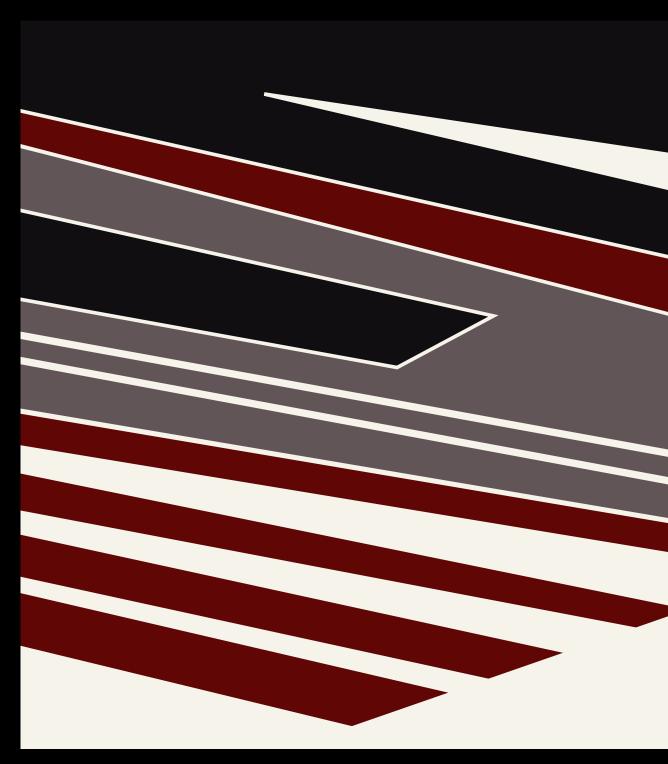
SUPER STAR

2026







2026 Super Star Owner's Guide Table of Contents

This article provides an overview of the content published in the 2026 Super Star Owner's Guide, including chapter titles, sub-category listings, select articles, as well as relevant page numbers for corresponding chapters.

A IMPORTANT

The content within this Owner's Guide is customized based on available standards and options determined by Newmar for the 2026 model year. This Guide may not include information for "specials," such as equipment and/or features selected outside of the available standard and options list.

A IMPORTANT

This Owner's Guide is a compilation of quick start guides for various components in your coach and should not take the place of the complete Operation Manual(s) provided by the component manufacturer(s). Refer to the complete manuals provided by the component manufacturer(s), which may be located in your owner's information package and/or Newgle.

A NOTICE

This Owner's Guide is published and printed from Newmar's online knowledgebase. For the most up-to-date version of this content, and for more product-specific information, how-to articles, and troubleshooting information, please refer to Newgle. All of the information in Newgle is believed to be accurate at the time of publication. However, it may be necessary to make revisions, and Newmar reserves the right to make any such changes without notice or obligation.

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▲ IMPORTANT

Reset all default keyless entry codes and WiFi system network passwords to prevent unauthorized access to the coach and its components.

For more information, refer to the Electronics chapter in this owner's guide.

Coach WiFi Security Alert - Changing Your Newmar Network Password(s) - WiFi Ranger Systems Only (2026 and newer)

Newmar Corporation has determined that the potential exists for unauthorized persons to gain unauthorized access to certain WiFi-connected components on some Newmar products via factory-installed WiFi routers which utilize factory password settings. The factory password setting is unique to each coach and there are no known instances of any such unauthorized access having ever occurred on any Newmar product. However, if an unauthorized person were to gain access to the factory-installed WiFi system there is a potential on some products for the unauthorized person to gain access to the WiFi-connected systems in the coach including certain televisions, sound equipment, cameras, and some coach management systems.

In order to protect against the potential for such unauthorized access to occur on Newmar products, Newmar Corporation highly recommends that customers owning the subject coaches change the factory password settings on the WiFi router to new passwords that have been chosen by the customer by following the directions provided below. Changing the factory passwords on the WiFi router will eliminate the potential for unauthorized persons to gain access to Newmar products via the factory password settings.

Note that changing the factory passwords to new passwords selected by the customer will cause a loss of pairing or connectivity between existing WiFi devices in the coach and the WiFi router. It will then be necessary to update the passwords on each of the individual WiFi-connected devices in the coach to have the same new password as the router in order to re-establish the pairing and connectivity between each of those WiFi devices and the router.

Please refer to the manufacturer's operation manual for pairing instructions for each WiFi-enabled component.

If the passwords are not updated on the WiFi devices in the coach after the WiFi router password has been changed, the devices will still function on their individual remote controls and on their individual in-coach control panels but those devices will no longer have any internet functionality or remote connectivity functionality until their passwords are updated to match the new WiFi router password.

If a customer is not able to make the recommended password changes to the factory-installed WiFi router immediately, the potential for unauthorized users to gain access to the coach WiFi systems can be easily blocked by simply turning off or unplugging the WiFi router until such time as the passwords can be reset.

Overview

Your Newmar coach's WiFi router has been preset to a unique factory password in order to ensure that all coach WiFi-enabled components were properly tested during the production process.

To better secure this network once you become the owner of the coach, it is highly recommended that you read and perform the following instructions for "Changing the Coach WiFi Router Password."

A CAUTION

Failure to change these passwords poses a potential security risk to you and your coach.

Passwords should be at least 12 characters long. The longer the password is, the harder and longer it takes to crack.

- Include upper case letters, lower case letters, and special characters (i.e., #, !, &).
- Never use the exact same password for all your systems.
- Recommend a passphrase that contains a series of unrelated words.
 - Passphrases greatly increase the difficulty of this type of software. To create a passphrase think up a short, silly story: "The buffalo drove the truck to the store." To create a passphrase from this, you simply select words and string them together, and make a few substitutions: BuffaloTruckSt0re! While it may seem silly, it is incredibly easy to remember, so long as you remember the story. Your stories can be anything you want, just make sure it's something easy to visualize and sticks in your head."

Changing the WiFi Router Password

Connect to the Coach Network



A NOTICE

These instructions are intended for WiFi Ranger (WFR) GO2 and CONVERGE (Teton/Poplar, Denali/Spruce, and Everest/Aspen) Products. To change the Guest WiFi password, please refer to the user guide by typing "WiFi Ranger User Guide" (including the quotation marks) in the Newgle search bar.

- 1. Search for the 'Newmar Network' in the coach when scanning for network connections.
 - a. It is identified by "NewmarXXYY." Pick the network that has the identifier that matches the sticker on the indoor router.
 - b. Each coach model has an identifier for the password, as seen below.
- 2. Enter the password according to the coach identifier.

Example Coach Info:

• WFR ID #: 778XXX

Model: King Aire Diesel Bus

Serial #: 530XXX

Customer WiFi Signal	
Example ID	778XXX
SSID Broadcast	NewmarXXYY
WPA Key (Password)	KGDB530XXX

- After connecting to the coach network, open an internet browser and type in 'MYWIFIRANGER.COM' in the address bar to connect to the WiFi Ranger control panel.
- 2. In the address bar of the internet browser, remove any text following ":8080" and then type in '/admin' after the ':8080'.
 - a. Example: 10.189.90.1:8080/admin
 - b. This will go to a username and password screen for the admin credentials.
- 3. Enter USERNAME: admin
- 4. Enter PASSWORD: wfradmin





- In the WPA KEY setting, change the password to one decided by the customer. After the password is changed click 'SAVE CHANGES'.
- 2. A banner will show up when the changes are being made. When the password is changed, the banner should show.



- 1. Once the settings have been changed, reconnect to the network using the new password.
- 2. Set up is complete!

Changing the WiFi Ranger Control Panel Password

For more security in the WiFi Ranger (WFR), it is suggested to make a change in the Control Panel that will require a USERNAME and PASSWORD when trying to get access to the WFR Control Panel. Complete the following procedure to further enhance the security.

- 1. Enter the control panel by first connecting to the Newmar Network in the coach as explained previously in the "Connect to the Coach Network" section.
- 2. When connected, go to the SETUP tab and make sure the HIDE ADVANCED FEATURES selection is turned off. If it is ON, select OFF, and click SAVE CHANGES.
- 3. From there, click the ADVANCED tab.
- 4. In the last box labeled ADMIN ACCESS, choose "ON."
- 5. Change the USERNAME and PASSWORD to something different. To make this as safe and secure as possible, do not share this password.



- 1. Click SAVE CHANGES.
 - a. The next time you try and enter the Control Panel, you will need this username and password to gain access.
- 2. Passwords to WiFi-enabled devices like televisions, cameras, and sound bars (i.e.: Bose 700 sound bar used on select Mountain Aire, London Aire, Supreme Aire, Essex, and King Aire coaches) will also need to be updated to have the same new password as the router in order to re-establish the pairing and connectivity between each of those WiFi devices and the router. Please refer to the manufacturer's operation manual for pairing instructions for each WiFi-enabled component.
- 3. Setup is complete!

For coaches equipped with the KIB/ATC Global Connected Solutions/Newmar App: The next time you log in to the app, you will be prompted to change the password to connect to the coach WiFi.

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INTRODUCTION: ABOUT NEWMAR AND YOUR NEW COACH

This chapter provides you with an introduction to Newmar, our warranty process, and our seamless service promise.

New Coach Delivery Process and Limited Warranty

This article provides a detailed list of the customer and dealer responsibilities during the delivery process, as well as information about Newmar's limited warranty.

Introduction to Newmar

Welcome to the exciting world of recreational vehicles and the growing Newmar family! Congratulations on your purchase of a Newmar product! Your coach proudly carries the Newmar torch, as a new generation of RV'ing begins. We share your excitement at this moment, and with you look forward to the years and miles of adventure the RV lifestyle offers you in your coach.

Whether camping at your favorite remote fishing hole or tailgating at the big game with your friends, Newmar is with you every step of the way.

The Newmar Legacy

Your new coach was built with care using today's technology and old-world craftsmanship. At Newmar, we strive to build vehicles that are safe, dependable, and comfortable. Born on Christian principles and from the desire to build the best, the legacy associated with the name Newmar is one of family pride and quality. It is the culmination of decades of RV design and building experience.

We take humble pride in our history of innovation. We introduced the industry to the first slideout rooms, and continued our tradition of innovation with the first flush floor slideout in a motorized coach and the smooth, seamless fiberglass body. Your coach is at the forefront of current technology, built by the skilled hands and quality-conscious eyes of craftsmen.

At Newmar, we recognize that a craftsman's final product is only as good as the materials they use, so we are selective about what we put into our coaches. We start with a foundation forged in the strength of steel and aluminum. We fill it with beautiful, durable hardwoods, and select name-brand appliances and components, then build it on a chassis proven to stand the test of time. Then we finish our coaches with an artist's gentle touch.

The Newmar Warranty

We stand behind our work with an exceptional warranty and dependable service, so you can travel with the kind of confidence that comes from knowing you're protected. What helps Newmar stand out from other coach manufacturers is our commitment to following our customers throughout the repair process to ensure any issues get taken care of the right way, right away.

Please read the Newmar Limited Warranty and all other component warranties that apply to the equipment installed on your coach. A copy of the "Newmar Limited Warranty" is available in Newgle.

Chassis and Component Manufacturer Warranties

The limited warranties issued by the chassis and component manufacturers require periodic service and maintenance. The owner's failure to provide this service and/or maintenance may result in the loss of warranty coverage.

Be sure to file the appropriate warranty registration with the proper manufacturer to activate the warranties on the components within your Newmar coach.

If you, for any reason, have a problem obtaining satisfactory and timely warranty service that may substantially impair the use, value, or safety of your Newmar coach, please call Newmar Customer Service toll free at **1-800-731-8300** (select the appropriate menu option).

The Delivery Process

1

Throughout the manufacturing process, your vehicle has been inspected by Newmar qualified technicians. However, our final inspection at the factory is not to be the last one. The pre-delivery inspection and systems check your dealer performs are the final inspections done to the unit prior to you receiving your new coach. Your dealer may assist you in understanding the limited warranties and with completing all warranty forms for the various appliances and accessories installed in your unit.

Customer Responsibilities

To assist you in avoiding problems with your vehicle, we recommend you do the following:

- 1. Read the warranty. Go over it thoroughly with your dealer.
- Inspect the vehicle. Do not accept delivery until you have gone through the
 coach with the dealer. Newmar has provided a checklist as part of the Owner's
 Registration to be used during retail delivery. Check each item on the list, and
 make sure the dealer does the same. Do not sign this checklist until you have
 checked off each item.

A NOTICE

The sales literature versus actual specifics to the vehicle's measurements, weights, or quantities may vary.

Ask questions about anything that you do not understand concerning your recreational vehicle.

A IMPORTANT

Reset all default keyless entry codes and WiFi system network passwords to prevent unauthorized access to the coach and its components. For more information, refer to Newgle and/or your coach owner's guide for keyless entry and WiFi security documentation.

For customers with SilverLeaf touchscreen(s) with version 1.81 or higher, LR 125 version 2.01 or higher, web version 5.0, and operating system version 4.0: An additional layer of SilverLeaf LR125/Control app security called "white listing" is available for the customer to use if they wish; however, it is not required. For more information about using white listing, refer to the PDF file in Newgle called "White Listing Devices via LR125 and System Control App."

Dealer Responsibilities

- 1. A pre-delivery inspection and systems check: thoroughly inspecting the vehicle and the operation of the factory-installed components.
- 2. A customer walk-through to familiarize the customer with the vehicle, its systems and components, and its operation.
- 3. Delivery of the Owner's Information Package. This package contains the warranty cards and registrations for the vehicle and factory-installed components that carry a separate warranty. The detailed operating and maintenance instructions on these components are also included in this package.
- 4. Assisting the customer in completing the component registration forms, at the customer's request. To avoid loss of warranty coverage, the dealer should review the limited warranty provisions with the customer, stressing the importance of filing warranty cards and registrations to the component manufacturers within the prescribed time limit.
- 5. Providing the customer with information regarding warranty and non-warranty work on the vehicle, as well as its separately warranted components, whether the customer is in or out of the area.



NEWMAR CORPORATION

PURCHASE DATE	SERIAL#_	

NEWMAR CORPORATION • 355 N DELAWARE ST • PO BOX 30 • NAPPANEE IN 46550-0030

2026 RECREATIONAL VEHICLE TWELVE MONTH LIMITED WARRANTY AND LIMITED 5-YEAR STRUCTURAL WARRANTY

BRANDS: FREEDOM AIRE • BAY STAR SPORT • BAY STAR • CANYON STAR • GRAND STAR • SUPER STAR • SUPREME AIRE SUMMIT AIRE • NORTHERN STAR • VENTANA • DUTCH STAR • NEW AIRE • MOUNTAIN AIRE • LONDON AIRE • ESSEX • KING AIRE

Newmar Corporation warrants this recreational vehicle for twelve (12) months from the original retail owner's date of purchase under normal use and service while in operation in the United States and Canada excluding the exceptions set out below.

If any part of your new Newmar Corporation product fails because of a manufacturing defect within twelve (12) months from the original retail owner's date of purchase, it will be repaired without charge for either parts or labor by Newmar Corporation, providing the required maintenance as outlined in the Newmar Owner's Guide and claim procedures below are followed.

Upon discovery of a defect, you must notify the dealership where you purchased your Newmar recreational vehicle, or the local authorized Newmar Service Center and set up an appointment to have the defect corrected without charge for either parts or labor. It is the owner's obligation and an essential term of this warranty that they make the vehicle available for warranty service whenever it needs warranty service at the selling dealer or at an authorized Newmar service center. If you do not know the location of your closest Newmar Service Center, you must contact the Newmar Corporation warranty department by telephone at 800-731-8300, or by mail at PO BOX 30, NAPPANEE IN 46550-0030. Newmar will then direct you to the nearest service center. You must then call the service center and set up an appointment, or ask the warranty department to assist you in scheduling an appointment at the service center. Service performed by non-authorized service centers must have prior written approval from Newmar for warranty reimbursement. If you do not get an immediate response from any component manufacturer, call Newmar Customer Service and Newmar will assist you in obtaining warranty service from the component part supplier for the term of the Newmar warranty.

The repair or replacement of defective parts under this warranty shall be made by an authorized Newmar Corporation Dealership or Authorized Newmar Service Center.

THE LIMITED 5-YEAR STRUCTURAL WARRANTY. If any part of your Newmar recreational vehicle superstructure (which is the

steel/aluminum structure of the sidewall, roof, or frame) fails to perform properly within five years from the date of purchase because of faulty workmanship or material supplied by Newmar, it will be repaired without charge for either parts or labor by Newmar providing the claim procedures stated above are followed. This structural warranty is available only to the original purchaser and is non-transferable.

THE TWELVE MONTH LIMITED AND LIMITED 5-YEAR STRUCTURAL WARRANITES DO NOT COVER OR INCLUDE:

- a. Any deterioration of appearance items due to wear and/or exposure to natural elements, including, but not limited to, drapery, upholstery, carpeting, exterior paint and finish, rust and corrosion;
- b. Any Newmar Corporation product that is not used solely for personal and recreational uses, including but not limited to, commercial o r business use purposes (any use for business for profit, or nonprofit,) held for rental or hire, or used as a residence, dwelling, or abode;
- c. Unauthorized Modifications. Installation of any 'aftermarket' devices or modifying any existing system originally installed by Newmar Corporation will be considered an unauthorized modification. Any condition or repair related to the performance or function of the Newmar unit as a result of an unauthorized modification will not be considered a warrantable defect in materials, workmanship, or components, and necessitated repairs as a result thereof will not be covered under the Newmar Limited Warranties:
- d. Any damage or defect caused by, but not limited to, collision, fire, theft, vandalism, riot, explosion, acts of God, war, objects striking the vehicle, neglect, misuse, abuse, overloading, accident, unauthorized repairs, alterations, improper dealer handling, improper or un-applied maintenance, or failure to follow operating instructions or the Newmar Owner's Guide;
- e. Normal Maintenance Cost and Requirements. Normal maintenance cost and requirements detailed in the Newmar Owner's Guide are the responsibility of the purchaser. For an itemized list of required maintenance procedures and schedules, please refer to your Newmar Owner's Guide;
- f. Cosmetic alignment of the slide out(s) and other cosmetic adjustments are considered routine maintenance and are not covered;
- g. Equipment and components supplied and separately warranted by other manufacturers, including but not limited to, tires, batteries, engines, chassis, including all items supplied by the chassis manufacturer, and other installed equipment or accessories. These suppliers provide their own warranties or extensions. These warranties are separate from the Newmar Limited Warranties. Please review each separate warranty for descriptions and details of their respective warranty. The terms, conditions and warranty periods of these warranties may vary from the Newmar Limited Warranties.;
- h. Any undertaking, representation, or warranty made by dealers or other parties selling or representing the products covered by this warranty other than those specifically stated herein.

Newmar Corporation reserves the right to make changes in design and changes or improvements upon its products without imposing any obligation upon itself to install the same upon products theretofore manufactured.

This warranty is expressly in lieu of any other express warranties, written or verbal, made on the part of Newmar Corporation, which corporation does not undertake responsibility to any purchaser of its products for any undertaking, representation or warranty made by dealers beyond those herein expressed. Any implied warranties as to the Newmar Corporation Recreational Vehicle including any warranty of merchantability or fitness for a particular purpose or use are limited to a period of twelve (12) months immediately following the original retail owner's date of purchase as therefore stipulated. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

This warranty is null and void unless the purchaser of and the dealer who sells the recreational vehicle fill out completely and mail the respective registration form supplied with this recreational vehicle within 10 days from date of original sale.

LEGAL REMEDIES: Purchaser and dealer further agree the courts (state or federal) located in the State of Indiana have exclusive jurisdiction to resolve any dispute based on this warranty, any implied warranty, or any alleged warranty breach, as well as any claim or cause filed in conjunction with a breach of warranty claim. Indiana Law shall apply to all agreements, disputes, negotiations, litigation, and settlements, without giving effect to any conflict of law rule that would result in the application of the laws of a different jurisdiction. Owner must provide written notice as described below and permit Newmar the opportunity to repair before owner may seek any action to seek legal or equitable remedies for breach of this limited warranty and any implied warranties. Any action for alleged warranty breach or revocation of acceptance or any action to enforce any portion of this warranty must be commenced no later than ninety (90) days of the expiration of the warranty period. Any warranty claim asserted or brought in violation of this Limited Warranty, or any claim brought against Newmar, directly or indirectly, under which the owner or any other person or entity seeks to broaden the terms of the Limited Warranty or under which the Purchaser or any other person fails to successfully prevail on any issue or matter of any type or nature, shall entitle Newmar to recover its costs, damages, and reasonable attorney's fees in connection with the same.

NEWMAR CORPORATION WILL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING (BUT NOT LIMITED TO) LOSS OF USE OF VEHICLE, LOSS OF TIME, INCONVENIENCE, EXPENSES FOR TRAVEL, LODGING, TELEPHONE, TRANSPORTATION CHARGES, LOSS OR DAMAGES TO PERSONAL PROPERTY, OR LOSS OF INCOME.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In addition to the above provisions, the purchaser has certain legal remedies provided by the MAGNUSON-MOSS WARRANTY ACT, Public Law 93-637, 88 Stat. 2183-2193; U.S. Code, Secs. 2301-2312.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

01/2025

NEWMAR CORPORATION

DATE D'ACHAT	EN SÉRIE #
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NEWMAR CORPORATION• 355 N DELAWARE ST• PO BOX 30 • NAPPANEE IN 46550-0030

VÉHICULE RÉCRÉATIF 2026 GARANTIE LIMITÉE DE DOUZE MOIS ET GARANTIE STRUCTURELLE LIMITÉE DE 5 ANS

BRANDS: FREEDOM AIRE • BAY STAR SPORT • BAY STAR • CANYON STAR • GRAND STAR • SUPER STAR • SUPREME AIRE SUMMIT AIRE · NORTHERN STAR · VENTANA · DUTCH STAR · NEW AIRE · MOUNTAIN AIRE · LONDON AIRE · ESSEX · KING AIRE

Newmar Corporation garantit ce véhicule récréatif pendant douze (12) mois à compter de la date d'achat par le propriétaire au détail d'origine dans des conditions normales d'utilisation et d'entretien pendant son utilisation aux États-Unis et au Canada, à l'exclusion des exceptions énoncées ci-dessous.

Si une pièce de votre nouveau produit Newmar Corporation tombe en panne en raison d'un défaut de fabrication dans les douze (12) mois à compter de la date d'achat du propriétaire au détail d'origine, elle sera réparée sans frais pour les pièces ou la main d'œuvre par Newmar Corporation, en fournissant l'entretien requis comme décrites dans le Guide du propriétaire Newmar et les procédures de réclamation ci-dessous sont suivies.

Lors de la découverte d'un défaut, vous devez aviser le concessionnaire où vous avez acheté votre véhicule récréatif Newmar ou le centre de service Newmar autorisé local et prendre rendez-vous pour faire corriger le défaut sans frais de pièces ou de main d'œuvre. C'est l'obligation du propriétaire et une condition essentielle de cette garantie de rendre le véhicule disponible pour le service de garantie chaque fois qu'il a besoin d'un service de garantie chez le concessionnaire vendeur ou dans un centre de service Newmar agréé. Si vous ne connaissez pas l'emplacement de votre centre de service Newmar le plus proche, vous devez contacter le service de garantie de Newmar Corporation par téléphone au 800-731-8300 ou par courrier à PO BOX 30, NAPPANEE IN 46550-0030. Newmar vous dirigera ensuite vers le centre de service le plus proche. Vous devez ensuite appeler le centre de service et prendre rendez-vous, ou demander au service de garantie de vous aider à prendre rendez-vous au centre de service. Le service effectué par des centres de service non autorisés doit avoir l'approbation écrite préalable de Newmar pour le remboursement de la garantie. Si vous n'obtenez pas de réponse immédiate d'un fabricant de composants, appelez le service client Newmar et Newmar vous aidera à obtenir un service de garantie auprès du fournisseur de composants pour la durée de la garantie Newmar.

La réparation ou le remplacement des pièces défectueuses dans le cadre de cette garantie doit être effectué par un concessionnaire Newmar Corporation agréé ou un centre de service

LA GARANTIE STRUCTURELLE LIMITÉE DE 5 ANS. Si une partie de la superstructure de votre véhicule récréatif Newmar (qui est la

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structure en acier/aluminium de la paroi latérale, du toit ou du cadre) ne fonctionne pas correctement dans les cing ans à compter de la date d'achat en raison d'un défaut de fabrication ou de matériaux fournis par Newmar, il sera réparé sans frais pour les pièces ou la main-d'œuvre par Newmar à condition que le les procédures de réclamation indiquées ci-dessus sont suivies. Cette garantie structurelle est disponible uniquement pour l'acheteur d'origine et n'est pas transférable.

LES GARANTIES STRUCTURELLES LIMITÉES DE DOUZE MOIS ET LIMITÉES DE 5 ANS NE COUVRENT NI N'INCLUENT

- Toute détérioration de l'apparence des articles due à l'usure et/ou à l'exposition à des éléments naturels, y compris, mais sans s'y limiter, les draperies, les tissus a. d'ameublement, la moquette, la peinture et la finition extérieures, la rouille et la corrosion ;
- Tout produit de Newmar Corporation qui n'est pas utilisé uniquement à des fins personnelles et récréatives, y compris, mais sans s'y limiter, à des fins commerciales ou professionnelles (toute utilisation à des fins commerciales ou à but non lucratif), détenu à des fins de location ou de location, ou utilisé comme résidence, habitation ou demeure:
- Modifications non autorisées. L'installation de tout appareil « de rechange » ou la modification de tout système existant initialement installé par Newmar Corporation sera considérée comme une modification non autorisée. Toute condition ou réparation liée à la performance ou au fonctionnement de l'unité Newmar à la suite d'une modification non autorisée ne sera pas considérée comme un défaut de matériaux, de fabrication ou de composants couvert par la garantie, et les réparations nécessaires en conséquence ne seront pas couvertes par la garantie Newmar. Garanties limitées ;
- d. Tout dommage ou défaut causé, sans toutefois s'y limiter, par une collision, un incendie, un vol, un vandalisme, une émeute, une explosion, une catastrophe naturelle, une guerre, des objets heurtant le véhicule, une négligence, une mauvaise utilisation, un abus, une surcharge, un accident, des réparations non autorisées, des modifications, une mauvaise manipulation du concessionnaire, un entretien inapproprié ou non appliqué, ou le non-respect des instructions d'utilisation ou du Guide du propriétaire Newmar :
- Coût et exigences de maintenance normale. Les coûts d'entretien normaux et les exigences détaillées dans le guide du propriétaire Newmar sont à la charge de l'acheteur. Pour une liste détaillée des procédures et des calendriers d'entretien requis, veuillez vous référer à votre guide du propriétaire Newmar ;
- L'alignement esthétique des coulisses et autres ajustements esthétiques sont considérés comme un entretien de routine et ne sont pas couverts ;
- Équipements et composants fournis et garantis séparément par d'autres fabricants, y compris, mais sans s'y limiter, les pneus, les batteries, les moteurs, le châssis, y compris tous les éléments fournis par le fabricant du châssis, et autres équipements ou accessoires installés. Ces fournisseurs fournis extensions. Ces garanties sont distinctes des garanties limitées Newmar. Veuillez examiner chaque garantie distincte pour connaître les descriptions et les détails de leur garantie respective. Les termes, conditions et périodes de garantie de ces garanties peuvent différer des garanties limitées Newmar.
- Tout engagement, représentation ou garantie faite par des revendeurs ou d'autres parties vendant ou représentant les produits couverts par cette garantie autres que ceux spécifiquement indiqués dans les présentes

Newmar Corporation se réserve le droit d'apporter des modifications à la conception et des changements ou améliorations à ses produits sans s'imposer aucune obligation d'installer les mêmes sur les produits fabriqués jusqu'à présent.

Cette garantie remplace expressément toute autre garantie expresse, écrite ou verbale, faite par Newmar Corporation, laquelle société n'assume aucune responsabilité envers tout acheteur de ses produits pour tout engagement, représentation ou garantie faite par les revendeurs au-delà de celles exprimées dans les présentes. Toutes les garanties implicites concernant le véhicule récréatif de Newmar Corporation, y compris toute garantie de qualité marchande ou d'adéquation à un usage ou à un usage particulier, sont limitées à une période de douze (12) mois immédiatement après la date d'achat par le propriétaire au détail d'origine, comme stipulé par conséquent. Certains États n'autorisent pas les limitations sur la durée d'une garantie implicite, donc les limitations ci-dessus peuvent ne pas s'appliquer à vous.

Cette garantie est nulle et non avenue à moins que l'acheteur et le concessionnaire qui vend le véhicule récréatif ne remplissent complètement et ne postent le formulaire d'enregistrement respectif fourni avec ce véhicule récréatif dans les 10 jours suivant la date de vente originale.

RECOURS JURIDIOUES: L'acheteur et le revendeur conviennent en outre que les tribunaux (étatiques ou fédéraux) situés dans l'État de l'Indiana ont la compétence exclusive pour résoudre tout litige basé sur cette garantie, toute garantie implicite ou toute violation présumée de la garantie, ainsi que toute réclamation ou cause. déposée conjointement avec une réclamation pour rupture de garantie. La loi de l'Indiana s'appliquera à tous les accords, litiges, négociations, litiges et règlements, sans donner effet à aucune règle de conflit de lois qui entraînerait l'application des lois d'une juridiction différente. Le propriétaire doit fournir un avis écrit comme décrit ci-dessous et donner à Newmar la possibilité de réparer avant que le propriétaire puisse intenter une action pour obtenir des recours légaux ou équitables en cas de violation de cette garantie limitée et de toute garantie implicite. Toute action pour violation présumée de la garantie ou révocation d'acceptation ou toute action visant à faire respecter une partie de cette garantie doit être intentée au plus tard quatre-vingt-dix (90) jours après l'expiration de la période de garantie. Toute réclamation au titre de la garantie revendiquée ou intentée en violation de cette garantie limitée, ou toute réclamation intentée contre Newmar, directement ou indirectement, en vertu de laquelle le propriétaire ou toute autre personne ou entité cherche à élargir les termes de la garantie limitée ou en vertu de laquelle l'acheteur ou tout autre une autre personne ne parvient pas à l'emporter sur toute question ou affaire de quelque type ou nature que ce soit, autorisera Newmar à recouvrer ses frais, dommages et honoraires d'avocat raisonnables en relation avec le même.

NEWMAR CORPORATION NE SERA PAS RESPONSABLE DE TOUT DOMMAGE ACCESSOIRE OU CONSÉCUTIF, Y COMPRIS (MAIS SANS LIMITATION) LA PERTE D'UTILISATION DU VÉHICULE, LA PERTE DE TEMPS, LES INCOMVENANCES, LES FRAIS DE VOYAGE, D'HÉBERGEMENT, DE TÉLÉPHONE, LES FRAIS DE TRANSPORT, LA PERTE OU LES DOMMAGES AUX BIENS PERSONNELS, OU PERTE DE REVENU.

Certains États n'autorisent pas l'exclusion ou la limitation des dommages accidentels ou consécutifs. Les limitations ou exclusions ci-dessus peuvent donc ne pas s'appliquer à vous.

En plus des dispositions ci-dessus, l'acheteur dispose de certains recours légaux prévus par la LOI SUR LA GARANTIE MAGNUSON-MOSS, Loi publique 93-637, 88 Stat. 2183-2193 ; Code

Cette garantie vous donne des droits légaux spécifiques et vous pouvez également bénéficier d'autres droits qui varient d'un État à l'autre..

01/2025

California (CA) Lemon Law Requirements

California Consumers

At least 30 days prior to commencing a legal action seeking civil penalties, you must provide a notice to Newmar Corporation that includes the following information. You must also own and be in possession of the recreational vehicle at the time that the notice is sent. The notice must include:

- 1. Your name
- 2. The Vehicle Identification Number of the recreational vehicle that you own
- 3. A brief summary of the repair history and alleged problems with the recreational vehicle
- 4. A demand that Newmar Corporation either repurchase or replace the recreational vehicle

You must send this notice to:

If by email to: Newmar CA@newmarcorp.com

If by mail, by certified or registered mail, return receipt requested to:

Newmar Corporation P.O. Box 30 1301 Stahley Drive Nappanee, IN 46550 Attention: S. Klotz

Please send a copy to (not a requirement):

Winnebago Industries, Inc. 13200 Pioneer Trail Eden Prairie, MN 55347 Attn: Legal Department

Consumidores de California

Al menos 30 días antes de iniciar acciones legales en busca de sanciones civiles, debe dar un aviso a Newmar Corporation que incluya la siguiente información. También debe ser propietario y poseer el vehículo recreativo en el momento en que se envía el aviso. El aviso debe incluir lo siguiente:

- 1. Su nombre
- 2. El número de identificación del vehículo recreativo que posee
- 3. Un breve resumen del historial de reparaciones y presuntos problemas con el vehículo recreativo
- 4. Una demanda de que Newmar Corporation vuelva a comprar o reemplace el vehículo recreativo

Debe enviar el avisio a:

Por correo electrónico a: Newmar CA@newmarcorp.com

Si lo envía por correo postal, por correo certificado o registrado, se solicita acuse de recibo a

Newmar Corporation P.O. Box 30 1301 Stahley Drive Nappanee, IN 46550 Attn: S. Klotz

Envíe una copia a (no es un requisito):

Winnebago Industries, Inc. 13200 Pioneer Trail Eden Prairie, MN 55347 Attn: Legal Department

Owner's Guide, Information Package, and Appliance Data Sheet

This article provides information about the Newmar owner's guide and information package, as well as the appliance data sheet posted in the coach.



The Newmar Owner's Guide, Information Package, and Appliance Data Sheet must NOT be removed from the vehicle in the event that the coach is sold. These items should remain with the coach for the next owner.

Owner's Information Package (Black Bag) and Newmar Owner's Guide

Included in your Owner's Information package are valuable documents about your vehicle and its components and systems. Carefully read both the instructions in your Owner's Guide, as well as the booklets supplied by the chassis and component manufacturers for important operation, safety, and maintenance information. This Owner's Guide should be kept in your vehicle for quick reference.

The Newmar Owner's Guide does not cover every possible detail of the equipment (standard and/or optional) installed on or in your coach. Consulting the booklets and instruction manuals in this package will help you safely operate, maintain, and troubleshoot these items. For more details about each of the components and systems installed in the coach, refer to Newgle.



A IMPORTANT

Read all of the information and understand the safety and operating instructions included in the Owner's Information Package. To assure full warranty coverage, it is essential that all maintenance instructions are followed.

Take time to get acquainted with your coach and how it operates. Should you have any questions, consult your dealer or the Newmar customer support team.

Appliance Data Sheet

An information sheet is provided containing important information about your coach for your convenience.

- Your coach's Newmar Serial Number. This number is needed whenever making an appointment for service or ordering parts through your Newmar Dealer or Service Center.
- Your coach's Vehicle Identification Number (VIN). The VIN is the legal identification of the completed vehicle and is used by the state for vehicle registration.
- Your coach's Year, Model, Type, and Floorplan.
- Manufacturer, Model, and Serial Number of factory-installed equipment.
 Use these model numbers to quickly locate relevant information in
 Newgle about the parts, including links, files, and articles.

A IMPORTANT

The manufacturer, model, and serial number of the appliances and accessories installed at the factory in your coach are listed on this label for convenience. It is important that the label remains in the coach for identification purposes. Do not remove or relocate this label.

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Contacting Newmar

Newmar has a large pool of online tools and content to help our RV owners. Before you reach out to our Customer Service team, check Newgle, NewPar, or Newmar's website for additional resources that may answer your questions and/or solve your concerns.

Newgle







Visit Newgle (<u>newgle.newmarcorp.com</u>), which is Newmar's dynamic, multi-faceted knowledge center created specifically for Newmar coach owners and certified technicians. Because content about your coach is constantly evolving and changing, the only way we can provide you with access to the most up-to-date and relevant information is by linking you directly to it! Much of the information comes from various departments at Newmar, as well as the manufacturer or supplier of the items specific to your coach model and year.

We urge you to check out the site for any additional information that may not be included in your owner's guide or information package. Newmar reserves the right to make any such changes without notice or obligation. For questions or feedback about the Newgle knowledgebase, email the Newgle team at newgle@newmarcorp.com.

NewPar (Parts)

For parts inquiries or purchases, refer to NewPar (ComNet), Newmar's parts catalog (<u>newpar.newmarcorp.com</u>) or contact the parts department directly at 800-731-8300 (select the appropriate menu option).

Factory Service and New-Serv Mobile Service

If you wish to schedule maintenance work, schedule service work, or order parts, you should notify Newmar or your local authorized Newmar Service Center to set up an appointment.

In select areas, Newmar's mobile service team can come to you if you do not have the time, resources, or ability to take the coach to a service center or dealership for repairs. Some repairs and services include (but are not limited to) awnings, electrical, freshwater system, furnaces, plumbing, slideouts, and basic care and maintenance.

For assistance locating the closest authorized Service Center, or to inquire about or schedule a New-Serv appointment, please contact Customer Service at 800-731-8300 (select the appropriate menu option) or send an email to newserv@newmarcorp.com.

Customer Service

If you still have questions and/or would like to speak to a Customer Service Representative, please call 800-731-8300 or email *customerservice@newmarcorp.com*.

Sales and Factory Tour

To find out details about the factory tours, or to contact the Newmar Sales department, call 800-852-1731.

Newmar Corporation | 355 N Delaware Street | PO Box 30 | Nappanee, IN 46550-0030

Notices in Newgle and Newmar's Owner's Guide

Reference is made to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

A DANGER

DANGER indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Failure to observe a DANGER may also result in damage to the equipment or unit.

A WARNING

WARNING indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury. Failure to observe a WARNING may also result in damage to the equipment or unit.

A CAUTION

CAUTION indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. Failure to observe a CAUTION may also result in damage to the equipment or unit.

A IMPORTANT

IMPORTANT notices are not related to personal injury, but provide additional information to make a step easier or clearer.

A NOTICE

NOTICE indicates information that is not necessary or required, but may prove to be helpful.

NOTE FROM NEWMAR -

NOTE FROM NEWMAR indicates helpful information to improve customer experience or satisfaction outside of what is provided by a component manufacturer or supplier.

Newgle Introduction and Navigational Overview

This article provides a brief overview of Newgle: what it is, how to access it, how to navigate it, and what information is available. It also explains the different types of search filters that can be utilized in Newgle to produce the most effective search results.

What is Newgle, and why do I need it?

Do you have trouble finding reliable and trustworthy resources about your coach? How much time do you spend trying to figure out how to operate your appliances or what cleaning products are safe to use on your floors? What about troubleshooting information when something in your coach just is not working quite right? Do you prefer to find the answer yourself rather than asking for advice online or your neighbor parked next to you at the RV resort, or even contacting your dealer or customer service? You have come to the right place!

Welcome to the wonderful world of Newgle! Our free online knowledgebase provides you with coach information directly from Newmar, as well as our manufacturers and suppliers. Content is added and updated regularly and is only available to current coach owners and authorized service technicians. As part of Newmar's seamless service promise, your questions can be answered quicker than ever before with just a few clicks on Newgle's search-focused platform right from your laptop, tablet, or smartphone.

Newgle consists of nearly a dozen categories, hundreds of knowledge articles, and thousands of parts with associated coach models and years, files, and links. Leave the research to us. Our goal is to provide you with the most updated information at all times. Though not coach-specific, Newgle supplies endless documentation about your coach model and year, all verified by Newmar's Service Content department.

A IMPORTANT

Newgle is an ever-changing knowledgebase. The Newgle Team strives to introduce new features and content regularly to improve the site. The included screenshots and navigational instructions may change without notice. Always refer to Newgle for the most up-to-date version of this content.

A NOTICE

Any technical information published in Newgle is only intended for use by qualified, Newmar-authorized service technicians. Newmar is not responsible for misuse of this information.

How do I navigate the website?

Home Page

The Home Page is a launching pad into the endless sea of knowledge. You can easily return to the home page at any time by clicking the Newgle logo, the "Home" button at the top of the page, or by selecting the "Home" option from your username or nickname in the upper right-hand portion of the screen.

There are two key ways to navigate our website: Product Filter, and Search Bar.



Product Filter

To view products and parts related to your coach model and year, click through each option on the home page to narrow your results.

First, enter your coach model year, then your model. Then, select the category and sub-category of the information you are seeking. This will narrow your results down to the products and parts that are relevant to these specifications.

Then select the component installed in your coach to view the product page, which often includes associated features, files, links, and knowledge articles.

Search Bar

Search from the home page or from anywhere in the site using a key word or phrase, or by the product name, manufacturer, or model number. There is no need to search using coach information like the production number, VIN, model or year. Using the search bar produces the most results of the three different navigational options, which often contain one or more types of the following documentation:

- Products (Parts) by year and model Specific components, items, and parts installed by Newmar, which can be refined by the coach model and year.
- Files Attached documentation provided directly from Newmar's product manufacturers, suppliers, vendors, and
 distributors. The file results often include owner's guides, instruction manuals, installation guides, troubleshooting
 articles, care and maintenance guides, and much, much more. Files can be filtered on the left side of the screen by
 title and type of document.
- Links Helpful web addresses of product manufacturers that often contain additional resources such as online warranty registrations, safety information, reference material, contact information, etc.
- Knowledge articles Customer-friendly documentation written or revised by Newmar's Technical Publications department. These may contain basic operating instructions, additional safety information, product overviews, how-to and troubleshooting articles, as well as related videos produced by Newmar. In the past few years, Newmar's owner's guides for each model have been built from such articles, as they are meant to be an operational overview for a new coach owner. Note: The model-year coach filter on the Home screen bypasses these articles unless they are associated with a specific product or part. To view a more complete list of these articles, use the search bar.

After typing a search term or phrase, relevant results will populate on the screen; however, this is often not a comprehensive list. Instead, it only provides a "preview" of the results. For a more exhaustive list, click on the "View More" button in the top right corner of the section you wish to expand. Click on the Show More button at the bottom of the page if you wish to view even more results.

With so many results, it may be necessary to narrow them down. Refine your search results by choosing one of the categories on the left side of the screen: Products by Year Model, Files, Links, or Knowledge Articles, depending on what type of documentation you prefer to view. For example, review parts associated to your coach model and year by clicking on the "Products by Year Model" tab. Then refine your results using the filters shown on the left side of the screen, such as year, model, product description, etc.

Once you find the part that you are looking for, click on the blue link to review the product page for that part. On this page, you will find helpful resources such as a picture (if it is available in Newmar's online part's catalog), the product description and features, as well as relevant files, links, and knowledge articles, for all of the documentation provided by Newmar and the part's manufacturer or supplier.

What if I can't find what I'm looking for?

Now that you know how to navigate, feel free to explore! Forget Google, and surf Newgle to answer your coach-related questions!

Just like the RV industry, our site is always growing, changing, and improving. Our dedicated, full-time Newgle staff is working diligently to provide you with access to more model- and year-specific information directly from the manufacturers as quickly as we can. Help us prioritize our efforts!

If you have suggestions for a better user experience, or if you are unable to locate the information you need, feel free to contact us:

- Email the Newgle team: newgle@newmarcorp.com
- Email the Customer Service team: customerservice@newmarcorp.com
- Call to speak to a Customer Service Brand Specialist: 1-800-731-8300 (select the appropriate menu option).

Newgle Registration and Login Assistance

This article provides information about registration and login assistance for Newgle, Newmar's online knowledgebase.

How Do I Register for Newgle?

Visit Newgle at https://newgle.newmarcorp.com to register for an account.

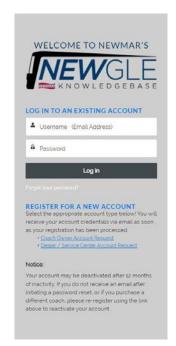
A NOTICE

Any technical information published in Newgle is only intended for use by qualified, Newmar-authorized service technicians. Newmar is not responsible for misuse of this information.

Customer Accounts

If you currently own a Newmar coach, click the link associated with an owner account, "Coach Owner Account Request." You will be asked to provide your coach information and some basic contact information, allowing the Newgle Team to verify ownership and set up an account just for you!

Once your account has been created, you will receive a verification email, which will include your new username and a link to create a password. The email address you provide when registering for an account will be used as your username, as well as for all Newgle-related communication, including account credentials, password resets, or any special updates from the Newgle team.



A IMPORTANT

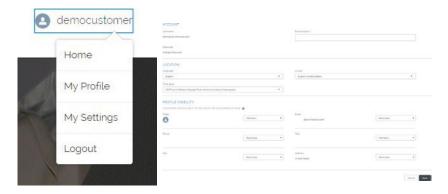
This link is only valid one time. Please use the direct URL - https://newgle.newmarcorp.com - for future access to the site.

If you already have a Newgle account but have since purchased a different coach, please request a new account to ensure that we have the most up-to-date information in our system. Your login credentials may or may not change pending the newly provided email address.



Logout

Click the user profile icon in the upper right corner; then select "Logout" from the down-down menu to end your Newgle session quickly with the click of a button.



Having Trouble Logging In?

After three failed login attempts, your account will become locked for 15 minutes. Wait 15 minutes, and try to login again. If you forget or lose your password, or if it is no longer working, you can reset it from the login screen.

Click on the "Forgot Your Password?" link, and enter your username (the email address you used when registering for your account), then click or tap "Continue." You should receive an email with a link to reset your password. Remember, this link is only valid one time. Please use the direct URL - https://newgle.newmarcorp.com - for future access to the site.

If you do not receive an email, it may be necessary to re-register for an account. Rather than entering your username and password, click the "Coach Owner Account Request" and complete the registration form. Once it is submitted, your account will be re-activated and a password reset link will be sent to the email address used when registering.



A IMPORTANT

Your Newgle account may be deactivated after twelve months of inactivity. Log in to the site often to avoid account deactivation. You may not be notified prior to deactivation.

A IMPORTANT

You will be asked to change your password every 180 days to ensure the highest level of security available. A new password cannot match any of the previously-used three passwords. When prompted, follow the onscreen instructions to create a new password that meets all of the requirements.

If you have any questions regarding your account, please email the Newgle Team at newgle@newmarcorp.com.

How to Locate a Coach Page in Newgle

This article provides instructions on how to locate a "Coach Page" in Newgle. These pages often include files (diagrams/schematics, owner's guides, brochures, etc.), links, and knowledge articles in Newgle, which may be relative to a coach's year and model and may even be specific to a particular floorplan or option.

A IMPORTANT

Newgle is an ever-changing knowledgebase. The Newgle Team strives to introduce new features and content regularly to improve the site. The included screenshots and navigational instructions may change without notice. Always refer to Newgle for the most up-to-date version of this content.

Navigating to a Coach Page

If you are listed as the current coach owner, your home screen welcome banner contains your name, the year, model, and floorplan of your coach, as well as a button marked "Visit Coach Page." Click this button to easily access specific content related to your coach, such as diagrams, chassis manuals, year/model-specific articles, videos, etc. This page provides some information to get you started, including files, links, and articles relevant to the coach year and model. The amount of content displayed will vary, so if you don't find what you're looking for on your Coach Page, use the search feature or component filter to review all information available in Newgle.



If your home page reflects the incorrect coach year and model, please register for a new Newgle account or send an email to customersrevice@newmarcorp.com so we can update our records.

If a brand new coach is not yet registered to you, the Visit Coach Page button will not display until Newmar receives a new coach registration from your selling dealer. To access your coach page while waiting for the registration process to be finalized, click on the search bar. Type in the coach production year, model abbreviation, and floorplan (separated by spaces). Coach pages may start displaying as "search recommendations," allowing you to select the relevant floorplan from the drop-down list.

• Example: 2025 dsdp 4369

• If you are unsure of your model abbreviation, refer to the "How Do I

2025 dsdp 4369	Q

Find My Coach model Abbreviation for Filtering" article in Newgle.

What Will I Find on a Coach Page?

Once on the coach page for the model, year, and floorplan of your choosing, you will have access to coach features and a copy of the owner support sticker, as well as any relevant files, links, and articles. The amount of content will vary by coach year and model.

A IMPORTANT

The layout and location of components on this screen may vary due to device and/or screen size (desktop/laptop computer, tablet, or smartphone). Depending on the device used to access Newgle, the Files, Links, and Articles sections may appear on the right side or bottom of the screen or in a "Related" tab at the top. Content may be added to these sections over time, so check back occasionally to see if anything new has been added.

Relevant Files

Click the View All button to see a complete list of associated files. The type of documentation located in the Files section will vary, but may include:

- Newmar's Original Coach Brochure, Owner's Guide, and Sales Data
- Newmar Diagrams and Schematics (A/V, Electrical, Plumbing, etc.)
- Chassis Manufacturer Manuals, Brochures, Specs, and/or Diagrams

Relevant Links

Click the View All button to see a complete list of associated links. Depending on the year and model of the coach, you may have access to web links such as:

- Chassis Manufacturer Content (Brochures, Specs, Manuals, Contact Info, Videos, etc.)
- Newmar Sales Documentation (Brochures, Videos, Product Specs, etc.)
- Coach CPU Walkthroughs (Year/Model Specific when available)

Product Knowledge Associations

Click the View All button to see a complete list of associated articles. Some Newgle knowledge articles are written to correspond with a particular coach model and year, so they may appear on the related coach pages.

A IMPORTANT

Newer coaches may have more documentation available than previous model years due to the availability of data. Some coach years/models may have limited documentation available.



SAFETY

This chapter provides information about Newmar's compliance requirements, placards and labels, and driving safety. It also includes details about emergency exits and installed safety components (smoke, propane, and carbon monoxide detectors).

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

Safety Resources and Compliance Requirements

This article provides information about Newmar's safety and compliance requirements.

Resource(s)

- Recreation Vehicle Safety and Education Foundation (RVSEF)
- Transport Canada (TC)
- National Highway Traffic Safety Administration (NHTSA)

A IMPORTANT

If you believe that your vehicle has a significant defect which could cause a crash or could cause injury or death, inform the National Highway Traffic Safety Administration (NHTSA) or Transport Canada (TC), and Newmar Corporation immediately.

Compliance Requirements

Newmar motorhomes meet or exceed compliance for the following agencies:

Canada

- Canada Motor Vehicle Safety Standards (CMVSS)
- QAI Laboratories is Newmar's listing agent

Contacting Transport Canada

Mailing Address / Adresse postale	Phone / Téléphone	Online / Internet
Transport Canada - ASFAD 330 Sparks Street Ottawa, ON K1A 0N5	819-994-3328 (Ottawa - Gatineau area or internationally) 800-333-0510 (Toll free)	http://www.tc.gc.ca/recalls
Transports Canada -ASFAD 330, rue Sparks Ottawa (Ontario) K1A 0N5	819-994-3328 (dans la région de Ottawa-Gatineau et à l'extérieur du pays) Sans frais: 1-800-333-0510 (au Canada)	http://www.tc.gc.ca/rappels

United States

- Federal Motor Vehicle Safety Standards (FMVSS)
- Nebraska and Washington State Seals
- National Fire Protection Association (NFPA) 1192 through Recreation Vehicle Industry Association (RVIA)
- National Fire Protection Association (NFPA) 70 National Electrical Code
- Carb Compliant Phase 2

Contacting National Highway Traffic Safety Administration (NHTSA)

Mailing Address	Phone	Online
NHTSA Headquarters 1200 New Jersey Avenue SE West Building Washington, DC 20590	800-424-9153 (Hearing-Impaired) 888-327-4236 (Toll free)	https://www.nhtsa.gov/recalls

Placards and Labels

A variety of placards and labels are located throughout your coach. These are installed to aid in the operation of a component, provide coach-specific information, or to warn of potential dangers while operating a specific appliance, accessory, or system.

A IMPORTANT

Reading, understanding, and heeding all such labels and placards is critical to the safe, efficient use of your coach. These labels should not be removed for any reason.

Before Driving Away

This article provides a brief list of procedures that will aid in your driving safety and extend the life of your coach.

A WARNING

Prior to driving your vehicle, be sure you have read your entire owner's guide and that you understand your vehicle's equipment completely. Read and understand all of the instructions and precautions in this owner's guide and the chassis manufacturer owner's manual before operating your new coach.

Listed below are some safety precautions that must be adhered to while your coach is in motion. These precautions, as well as others that involve possible damage to equipment, are also listed in the appropriate areas in this manual.

There are various adjustments that need to be made prior to starting and moving the vehicle. Among them are the driver's seat, the tilt steering, and the exterior side view mirrors, as well as checking the rear view monitoring system. In addition, the following procedures will aid in your driving safety and extend your equipment's life.

- Windows, mirrors, and light lenses are to be clean and unobstructed.
- Tires should be checked for proper cold inflation pressure.
- Wheel lug nuts should be checked for proper tightness.
- Fluid levels, including engine oil, transmission fluid, coolant, power steering fluid, brake fluid, and windshield washer solvent, should be checked and filled, if necessary.
- Disconnect the unit. Store the sewer and water supply hoses, as well as shoreline power cords.
- Secure all cargo in the storage compartments in the event of a sudden stop.
- Verify that the step has retracted prior to engine ignition and/or travel.
- Know the overall height of your coach to avoid overhead damage from low clearance bridges, overpasses, awnings, etc.

Dangerous Driving Conditions and Severe Weather Safety

This article provides safety tips to follow in the event of poor weather conditions.

Always Stay Informed

Avoid weather-related surprises by checking the forecast each day.

- If severe weather is a possibility, check a local weather website or phone application frequently for updates in your area. The National Weather Service (https://www.weather.gov/) is a great resource to check local forecasts. It may also be a wise decision to invest in a weather radio to receive up-to-date forecasts directly from the NWS.
- Know where you are at all times. Knowing which county you are in will help you know what is coming and when.
- For any extended stays, find out where the storm warning systems and alarms are located. It may also be helpful to know the days and times when these are typically tested to avoid any unnecessary concern.

Prepare Ahead of Time

If poor weather is in the forecast, preparing ahead of time can save you a lot of hassle.

- Check the function of your windshield wipers, brake lights, and headlights. Make sure you have plenty of fuel and that your tire pressure is correct to avoid hydroplaning.
- In the event of snow, freezing rain, or ice, make sure your coach is properly winterized. If you do not have to travel, wait until the roads are clear before proceeding to your next stop.

A WARNING

The cruise control is not to be operated on icy roads, extremely wet roads, winding roads, heavy traffic, or in any other traffic situation where a constant speed cannot be maintained.

WARNING

While driving on slippery surfaces, use care when accelerating or decelerating. Skidding and loss of vehicle control may be the result of abrupt changes in speed.

- If parked, try to avoid surrounding trees or power lines. Secure all loose belongings that could blow away. Bring them inside the RV or store them securely in a basement compartment before a storm hits to prevent physical damage to you or the RV.
- Retract all awnings to prevent wind and water damage.
- Find out where local storm shelters are and have an evacuation plan in place.
- Pack an emergency bag of necessities (i.e. medical supplies, important documents, cell phone chargers, water, non-perishable food, etc.).

Take Cover

Your coach can protect you from most severe weather, but it is not always the safest option. If there is a threat (even a small one) of severe weather, plan indoor activities in a safe, sheltered place. Be prepared; have a plan in place; and use good judgment.

- If straight line winds or the threat of tornado(s) are in the forecast, leave the RV, and find a local storm shelter.
- If you are driving and severe weather or a tornado pops up, park the RV in a safe location (not under a bridge or overpass), lay down away from windows, and cover your head.
- In the event of heavy rain or floodwaters, do not attempt to drive through water that is crossing a road. TURN AROUND: DON'T DROWN.

A WARNING

Driving through water deep enough to wet the brakes may affect the stopping distance or cause the vehicle to pull to one side. If you have driven through deep water, check the brake operation in a safe area to be sure they have not been affected.

A WARNING

Never operate a vehicle if a difference in braking efficiency is noticeable. Extreme terrain and adverse weather may affect the handling and/or performance of your vehicle.

Seat Belt Safety

This article provides information about the seat belts installed in the coach, including operation and care and maintenance instructions.

One of the most important safety features in your vehicle is the restraint system. Research has shown that seat belts save lives. And they can reduce the seriousness of injuries in a collision. Some of the worst injuries happen when people are thrown from the vehicle. Everyone in a motor vehicle needs to be buckled up at all times.

A WARNING

It is extremely dangerous to ride in a cargo area, inside or outside of a vehicle. In a collision, people riding in these areas are more likely to be seriously injured or killed. Do not allow people to ride in any area of your

vehicle that is not equipped with seats and seat belts. Be sure everyone in your vehicle is in a seat and is using a seat belt properly.

How to Operate Your Seat Belts and Restraint System

A WARNING

If you wear your safety belt improperly, both the effectiveness and comfort will decrease.

Lap/Shoulder Combination Restraints

- 1. Enter the vehicle and close the door. Sit back, and adjust the seat.
- 2. The latch plate of the belt is above the back of your seat. Grasp the latch plate, and pull out the belt. Slide the latch plate up the webbing as far as necessary to make the belt go around your lap.
- 3. When the belt is long enough to fit, insert the latch plate into the buckle until you hear a "click."
- 4. Position the lap belt across your thigh, below your abdomen. If you need the lap portion tighter, pull up a bit on the shoulder part. A snug belt reduces the risk of sliding under the belt in a collision. Position the shoulder belt on your chest so that it is comfortable and not resting on your neck. The retractor will withdraw any slack in the belt.
- 5. To release the belt, push the release button on the buckle.



A NOTICE

Some shoulder belts can be adjusted upward or downward to help position the belt away from your neck. Push on the anchorage cover to release it, and then move it up or down to the position that serves you best.

Lap Belt Restraints without a Shoulder Harness

A WARNING

Always wear your seat belt when the vehicle is in operation.

- 1. Slide the latch up the webbing as far as necessary to make the belt go around your lap.
- 2. Insert the latch plate into the buckle until you hear a "click."
- 3. Adjust and position the belt low and snug across your hips by removing the slack from the belt.
- 4. To release the belt, push the release button on the buckle.

A IMPORTANT

Each belt is intended to restrain only one person at a time. Do not put two people under one belt.

A CAUTION

Never attempt to restrain a child in your lap using the lap belt around both you and the child. The child could be severely injured or killed in the event of a collision.

A IMPORTANT

Seat belts are matched sets. Do not mix or use this belt or parts of this belt with other types of seat belts.

▲ IMPORTANT

Everyone in your vehicle needs to be buckled up at all times. Every state in the United States and all Canadian provinces require that small children ride in proper restraint systems. This is the law, and you can be prosecuted for ignoring it.

There are different sizes and types of restraints for children from newborn to near-adult size children. Use the restraint that is correct for your child:

- The restraint must be appropriate for your child's weight and height. Check the label on the restraint for this, too.
- Carefully follow the instructions that come with the restraint. If you install the restraint improperly, it may not work when you need it.

Buckle the child into the restraint exactly as the manufacturer's instructions have directed.

How to Maintain Your Seat Belts and Restraint System

Periodically examine your restraint equipment to be sure it functions correctly and to be sure there are no worn or broken components that either needs repair or replacement. Damaged parts must be replaced immediately. Do not disassemble or modify the system.

A WARNING

A frayed or torn belt could rip apart in a collision and leave you with no protection. Inspect the belt system periodically, checking for cuts, frays, or loose parts. Damaged parts must be replaced immediately. Do not disassemble or modify the system. Seat belt assemblies must be replaced after an accident if they have been damaged (bent retractor, torn webbing, etc.)

Restraint equipment must be replaced after an accident if they have been damaged. If there is any question regarding belt or retractor condition, replace the belt. It is a good idea to have your restraint system inspected during each periodic scheduled maintenance session. If the belts need cleaning, use a mild soap solution or lukewarm water. Do not remove the belts from the vehicle to wash them.

WARNING

Do not bleach, dye or clean the belts with chemical solvents or abrasive cleaners. This may severely weaken the fabric. In a crash, they might not be able to provide adequate protection.

Fire Safety

This article provides information about the smoke detectors and fire extinguishers installed in the coach. The possibility of fire exists in all areas of life, and the recreational lifestyle is no exception. Recreational vehicles are complex machines made up of many materials, some of which are flammable.

Like most hazards, the possibility of fire can be minimized, if not totally eliminated by recognizing the danger and practicing common sense safety and maintenance habits. For safety reasons, your unit is furnished with both a fire extinguisher and a smoke alarm.

A DANGER

If a fire occurs in the vehicle, evacuate the vehicle as quickly and as safely as possible. Consider the cause and the severity of the fire and the risk involved before trying to extinguish it. If the fire is major or fuel fed, move away from and stand clear of the vehicle and wait for emergency assistance to arrive.

WARNING

Portable fuel-burning equipment, including wood and charcoal grills and stoves, shall not be used inside the coach, as they can cause fire or asphyxiation. Failure to comply could result in serious injury or death.

Smoke Detectors

The smoke detector installed in your coach is operated on a 9 volt battery. The smoke detector is mounted on the ceiling in the living area of the unit. Read the operating instructions for details on the testing and care for this important safety device.

▲ WARNING

Test the smoke detector after the unit has been in storage, before each trip, and at least once a week during use. Failure to do so can result in death or serious injury.

Check your smoke detector for the manufacturer's expiration date. The battery needs to be tested periodically and replaced once a year and/or when the low battery signal sounds.

A WARNING

Test smoke alarm operation after vehicle has been in storage, before each trip, and at least once per week during use.

Failure to do so can result in death or serious injury.

AAVERTISSEMENT

Vérifier l'avertisseur de fumée si le véhicule a été entreposé, avant chaque déplacement et au moins une fois par semaine en service.

L'absence de vérification peut entraîner des blessures graves ou la mort.

When cleaning the case on any of the detectors, use a damp cloth or paper towel. Do not spray cleaners or wax directly into the case as it may cause false alarms.

A IMPORTANT

The detector should never be disabled because of nuisance or false alarm from cooking smoke or a dusty furnace. Ventilate the unit with fresh air and the alarm will shut off. Never disconnect or remove the battery from the smoke alarm.

Fire Extinguishers

The fire extinguisher is rated for Class B (grease, gasoline, diesel fuel, flammable liquids) and Class C (electrical) fires. These are the most common types of fires in vehicles. Fire extinguishers are mechanical, pressurized devices. Care must be exercised when they are handled.

The extinguisher should be inspected at least once a month. More frequent inspections may be required if the extinguisher is exposed to the weather or to possible tampering. Do not test the extinguisher by partially discharging, as it will cause a loss of pressure. Your fire extinguisher must be maintained as the operator's manual instructs for proper and safe operation.

Read the operator's manual and the instructions on the fire extinguisher. Be sure to know how and when to use the extinguisher and where it is located.

A DANGER

Failure to comply could result in an increased risk of fire, explosion, asphyxiation, serious injury, or death.

First Alert Battery-Operated Smoke Alarm (Model: SMI100RV)

This article provides basic operation instructions for a First Alert Battery-Operated Smoke Alarm (Model: SMI100RV).

Installation

- (A) Smoke LED (RED)
- (B) Power LED (GREEN)
- (C) Test/Silence Button
 - (1) Mounting Bracket
 - (2) Locking Pins (break out of bracket)
 - (3) Mounting Slots
 - (4) Latch to open battery compartment
 - (5) Battery Compartment Install 9V battery here
 - (6) Turn this way to remove
 - (7) Turn this way to attach

Operation

Normal Operations - Horn: Silent; Power LED: Flashes GREEN 1 time every minute; Smoke LED: Off

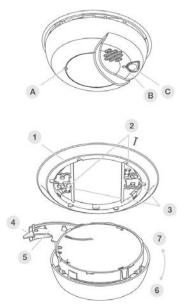
When You Test the Alarm - Horn: Short "chirp", then 3 beeps, pause, 3 beeps; Power LED: Flashes GREEN 1 time; Smoke LED: Flashes RED in sync with horn

If Battery Becomes Too Low - Horn: Chirps 1 time every minute; Power LED: Flashes Green 1 time every minute; Smoke LED: Off

Low Battery Signal is Silenced - Horn: Silent (for up to 8 hours); Power LED: Flashes Green 1 time every minute; Smoke LED: Off

Alarm is Not Operating Properly (Malfunction Signal) - Horn: 3 chirps every minute; Power LED: Flashes Green 3 times every minute; Smoke LED: Off

Alarm Has Reached End of Life - Horn: 5 chirps every minute; Power LED: Flashes Green 5 times every minute; Smoke LED: Off



End of Life Signal is Silenced - Horn: Silent (for up to 2 days, 14 days total); Power LED: Flashes Green 5 times every minute: Smoke LED: Off

Smoke is Detected - Horn: 3 beeps, pause, 3 beeps, repeat; Power LED: Off; Smoke LED: Flashes Red in sync with horn

Smoke Alarm is Silenced (up to 15 minutes) - Horn: Off; Power LED: Off; Smoke LED: Flashes Red 3 times, pause, 3 times, repeat

Testing and Maintenance

Weekly Testing

A WARNING

NEVER use an open flame of any kind to test this unit. You might accidentally damage or set fire to the unit or to your home.

DO NOT stand close to the Alarm when the horn is sounding. Exposure at close range may be harmful to your hearing. When testing, step away when horn starts sounding.

A CAUTION

Test Alarm operation after vehicle has been in storage, before each trip, and at least once per week during use. Failure to do so can result in death or serious injury.

It is important to test this unit every week to make sure it is working properly. Using the Test/Silence button is the recommended way to test this Smoke Alarm.

Press and release the Test/Silence button on the cover of the unit. The Alarm will chirp and then Alarm. If it does not Alarm, make sure the unit is receiving power and test it again. If it still does not Alarm, replace it immediately. During testing, you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause.

Regular Maintenance

This unit has been designed to be as maintenance free as possible, but there are a few simple things you must do to keep it working properly.

- Test it at least once a week.
- Clean the Smoke Alarm at least once a month; gently vacuum the outside of the Smoke Alarm using your
 household vacuum's soft brush attachment. Test the Smoke Alarm. Never use water, cleaners or solvents since
 they may damage the unit.
- If the green power LED flashes 2 times every minute (horn is silent) it means that the Alarm needs to be cleaned as indicated above. If green LED continues to flash, please call Consumer Support.
- If the Smoke Alarm becomes contaminated by excessive dirt, dust and/or grime, and cannot be cleaned to avoid unwanted Alarms, replace the unit immediately.
- Relocate the unit if it sounds frequent unwanted Alarms.
- When the battery becomes weak, the Smoke Alarm unit will "chirp" about once a minute (the low battery warning). This low battery warning should last for 7 days, but you should replace the battery immediately to continue your protection.

Choosing a Replacement Battery

Your Smoke Alarm requires one standard 9V battery. The following batteries are acceptable as replacements: Duracell #MN1604; Huiderui CP9V and Expocell CR9V. These batteries are available at many local retail stores.

A WARNING

Always use the exact batteries specified by this User's Manual. DO NOT use rechargeable batteries. Clean the battery contacts and also those of the device prior to battery installation. Install batteries correctly with regard to polarity (+ and -). Please dispose of or recycle used batteries properly, following any local regulations. Consult your local waste management authority or recycling organization to find an electronics recycling facility in your area. DO NOT DISPOSE OF BATTERIES IN FIRE. BATTERIES MAY EXPLODE OR LEAK.

A WARNING

Keep battery out of reach of children. In the event a battery is swallowed, immediately contact your poison control center, your physician, or the National Battery Ingestion hotline at 202-625-3333 as serious injury may occur.

A IMPORTANT

Actual battery service life depends on the Alarm and the environment in which it is installed. All the batteries specified above are acceptable replacement batteries for this unit. Regardless of the manufacturer's suggested battery life, you MUST replace the battery immediately once the unit starts "chirping" (the "low battery warning").

If This Smoke Alarm Sounds

Responding to an Alarm

During an Alarm, you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause.

A WARNING

If the unit Alarms get everyone out of the house immediately.

If the unit Alarms and you are not testing the unit, it is warning you of a potentially dangerous situation that requires your immediate attention. NEVER ignore any Alarm. Ignoring the Alarm may result in injury or death.

Never remove the batteries from a battery operated Smoke Alarm to stop an unwanted Alarm (caused by cooking smoke, etc.). Removing batteries disables the Alarm so it cannot sense smoke, and removes your protection. Instead open a window or fan the smoke away from the unit. The Alarm will reset automatically.

What to Do in Case of Fire

- Don't panic; stay calm. Follow your family escape plan.
- Get out of the house as quickly as possible. Don't stop to get dressed or collect anything.
- Feel doors with the back of your hand before opening them. If a door is cool, open it slowly. Don't open a hot door. Keep doors and windows closed, unless you must escape through them.
- Cover your nose and mouth with a cloth (preferably damp). Take short, shallow breaths.
- Meet at your planned meeting place outside your home, and do a head count to make sure everybody got out safely.
- Call the Fire Department as soon as possible from outside. Give your address, then your name.
- Never go back inside a burning building for any reason.
- Contact your Fire Department for ideas on making your home safer.

Source(s): First Alert User's Manual RV Smoke Alarm Battery Operated (Model: SMI100RV)

Product(s): First Alert Battery Operated RV Smoke Alarm (Model: SMI100RV, Newmar Part Number: 173477)

BRK Smoke Detector Quick Start (Model: FG250RV)

This article provides basic operation instructions for a BRK smoke detector (Model: FG250RV).

If the Smoke Alarm Sounds

During an alarm, you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause; and the Red LED will flash rapidly.

A WARNING

If the unit alarms and you are not testing the unit, it is warning you of a potentially dangerous situation that requires your immediate attention. NEVER ignore any alarm. Ignoring the alarm may result in injury or death.

A WARNING

Never remove the batteries from a battery operated Smoke Alarm to stop an unwanted alarm (caused by cooking smoke, etc.). Removing batteries disables the alarm so it cannot sense smoke, and removes your protection. Instead open a window or fan the smoke away from the unit. The alarm will reset automatically.

A WARNING

If the unit alarms get everyone out of the house immediately.

Weekly Testing

It is important to test this unit every week to make sure it is working properly. Using the test button is the recommended way to test this Smoke Alarm. Press and hold the test button on the cover of the unit until the alarm sounds (the unit may continue to alarm for a few seconds after you release the button). If it does not alarm, make sure the unit is receiving power and test it again. If it still does not alarm, replace it immediately. During testing you will hear a loud, repeating horn pattern: 3 beeps, pause, 3 beeps, pause; and the Red LED will flash rapidly.

A WARNING

Never use an open flame of any kind to test this unit. You might accidentally damage or set fire to the unit or to your home. The built-in test switch accurately tests the unit's operation as required by Underwriters Laboratories, Inc. (UL).

A WARNING

If the alarm ever fails to test properly, replace it immediately.

A CAUTION

Do not stand close to the alarm when the horn is sounding. Exposure at close range may be harmful to your hearing. When testing, step away when horn starts sounding.

Regular Maintenance

This unit has been designed to be as maintenance free as possible, but there are a few simple things you must do to keep it working properly.

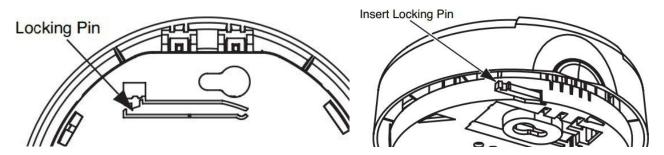
- Test it at least once a week.
- Clean the Smoke Alarm at least once a month; gently vacuum the outside of the Smoke Alarm using your household vacuum's soft brush attachment. Test the Smoke Alarm. Never use water, cleaners or solvents since they may damage the unit.
- If the Smoke Alarm becomes contaminated by excessive dirt, dust and/or grime, and cannot be cleaned to avoid unwanted alarms, replace the unit immediately.
- Relocate the unit if it sounds frequent unwanted alarms. See "Locations to Avoid for Smoke Alarms" for details.
- When the battery becomes weak, the Smoke Alarm unit will "chirp" about once a minute (the low battery warning). This low battery warning should last 7 days, but you should replace the battery immediately to continue your protection. Note: If locking pin is engaged see "Locking Feature" section for unlocking instructions.

Replacing the Battery

Your Smoke Alarm requires one standard 9V battery. The following batteries are acceptable as replacements: Duracell #MN1604, Eveready (Energizer) #522. You may also use a Lithium battery like the Ultralife U9VL-J, U9VL-J-P for longer service life between battery changes. These batteries are available at many local retail stores.

To lock/unlock the cover to the base:

- 1. Using needle-nose pliers or a utility knife, detach locking pin from back of alarm base.
- 2. Insert locking pin into the slot located on the front of the alarm as shown in the diagram.
- 3. Remove pin to unlock and replace battery.



Source(s): BRK Battery Powered Smoke Alarm User's Manual

Product(s): BRK Electronics Smoke Detector (Model: FG250RV, Newmar Part Number: 119606)

Kidde 10 lbs. Fire Extinguisher UL Quick Start (Model: K2D82-110AC)

This article provides basic operation instructions for a Kidde fire extinguisher.

How to Use Fire Extinguishers

Stand 5 feet away from the fire and follow the four-step PASS procedure recommended by the National Fire Protection Association:

- P Pull the pin and hold the extinguisher with the nozzle pointing away from you.
- A Aim low at the base of the fire.
- S Squeeze the lever slowly and evenly to discharge the extinguishing agent. When the agent first hits the fire, the fire may briefly flare up. This should be expected.
- S Sweep the nozzle from side to side, moving carefully toward the fire. Keep the
 extinguisher aimed at the base of the fire.

When to Use Fire Extinguishers

It's important to remember that fire extinguishers are only one element of a complete fire survival plan. Only use your extinguisher after making sure:

- All residents of the home have been evacuated to safety
- The fire department has been notified
- There is a clear exit behind the person using the extinguisher

Use your extinguisher only to keep a small self-contained fire from growing, only when the room is not filled with smoke, or to create a safe pathway out of the home. Be sure to read the instructions and become familiar with your fire extinguisher's parts and operation before a fire breaks out.

Source(s): Kidde Fire Extinguisher Owner's Manual

Carbon Monoxide Safety

This articles provides information about the safe use of carbon monoxide-producing coach components.

Carbon Monoxide Poisoning

Carbon monoxide is a colorless, tasteless, odorless gas. It is a by-product of the burning of fossil fuels (gasoline, propane gas, diesel fuel, etc.). The chassis and generator engines, furnaces, water heater, propane gas refrigerator, and range produce carbon monoxide constantly while they are operating.

A DANGER

Carbon monoxide is deadly. Read and understand the following precautions, as well as any warning labels in your coach, to protect yourself and others from the effects of carbon monoxide poisoning.

A DANGER

Vehicles and equipment powered by internal combustion engines and placed in recreational vehicles can cause carbon monoxide poisoning or asphyxiation, which could result in death or serious injury. The flammable liquids used to power these items can cause a fire or explosion, which can result in death or serious injury.

To reduce risk:

- 1. Do not ride in the vehicle storage area when vehicles are present.
- 2. Do not sleep in the vehicle storage area when vehicles are present.
- 3. Close doors and windows in walls of separation (if installed) when any vehicle is present.
- 4. Run fuel out of engines of stored vehicles after shutting off fuel at the tank.
- 5. Do not store, transport, or dispense fuel inside this vehicle.
- 6. Open the windows, openings, or air ventilation systems provided for venting the transportation area when vehicles are present.



7. Do not operate propane appliances, pilot lights, or electrical equipment when motorized vehicles are present.

If you, or anyone else, experience any of the following carbon monoxide poisoning symptoms, exit the coach immediately. Seek medical attention if the symptoms persist. Shut down the coach, and do not operate it until it has been thoroughly inspected and repaired. Symptoms include dizziness, nausea, vomiting, muscular twitching, throbbing in the temples, inability to think coherently, weakness and/or sleepiness, and/or Intense headaches.

A WARNING

Do not block the tailpipes or exhaust ports. Do not situate the vehicle in a place where the exhaust gases have any possibility of accumulating either outside, underneath, or inside your vehicle or any nearby vehicles. Outside air movements can carry exhaust gases inside the vehicle through windows or other openings remote from the exhaust outlet. Operate engines, carbon monoxide-producing systems, or components only when safe dispersion of exhaust gases can be assured. Monitor outside conditions to be sure that exhaust continues to be dispersed safely.

Carbon Monoxide (CO) Detectors

The detector is equipped with a "sensor activation strip," which must be removed for the detector to operate properly. This should have been done during the dealer's Pre-Delivery Inspection. Please check the detector to verify that the activation strip has been removed. The CO detectors are self-contained and do not require any maintenance other than normal cleaning and dusting.

Install battery or batteries into the battery holder, and observe the polarity. After approximately 30 seconds, the battery-operated detector will begin monitoring for carbon monoxide, making the device operational. The test/reset button is used to test the detector's electronics and reset the detector after an alarm. Test the detector weekly.

A WARNING

Under no circumstance should you operate any engine while sleeping. When you are sleeping, you are not able to monitor outside conditions to ensure that engine exhaust does not enter the coach. Check the exhaust system frequently for damage. If damage is found, do not operate the system. Never modify the exhaust system(s) in any way.

BRK First Alert Carbon Monoxide Alarm Quick Start (Model: CO250RVA)

This article provides basic operation instructions for a BRK (First Alert) carbon monoxide alarm (Model: CO250RVA).

How Your CO Alarm Works

A CO Alarm measures the CO levels in the air. It will alarm if CO levels rise quickly (if the heat exchanger on your furnace breaks, for example), of if CO is consistently present (a slow CO leak on a fuel-burning appliance).

This Carbon Monoxide alarm features a permanently installed sensor and an 85 dB alarm horn. It also has a silence feature to temporarily quiet the alarm horn.



Understanding Your CO Alarm

Welcome Chirp	Horn chirps and light blinks once when batteries are first connected.	
Alarm Receiving Battery Power	Light flashes every minute. Horn is silent.	
Low Battery Warning	The light continues to flash (RED) and the horn also "chirps" once every minute. This warning should last for up to 30 days, but you should replace the batteries as soon as possible.	
During Testing	Light flashes RED with the horn pattern (4 beeps, pause, 4 beeps), simulating a CO Alarm condition.	

CO Alarm	Sensor has detected enough CO to trigger an alarm. Light flashes rapidly and horn sounds loudly (repeating 4 beeps, pause). During an alarm, move everyone to a source of fresh air. DO NOT move the CO Alarm!	
CO Alarm Requires Service (Malfunction Signal)	The light flashes (RED) and the horn sounds 3 "chirps" every minute. CO Alarm needs to be replaced.	
CO Alarm Has Reached End of Life	The light flashes (RED) and the horn sounds 3 "chirps" every minute. CO Alarm needs to be replaced.	

If the CO Alarm Sounds

A WARNING

Actuation of your CO Alarm indicates the presence of carbon monoxide (CO) which can kill you. In other words, when your CO Alarm sounds, you must not ignore it!

If the Alarm Signal Sounds

- 1. If you hear the alarm horn and the Red light is flashing, move everyone to a source of fresh air. DO NOT disconnect the battery from the CO Alarm! Do a head count to check that all persons are accounted for. Do not re-enter the premises, or move away from the open door or window until the emergency services responder has arrived, the premises have been aired out, and your CO Alarm remains in its normal condition.
- 2. Call your emergency services, fire department or 911.
- 3. After following steps 1-2, if your CO Alarm reactivates within a 24-hour period, repeat steps 1-2 and call a qualified appliance technician to investigate for sources of CO from fuel-burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately.

Using the Silence Feature

A WARNING

The Silence Feature is for your convenience only and will not correct a CO problem. Always check your home for a potential problem after any alarm. Failure to do so can result in injury or death.

WARNING

NEVER remove the batteries from your CO Alarm to silence the horn. Use the silence feature. Removing the batteries removes your protection!

The Silence Feature is intended to temporarily silence your CO Alarm's alarm horn while you correct the problem—it will not correct a CO problem. While the alarm is silenced it will continue to monitor the air for CO.

When CO reaches alarm levels the alarm will sound—repeating horn pattern: 4 beeps, a pause, 4 beeps, etc. Press and hold the Test/Silence button until the horn is silent. The initial Silence cycle will last approximately 4 minutes.

NOTE: After initial 4-minute Silence cycle, the CO Alarm re-evaluates present CO levels and responds accordingly. If CO levels remain potentially dangerous —or start rising higher—the horn will start sounding again.

When the detector is silenced:

- IF the CO alarm is silent for only 4 minutes, then starts sounding loudly 4 beeps, pause, 4 beeps, pause... THEN the CO levels are still potentially dangerous.
- IF the CO alarm remains silent after you pressed the Test/Silence button... THEN the CO levels are dropping.

Silencing the Low Battery Warning

This silence feature can temporarily quiet the low battery warning "chirp" for up to 8 hours. You can silence the low battery warning "chirp" by pressing the Test/Silence button. The horn will chirp, acknowledging that the low battery silence feature has been activated.

After 8 hours, the low battery "chirp" will resume. Replace the battery as soon as possible; this unit will not operate without battery power!

To deactivate this feature: Press the Test/Silence button again. The unit will go into Test Mode and the low battery

warning will resume (LED flashes and unit sounds "chirp" once a minute.) If you cannot silence the low battery warning, replace the battery immediately.

Silencing the End of Life Signal

This silence feature can temporarily quiet the End of Life warning "chirp" for up to 2 days. You can silence the End of Life warning "chirp" by pressing the Test/Silence button. The horn will chirp, acknowledging that the End of Life silence feature has been activated.

- After approximately 2 days, the End of Life "chirp" will resume.
- After approximately 2-3 weeks the End of Life warning cannot be silenced.

Testing and Maintenance

Weekly Testing

▲ WARNING

Test the CO Alarm once a week. If the CO Alarm ever fails to test correctly, have it replaced immediately! If the CO Alarm is not working properly, it cannot alert you to a problem.

▲ WARNING

Do NOT stand close to the Alarm when the horn is sounding. Exposure at close range may be harmful to your hearing. When testing, step away when horn starts sounding.

Push and hold the Test/Silence button on the cover until the LED flashes. The alarm horn will sound 4 beeps, a pause, then 4 beeps. Th ALARM (RED) light will flash. The alarm sequence should last 5-6 seconds. If it does not alarm, make sure fresh batteries are correctly installed, and test it again. If the unit still does not alarm, replace it immediately.

If the alarm does not test properly:

- 1. Make sure the battery is installed correctly.
- 2. Be sure the Alarm is clean and dust-free.
- 3. Install a fresh 9V battery and test the Alarm again.

▲ WARNING

DO NOT try fixing the Alarm yourself - this will void your warranty! Install a new CO Alarm immediately.

A WARNING

The Test/Silence button is the only proper way to test the CO Alarm. NEVER use vehicle exhaust! Exhaust may cause permanent damage and voids your warranty.

Regular Maintenance

To keep the CO Alarm in good working order:

- Test it every week using the Test/Silence button.
- Vacuum the CO Alarm cover once a month, using the soft brush attachment. Never use water, cleaners, or solvents, since these may damage the unit. Test the CO Alarm again after vacuuming.
- Replace the batteries when the CO Alarm "chirps" about every minute (the low battery warning). The low battery warning should last for 30 days, but you should replace the battery immediately to continue your protection.

Choosing a replacement battery:

This CO Alarm requires one 9V alkaline battery. The following batteries are acceptable as replacements: Alkaline Batteries — Duracell MN1604 or Energizer 522; Lithium Batteries — Ultralife U9VL-J. These replacement batteries are commonly available at local retail stores.

A WARNING

Always use the exact batteries specified by this User's Manual. DO NOT use rechargeable batteries. For products requiring multiple batteries, replace all batteries of a set at the same time. Do Not Mix Old and New Batteries. Clean the battery contacts and also those of the device prior to battery installation. Install batteries correctly with regard to polarity (+ and -).

A WARNING

Please dispose of or recycle used batteries properly, following any local regulations. Consult your local waste management authority or recycling organization to find an electronics recycling facility in your area. DO NOT DISPOSE OF BATTERIES IN FIRE. BATTERIES MAY EXPLODE OR LEAK.

Source(s): BRK Battery Powered Carbon Monoxide Alarm (CO250RVA-48B) User's Manual Product(s): BRK Electronics Carbon Monoxide Alarm (Model: CO250RVA, Newmar Part Number: 125654)

EMERGENCY EXITS

Hehr/LCI Emergency Exit and Vent Window Operation

This article provides instructions for opening and closing Hehr/LCI emergency exit and vent windows.

Hehr/LCI Egress Emergency Exit Window

Select Hehr windows have an opening window pane in the egress window for ventilation. This style of window can also be opened in the event of an emergency.

To open the vent: Unclip and lower the arm. Swing the arm 90 degrees, and push out on the arm until the red handle latches.

To close the vent: Unclip the red handle from the latch by lifting slightly while pushing outward. Once the latch releases, pull the arm in until the window is closed. Rotate the arm 90 degrees until it latches into the closed position.

In the event of an emergency, open the window: Remove the screen by pulling out on the red handle. Push and release the lever from the locking hook. Rotate the lever 90 degrees, and push it through the slot in the window frame. Escape through the opening.

Hehr/LCI Double-Latched Emergency Exit Window

To open the emergency exit double-latched window: Flip both latches up to the open position. Push out on the window.

To close the emergency exit double-latched window: Pull the window shut while holding the window track with one hand. With the other hand, rotate the latch up until it connects with the track on the window. Press the front side down until it latches. Repeat the steps for the second latch.

Emergency Egress Exit Door and Ladder Operation

This article provides the Newmar-recommended step-by-step instructions for operating the emergency exit door and ladder.

A NOTICE

The emergency egress exit door and ladder is a feature only installed on select coach models and floor plans.

To use the emergency egress exit door:

1. Unlock the deadbolt by turning it in the direction specified on the label.









- 2. Make sure the door latch is unlocked.
- 3. Unlatch and completely open the door to avoid coach damage during ladder extension.
- 4. Grab and pull the tab to remove the ladder cover, and set it aside.
- 5. Grab and pull the tab on the Velcro strap to release the ladder.
- 6. Flip the ladder out, allowing it to extend to the ground.

To close the emergency exit door:

- 1. Lift the ladder from the bottom, stacking the rungs and pushing the ladder up into the door cavity.
- 2. Secure it in place with the Velcro strap.
- 3. Reinstall the ladder cover.
- 4. Close and latch the door.
- 5. Lock the door latch by sliding it into the locked position.
- 6. Lock the deadbolt by turning it in the direction specified on the label.

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APPLIANCES

This chapter provides information regarding each appliance available for your coach model and year, including cooktops and ranges, dishwashers, fireplaces, microwaves and convection ovens, refrigerators and freezers, central vacuum systems, and washers and dryers.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

Before Scheduling Service Work for Your Appliance

This article provides helpful tips to follow prior to scheduling service work for your coach appliances.

A IMPORTANT

Most appliance manufacturers (i.e. Whirlpool, GE, Maytag, Samsung, Fisher Paykel) require that service work performed on their appliances be completed by one of their own authorized service technicians. However, most appliance service technicians will not remove any appliance from its secured location if it is installed inside an RV. Instead, most require the appliance to be removed from its secured location prior to completing any service work.

Complete the following steps prior to scheduling any appliance servicing, repairs, or replacement, as this requires the coordination of multiple parties to complete the repair.



A NOTICE

It is recommended that you contact the appliance manufacturer right away so they can note the account/issue. They may also assist with locating an authorized service technician near your location.

To service an appliance in your coach, select one of the following options:

Option 1

- 1. Take the coach to your dealer, who can coordinate an appointment with a local manufacturer-specific appliance service technician to come on-site to make the repair.
- 2. In the meantime, one of the dealer technicians will remove the appliance from its mounted position so that the manufacturer-specific technician can service it.
- 3. Once repairs are complete on the appliance, the dealer technician will reinstall the appliance in its mounted position.

Option 2

- 1. Set an appointment with a local manufacturer-specific service technician.
- 2. Contact a local mobile technician to come to your location to remove the appliance prior to the appointment with a manufacturer-specific appliance technician.
- 3. Once the mobile technician has removed the appliance, the manufacturer-specific technician can then service the appliance.
- 4. After repairs are made, contact the mobile technician to come back to the coach and reinstall the appliance.

Option 3

- 1. Set an appointment with a local manufacturer-specific appliance service technician.
- 2. Remove your own appliance from its mounted position. Some instructions may be obtained on Newgle or by contacting Newmar Customer Service at 1-800-731-8300 (select the appropriate menu option).
- 3. Once the manufacturer-specific technician has serviced the appliance, reinstall it by reversing the procedure for removing it from its mounted position.

COOKTOPS AND RANGES

Single or Double Solid Surface Cooktop Cover Overview

This article provides an overview of the solid surface cover for the range or cooktop. This cover may be made up of one or two solid surface pieces.

Your range may be equipped with a solid surface cover that matches your countertop material. This cover helps to protect the burners when they are not in use. Before cooking on the range top, the cover must be removed and stored during cooking. Some coaches with an induction cooktop may have a solid surface cover with a built-in cutting board.

A IMPORTANT

Never close the cover while the burners are in use. Never use the range while the RV is moving and remember to reinstall the solid surface cover when the range top is cool and not in use.



True Induction 2-Burner Induction Cooktop Quick Start (Model: TI-2B / S2F3)

This article provides basic operation instructions for a True Induction 2-Burner Induction Cooktop (Model: TI-2B / S2F3).

Overview

The counter inset model of the Double Burner Induction Cooktop is not only energy efficient and safe. It also features a sleek glass-ceramic top that fits directly into your counter, maximizing the amount of space that you have to work with. Space is important, especially in an RV. You don't have to worry about losing counter space or storage because the cooktop is nothing more than a flat surface.



A NOTICE

Induction cooktops require pots and pans that are made of ferrous (meaning magnetic) materials. The following are not compatible: heat-resistant glass, ceramic, copper, aluminum pan/pots, round-bottomed cookware, or cookware with a base less than 4.5 inches.

How to Use

Unlike standard stove tops that generate and displace heat in a way that wastes energy and runs the risk of causing injury or being a fire hazard, the counter inset induction cooktop generates heat through a magnetic circuit that connects with ferromagnetic cookware, allowing the heat to be generated by the pot or pan being used. The True Induction cooktop is also easy to use.

- 1. Plug the power plug into a standard outlet.
- 2. The Power button will light up and the unit will sound to indicate on.
- 3. The device will remain in standby mode, awaiting user direction.
- 4. Place ferromagnetic cookware (with water, oil or food already inside) on the center of the glass-ceramic top center.
- 5. Now press the Power button on the control panel, this will turn the cooktop on. The power display will blink and sound another indicator.
- 6. Press the Heat function key once. The pre-set power level "5" is the default selection as the device turns on.
- 7. Using the +/ keys you can change the settings at any time, ranging from 1-10. This is considered to be the HEAT function.

A CAUTION

Do not place induction cookware on the cooktop burner until operation of cooktop is desired.



Some induction cooktops are removable and can be used outside of the coach. If removed, the legs for the cooktop need to be installed in order to provide adequate airflow. In most cases, the legs are included with the cooktop manual inside of the coach owner's information package (black bag).





Power Invariance Technology

The maximum power of an individual burner level is at setting 10. But, when operating both burners their combined total is level 10 (newer cooktops may have a combined total of a level 14), meaning that when operating the two burners at the same time they'll self adjust levels accordingly:

- When you increase the power of one side, the power output of the other side will reduce automatically.
 - Older cooktops: If one side is at 6, the other burner automatically reduces power to level 4 creating a total of max 10 setting.
 - Newer cooktops: If one side is at 6, the other burner automatically reduces power to level 8 creating a total of max 14 setting.
- If one side of the double burner is using the HEAT function and the other side uses the TEMP settings, the maximum HEAT setting is "5." Newer cooktops may have a maximum heat setting of "9."

Using the Temperature Setting

Using the +/ - keys you can change the temperature settings at any time. Settings range from 150-450 degrees Fahrenheit. (Exact temperatures: 150, 180, 210, 240, 270, 300, 330, 360, 390, 420 and 450 F).

Using the Timer Function

- After selecting the HEAT or TEMP mode, press the TIMER button once. The display will show the number "0."
 Using the +/ keys you can select the operating time in 5-minute intervals (up to max 150 min.) and reducing 1 minute.
- The display will count down the duration in minutes. Once the time is up, the unit sounds and automatically goes into standby mode. To continue cooking, press the Power button and Heat button to restart.
- During the timer operation, you can change the timer duration at any time with the arrow keys. The device's built-in memory maintains the HEAT or TEMP setting previously entered.
- You can also change the HEAT or TEMP settings without affecting the current timer setting.

Built-In Safety Shut Off

- The True Induction cooktop is designed to automatically shut off after 150 minutes of use. This built-in auto shut off is a safety feature.
- This function occurs for both the HEAT and TEMP settings. The panel displays EE code and sounds indicating this auto-off setting.
- In the event your food requires further cooking, the unit can easily be turned back on and re-set to the desired setting

Turning Off Unit

- When you are finished cooking, simply press the Power button to turn off the machine.
- Upon completion of cooking, the fan may remain on until the unit is cool.

The power light indicators turn on and the unit will immediately begin heating if proper ferromagnetic cookware is used. There are two main heat settings, a quick touch level selection featuring settings 1-10 and an exact temperature setting ranging from 150 to 450 degrees Fahrenheit. The default heat setting is level 5 and the settings can be adjusted by pressing the "+/-" key to achieve the desired heat. The default temperature setting is 270 degrees Fahrenheit and the temperature can be adjusted in 30-degree increments.

Source(s): True Induction Double Burner TI-2B Counter Inset Induction Cooktop Manual

Product(s): True Induction 1800w 2-Burner Induction Black Landscape Electric Cooktop (Model: TI-2B (S2F3), Newmar Part Number: 145601) or True Induction 1800w 2-Burner Induction Black Landscape Electric Cooktop (Model: TI-2B, Newmar Part Number: 124108)

DISHWASHERS

Fisher Paykel Single DishDrawer Dishwasher Quick Start (Model: DD24SAX9)

This article provides basic operation instructions for a Fisher Paykel Single DishDrawer Dishwasher (Model: DD24SAX9).

Operating Instructions - Starting a Wash

- 1. Discard scraps. Scrape large food particles off (e.g. bones, fruit stones) and remove any foreign objects (e.g. toothpicks, strings, paper).
- 2. Load dishes carefully. To help with wash performance, arrange dishes so they are evenly spaced and not nesting. (Accommodates plates up to a max height of 280mm (11") for standard tubs or 310mm (12 1/4") for tall tubs.)
- 3. Check spray arm(s) are mounted correctly and can rotate fully around. Check the spray arm is mounted correctly by physically rotating it around with your hand. Before a wash, ensure there are no items blocking the spray arm(s) from rotating.
- 4. Add detergent. Fill the detergent dispenser with powdered detergent and close the dispenser door. If using a tablet or gel pouch, place it in the cutlery basket or at the edge of the base rack.

A IMPORTANT

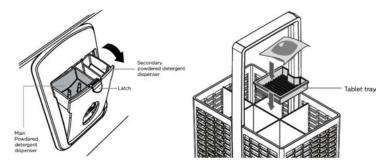
Do not place liquid detergent or tablets in the detergent dispenser.

- 1. Check rinse aid. If the indicator on its plug glows bright red, refill the rinse aid dispenser with liquid rinse aid. Make sure you then refit the rinse aid plug back into its original position, by rotating the plug back into an upright position.
- 2. Select wash. Power the dishwasher on then select wash program.
- 3. Start wash or set Delay start. Ensure drawer is closed.
 - 1. To start wash: Press the Start/Pause button.
 - 2. To set delay start: Press and hold the Start/Pause button to enter delay start, then press and hold the Start/Pause button again to increase the delay start time.

Adding Detergent

Powdered Dishwasher Detergent

- 1. Press the latch down to open the dispenser.
- Check that the dispenser is empty and dry, then add detergent (do not place solid or liquid tablets in the dispenser). No detergent is needed for the Rinse program.
- Close the dispenser until it clicks shut. The detergent will automatically be released into the drawer during the wash program.



A NOTICE

When washing heavily soiled dishes and in very hard water, you may also fill the secondary dispenser with detergent to aid dishwasher performance.

Pouch Packs of Gel or Powder or Solid Dishwasher Tablets

Place on tablet tray in the cutlery basket. If the cutlery basket is not being used for a particular load, wedge pack between the racking on the side.

A IMPORTANT

Don't place the pack or tablet on the floor of the drawer, as it may interfere with the spray arm rotation and affect wash performance.

Notes on using tablets:

- If you are using tablets, follow manufacturer instructions on the packet. Some tablets may not be suitable for all wash programs.
- Using tablets could improve wash performance in hard water areas.
- Make sure that tablets never get in direct contact with dishes or cutlery.
- If you are using dishwasher tablets with a built-in rinse aid component, we recommend turning off the rinse aid.

A IMPORTANT

Dishwasher detergents are strongly alkaline. They can be extremely dangerous if swallowed. Avoid contact with the skin and eyes and keep children and infirm persons away from the dishwasher when it is open. Check that the powdered detergent dispenser is empty after completion of the wash program.

Unsuitable Detergents

These types of detergent are not suitable and may damage your dishwasher and lead to a service call that is not covered by warranty.

A IMPORTANT

Do NOT use these in your dishwasher: liquid detergents, laundry detergents, hand washing liquids, soaps, disinfectants.

How Much Detergent to Use

For powdered detergent... follow the quantities relevant to your location and water hardness level. Use the markings to help you measure the correct quantities. For other types of detergent, follow the manufacturer's recommendations.

Controls and Indicators

- **(A) Off/On:** Press the Power button to turn the dishdrawer on or off. Opening the drawer will automatically turn the dishwasher on.
- **(C) Wash Program Selector:** Press the Fast Forward button to scroll through wash program options.
- **(D) Start / Delay Start:** Press the Play/Pause button to start the wash. To pause: Press the Play/Pause button again. The wash stage indicator will flash. Wait for the 3 short and one long tone before opening the drawer. Forcing it

open mid-cycle may cause damage or injury. If the drawer is not restarted within 7 minutes, it will tone intermittently until



it is restarted.

- To Delay Start: Press and hold until the Play/Pause button until the "1h" appears on the display, then release. You are now in Delay start mode. Press the Play/Pause button until the display shows the number of hours you want to delay the start of a wash by (1 to 12 hours). Note: If you scroll past 12 hours, the dishwasher will exit Delay start mode. To re-enter delay start, go back to the previous step. The wash will start once the delay time is over, provided the drawer is closed. If the drawer is opened after delay start has been set (for example if you need to load more dishes), delay start will be paused after the drawer is closed.
- To Restart Delay Start: Close the drawer. The clock icon will flash. Press the Play/Pause button to resume.
- Cancel Wash/Cancel Delay Start: Press the Power button to cancel a wash that has already started or to cancel the
 Delay start setting. If there is any water in the drawer, it will automatically drain before the dishwasher turns off.
- **(E) Keylock:** Keylock disables all the buttons helpful when cleaning the dishwasher. To activate: press and hold the Lock button until you hear one tone. The keylock indicator will come on. To cancel: press and hold the Lock button until you hear another tone and the keylock indicator stops flashing and goes out.
- **(E) Childlock:** Childlock disables all the buttons and locks the drawer closed, preventing unauthorized use by children. To activate: press and hold the Lock button until you hear a second tone. The keylock indicator will come on. To cancel: press and hold the Lock button until you hear another tone and the keylock indicator stops flashing and goes out.
- (F) Wash Program Indicators: These show which program is selected.
- (H) Display: Time remaining (minutes). Fault code numbers.
- (I) Wash Stage Indicators: (See 'During and after the wash cycle').
- (J) Keylock/Childlock Indicator: If lit: keylock or childlock is activated.
- (K) Delayed Start Indicator: If lit: delayed start is set.
- (L) Salt Indicator: If lit: salt reservoir is empty. (Water softener models only)

Wash Programs

Press the Fast Forward button to scroll through the wash program options.

Wash Program	Description	
Heavy	Heavily soiled pots, pans and dishes.	
Normal (Default)	Dishes that are quite heavily soiled or food soils that have been left to dry overnight.	
Normal Eco	Normally soiled dishes for optimum water and energy usage.	
Fast	Lightly soiled dishes.	
Delicate	Lightly soiled and heat sensitive crockery.	
Rinse	Prevents odors and soils from drying on dishes.	

During and After the Wash

As the wash progresses, the display will count down the minutes remaining and show what stage the program is at. When the program has finished, the display will show 0 and the dishwasher will sound a tone. After 30 seconds the display will go out. You may notice the following noises at the end of the wash. These are all part of normal operation:

The drying fan may continue to run after a wash program has finished for a set time or until the drawer is opened. The fan assists with drying and uses negligible amounts of energy. For best drying results, we recommend unloading the dishes once they have cooled.

Before Travel



Before traveling, lock the dishwasher drawer in the closed position. It is critical that the dishwasher drawer be locked into place any time the unit is in transit. If it is not, it can extend suddenly without warning, potentially damaging the dishwasher, its contents, the cabinetry, and may become dangerous to anyone standing near it.

MICROWAVES AND CONVECTION OVENS

Whirlpool Over-the-Range Convection Oven with Air Fry Mode Quick Start (Model: WMMF7330RZ)

This article provides basic operation instructions for a Whirlpool Over-the-Range Convection Oven with Air Fry Mode (Model: WMMF7330RZ).

Parts and Features

- (1) Vent
- (2) Grill Element
- (3) Cavity Light
- (4) Door Lock Latch
- (5) Rack (Position 2)
- (6) Open Door Pin
- (7) Rack (Position 1)
- (8) Oven Bottom
- (9) Serial Tag
- (10) Convection Element and Fan

Electronic Oven Controls (Buttons on Door Glass)



- (A) Air Fry: This function is to force air combined with the grill function to obtain a deep fried effect in a microwave oven environment instead of submerging the food in oil. Use with an air-fry basket. It is recommended to use a drip tray during the cycle, it can be placed in the oven bottom to catch dripping oil and juice.
- (B) Cook: The cook function is a microwave cooking function.
- **(C) Popcorn:** Cooking results may vary by brand and fat content. Follow the instructions provided by the microwave popcorn manufacturer.
- (D) Other Modes: Dehydrate, Keep Warm, Melt, Soften, and Roast (refer to Other Modes section for more information)
- (E) Back: Pressing the BACK button to go back to the previous screen.
- (F) Display
- **(G) Confirm / Menu:** At programming state, press CONFIRM/MENU button to confirm/save the setting and go to the next step.
- **(H) Settings:** Enables you to personalize the audible tones and oven operation to suit your needs. Press the Arrow buttons to toggle to your favorite choice. Press the BACK button to go back to the previous screen. Press the CONFIRM/MENU button to select. Press the CANCEL button to exit Settings.
- (I) Timer Set/Cancel: Set or cancel kitchen timer. At the idle state or running state, to set the kitchen timer up to 24 hours.
- (J) Start / +30 Sec (Add 30 Seconds): The Start button begins any oven function. During microwave cooking, when cooking is

interrupted by opening the door, press the START/+30 sec button after the door is closed again will resume the preset cycle. Press the START/+30 sec button once will start the microwave for 30 seconds, press repeatedly, will add the time amount of the button pressed.

(K) Door Open: Press the DOOR OPEN button to open the door. During cooking, press the DOOR OPEN button, cook time will be paused.

- (L) Cancel: Press the CANCEL button to exit and back to idle state. End the running cycle.
- **(M) Fan:** Press the Fan button to turn the vent fan on or off. Press the Fan button to set the vent fan speed among these options: HIGH MEDIUM LOW OFF. NOTE: To keep the microwave oven from overheating, the vent fan will automatically turn on if the temperature from the range or cooktop below the microwave oven gets too hot. When this occurs, the vent fan cannot be turned off until the product cools down.
- (N) Light: Press the Light button to set the vent light among these options: HIGH LOW OFF.
- (O) Right Arrow
- (P) Number Buttons
- (Q) Left Arrow
- (R) Food Options: Press the Food Options button to reach more cooking modes.
- **(S) Defrost:** This function allows you to quickly defrost food manually or automatically. Use this function to manually defrost, automatically defrost chicken breast, fish fillets, ground meat.
- (T) Reheat: This function allows you to reheat food manually or automatically. Use this function to manually defrost, automatically defrost chicken breast, fish fillets, ground meat.
- (U) Grill: To cook food evenly, hot air must be able to circulate.

Operating Instructions

Using Your Microwave Oven to Cook

- 1. Open the door.
- 2. Place food inside the microwave oven.
- 3. Select recipe.
- 4. Enter/Sense the amounts, or manually set the cooking time.
- 5. Close the door.
- 6. Press Start button to start the cooking.
- 7. The Cancel button can be used to cancel the function during or after cook time.

Using Your Oven to Cook

Always use oven mitts or pot holders when removing dishes from the oven, use the provided accessories or oven proof bakeware to bake/toast/broil/convect/bake/roast goods (on some models.)

- 1. Select oven modes.
- Select recipe.
- 3. Follow the display prompt to insert the accessories on the suggested level.
- 4. Set food weight, size, pieces or manual set temperature.
- 5. Press Start button to begin. Some cooking functions have preheating steps.
- 6. Place food into the provided accessory or a ovenproof bakeware, and then put inside the oven on the right level.
- 7. Close the door.
- 8. (Optional) Enter time to cook.
- 9. Press Start button to begin.
- 10. The Cancel button can be used to cancel the function during or after cooking time.

Oven Vents

The microwave oven vent(s) is flush to the cabinet, it will be opened automatically when it works, it should not be blocked or covered since it allows the inlet of fresh air into the cooling system. Also the bottom vent should not be blocked or covered since it allows the inlet of fresh air into the cooling system and the outlet of hot air from the cooling system. Blocking or covering vents will cause poor air circulation, affecting cooking, cleaning, and cooling results.

Oven Cooking Functions

Odors and smoke are normal when the microwave oven is used the first few times or when it is heavily soiled. During oven use, the heating elements will not remain on, but will cycle on and off throughout oven operation.

The provided accessories can help you to achieve the best results, use different accessories depending on the

recipe, see cooking tips on the display.

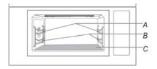
- Metal oven proof bakeware can be used during air fry, toast, bake, convect bake, roast, broil and dehydrate cycles.
- There are 3 levels to place the accessories, placing the appropriate accessories onto the right level will help you to achieve best results.
- When cooking oily or juicy foods in some cooking function, such as bake, air baking, convection bake, roast, placing the food on the toast pan directly, or placing the food on an oven proof baking plate, then placing the baking plate onto the wire rack.

Positioning Wire Rack, Air Fry Basket

There are three positions for wire rack, air fry basket, other cookware. The right position will help you achieve good performance when cooking food.

Air fry basket: Level 1 (B)

Wire rack: Level 0 (C), 1 (B), or 2 (A)



A. Rack Position 2 B. Rack Position 1 C. Oven Bottom

Modes

Defrost: This function allows you to quickly defrost food manually or automatically. Use this function to manually defrost, automatically defrost chicken breast, fish fillets, ground meat. Do Not Use: Air fry basket, wire rack

Reheat: This function allows you to reheat food manually or automatically. Use this function to manually defrost, automatically defrost chicken breast, fish fillets, ground meat. Do Not Use: Air fry basket, wire rack

Popcorn: Follow the instructions provided by the microwave popcorn manufacturer. Do Not Use: Air fry basket, wire rack

Cook: The cook function is a microwave cooking function. Do Not Use: Air fry basket, wire rack

Air Fry: This function is to force air combined with the grill function to obtain a deep fried effect in a microwave oven environment instead of submerging the food in oil. Use with an air-fry basket. It is recommended to use a drip tray during the cycle, it can be placed in the oven bottom to catch dripping oil and juice.

Put the food in the air fry basket without overlap and insert the air fry basket on the rack position 1. Air fry default temperature is 450°F (232°C). Use the left Arrow or right Arrow button to select a different temperature, 350°F (177°C) to 450°F (232°C) (skip this step for pre-set food). Press the CONFIRM/MENU button to set cooking time (manual air fry only) or select weight (for pre-set food). Use numbers buttons to set time in HH/MM, up to 2 hours (skip this step for pre-set food). Press START/+ 30 sec to cook. Use: Air fry basket

Dehydrate: This function is used to dry the moisture in the food.

Press the Other Modes button, reach Dehydrate submenu. Press the CONFIRM/MENU button to select. Select the desired temperature (manual) or pre-set food. Some tips prompt on the display, press the CONFIRM/MENU button to next step. Press the CONFIRM/MENU button to set the cooking time (skip this step for pre-set food). Press the START/+ 30 sec to cook. Use: Air fry basket

Keep Warm: Food Poisoning Hazard: Do not let food sit for more than one hour before or after cooking. Doing so can result in food poisoning or sickness. Do Not Use: Air fry basket, wire rack

Melt: The Melt function allows you to do manual melt, automatically melt butter, cheese, chocolate, the Melt function is under the Other modes. Do Not Use: Air fry basket, wire rack

Soften: The Soften function allows you to do manual soften, automatically soften butter, cream cheese, ice cream, the Soften function is under the Other modes. Do Not Use: Air fry basket, wire rack

Roast: This function allows to cook food as in traditional ovens. Therefore it is useful to cook pastries, bakeries, meat, poultry, fishes.

Press the Other Modes, and arrow button reach Roast submenu. Press the CONFIRM/MENU button to select. Some tips prompt on the display, Press the CONFIRM/MENU button to the next step. Select the desired temperature. Press the START/+ 30 sec button. The oven starts to preheat. After preheating, "Oven ready" is shown on the display. Open the door, place food inside the cavity on the recommended level. Close the door. Press the CONFIRM/MENU button to set cooking time or set delay time. Press the START/+ 30 sec to cook. Do Not Use: Wire rack

Grill: To cook food evenly, hot air must be able to circulate.

Open the door and insert the food to rack position 1 or oven bottom. Select the desired temperature and cooking time. Press the START/+ 30 sec button. After the cycle ends, let the product rest for at least 5 minutes. Use: Wire rack

Settings

The Settings selection key allows you access to the hidden functions within the Electronic Oven Control. These hidden functions are as below, You can use Arrow buttons to toggle to your favorite choice, use BACK button to back to previous screen, use CONFIRM/MENU button to select, and use CANCEL button to exit Settings.

Remote Start

Select Remote Start to enable the ability to utilize the Whirlpool app.

Cleaning and Maintenance

- Steam clean: This automatic cleaning cycle will help you to clean the microwave oven cavity and to remove unpleasant odors.
- IR cleaning (on some models): Clean the IR sensor when the display shows the cleaning reminder or manual clean if necessary.
- Reset filter: While the display shows the filter alert, replace a new charcoal filter and remove the filter alert to retrieve another 6 months duration.

Preference

Display Settings

- Display clock On/Off: Set the Clock on, both Date and Time will be on the screen, set the Clock off, both Date and Time will be hidden.
- Display brightness: Set the brightness of the screen, the brightness is set is 20%, 40%, 60%, 80%, and 100%.
- KCF mode: Set KCF: Set KCF mode on. Press and hold the CANCEL button to exit KCF mode.
- KCF bake: Use this function to bake during KCF mode. Press the CANCEL button once to exit baking. Press and hold CANCEL to exit KCF mode.

Language and Regional

- Language: English or Spanish or French is available.
- Temperature unit: °F or °C is available.
- Weight unit: Imperial Oz or Lbs, Metric Grams or Kg is available.
- Time format: 12 hours or 24 hours format.

Sound

- Sound volume: Set sound volume preferences.
- All sound: On/Off.
- Timers and alerts: Maximum, High, Medium, Low Off.
- Buttons and effects: Maximum, High, Medium, Low Off.

Time and Date

- Microwave oven will automatically using Wi-Fi or manually set global Time and date configuration.
- Set time: Set time in 12 hours with AM/PM (default setting), if you want to set time in 24 hours format, change time format first.
- Set date: Set date in MM/DD/YY.
- Time format: 12 hours or 24 hours format.

Source(s): GUIDE - WMMF7330RZ Whirlpool 1.1 Cu. Ft. Microwave Oven Hood Combination Quick Start Guide NOV 2023 and GUIDE - WMMF7330RZ Whirlpool 1.1 Cu. Ft. Microwave Oven Hood Combination Control Guide JAN 2024

Product(s): Whirlpool WMMF7330RZ 1.1 Cu. Ft. Over-the-Range Convection Oven with Air Fry Mode (Model: WMMF7330RZ, Newmar Part Number: 173020)

Refrigerators, Freezers and Ice Makers

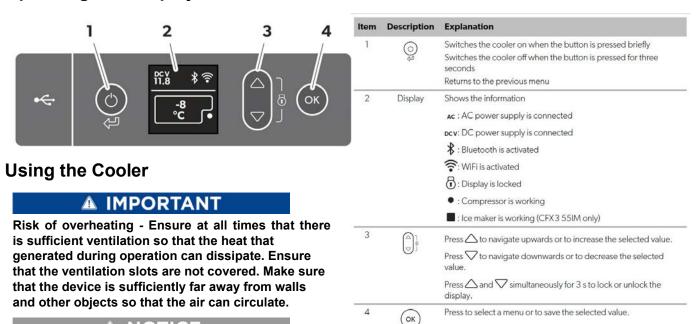
Exterior Portable Freezers

Dometic Exterior Portable Freezer Quick Start (Model: CFX3-25)

This article provides basic operation instructions for a Dometic Exterior Portable Freezer (Model: CFX3-25).

Operating and Display Elements

A NOTICE



When operating with the battery, the display switches off automatically if the battery voltage is low.

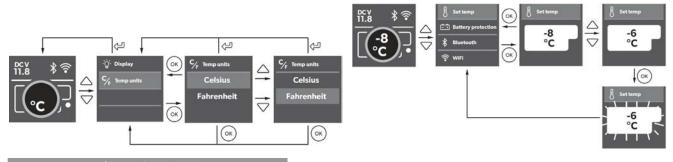
Navigating Through the Menus: The highlighted menu is selected. Press the UP arrow to navigate upwards. Press the DOWN arrow to navigate downwards. Press OK to select the required menu.

Changing Settings: The highlighted value or setting is selected. Press the UP arrow to increase the selected value or to choose the previous setting. Press the DOWN arrow to decrease the selected value or to choose the next setting.

Returning to the Previous Menu: Press the BACK arrow to return to the previous menu without saving.

Locking/Unlocking the Display: Press UP and DOWN arrow simultaneously for three (3) seconds to lock or unlock the display.

Selecting the Temperature Units and Setting the Temperature



A NOTICE

Damage hazard from excessively low temperature!!! Ensure that only those objects are placed in the cooler that are intended to be cooled at the selected temperature.

Using the Battery Protection

The device is equipped with 3-stage battery protection. The battery protection pre-vents excessive discharging when the device is connected to a vehicle starter battery or maximizes the use of a supply battery.

If the cooler is operated when the vehicle ignition is switched off, the cooler switches off automatically as soon as the supply voltage falls below a set level. The cooler will switch back on once the battery has been recharged to the restart voltage level.

A NOTICE

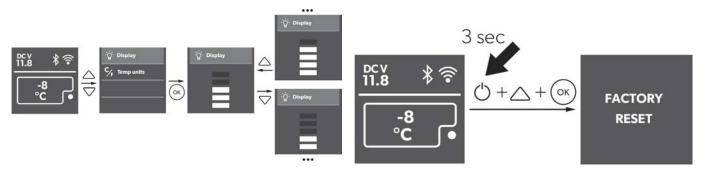
Damage hazard - When switched off by the battery protection, the battery will no longer be fully charged. Avoid starting repeatedly. Ensure that the battery is recharged.

A NOTICE

When the cooler is supplied by a starter battery, select the battery protection mode "MEDIUM" or "HIGH". If the cooler is connected to a supply battery, the battery protection mode "LOW" is ideal.

Setting the Display's Brightness or Resetting to Factory Settings

The reset function changes all display menu and app fields to the original factory settings.



USB Port for Power Supply

The USB port allows you to charge small devices like mobile phones and mp3 players.



Ensure that any small device connected to the USB port is compatible with 5 V/2 A operation.



Humidity can form frost in the interior of the cooling device or on the evaporator. This reduces the cooling capacity. Defrost the device in good time to avoid this.

A NOTICE

Never use hard or pointed tools to remove ice or to loosen objects which have frozen in place.

To defrost the cooler, proceed as follows: Take out the contents of the cooler. If necessary, place them in another cooling device to keep them cool. Switch off the device. Leave the lid open. Wipe off the defrosted water.

CFX 3 APP

The cooler can be monitored and controlled via Bluetooth or WiFi using an app that you can install on a compatible device. Download the CFX3 app from App Store or Google Play. Note that the CFX3 app may not be available in your country. For more information about connecting to the app, refer to the complete operation manual provided by Dometic.

Cleaning and Maintenance

A NOTICE

Never clean the cooler under running water or in dish water. Do not use abrasive cleaning agents or hard objects during cleaning as these can damage the cooler.

Occasionally clean the device interior and exterior with a damp cloth. Make sure that the air inlet and outlet vents on the device are free of any dust and dirt, so that heat can be released and the device is not damaged.

Source(s): Dometic Mobile Cooling CFX3 Compressor Cooler Operating Manual
Product(s): Dometic CFX3 25 Exterior Portable Freezer (Model: CFX3 25, Newmar Part Number: 161630)

Residential-Style Refrigerator Overview

This article provides a general overview of how a residential-style refrigerator operates.

Residential-style refrigerators are the most popular option installed in Newmar coaches. The refrigerator operates on 120 volt AC power and uses freon and a compressor to keep your food cold and fresh. The power may be supplied by the electrical hookup at the campsite, generator power or (in most coaches) an inverter with a charged house battery bank.

For models with a built-in ice maker, a pressurized water supply is required. In order for the ice maker to operate, you must have water in the fresh tank and have the water pump turned on, or your coach must be connected to city water supply. When placing items on the racks and in the bins, leave enough space for air to flow throughout the entire refrigerator cabinet.

All models are equipped with a means to latch and secure the doors for a tight seal and to prevent the doors from opening during transit. Become familiar with the latch operation and always lock prior to traveling.

Whirlpool French Door Refrigerator with Water Dispenser Quick Start (Model: WRF560SE)

This article provides basic operation instructions for a Whirlpool French Door Refrigerator with Water Dispenser (Models: WRF560SEHZ and WRF560SEYM).

There are two refrigerator compartment doors. The doors can be opened and closed either separately or together. There is a vertically-hinged seal on the left refrigerator door. When the left-hand refrigerator door is opened, the hinged seal automatically folds inward so that it is out of the way. When both doors are closed, the hinged seal automatically forms a seal between the 2 doors.

Using the Controls

A IMPORTANT

Wait 24 hours for your refrigerator to cool completely before adding food. If you add food before the refrigerator has cooled completely, your food may spoil. Adjusting the refrigerator and freezer temperature controls to a colder than recommended setting will not cool the compartments any faster.

The recommended setting should be correct for normal household refrigerator use. The controls are set correctly when milk or juice is as cold as you like and when ice cream is firm.

If the temperature is too warm or too cold in the refrigerator or freezer, first check the air vents to be sure they are not blocked before adjusting the controls.

Depending on your model, your refrigerator has either an internal control panel, located at the top of the refrigerator compartment, or an external control panel, located above the external water dispenser. Follow the instructions specific to your model.

The display screen on the dispenser control panel will turn off automatically and enter "sleep" mode when the control buttons and dispenser paddles have not been used for 2 minutes or more. While in "sleep" mode, the first press of a control button will only reactivate the display screen, without changing any settings. After reactivation, changes to any settings can then be made. If no changes are made within 2 minutes, the display will re-enter "sleep" mode. Touch any control button on the dispenser panel to activate the display screen.

Temperature Control

For your convenience, the temperature control is preset at the factory. When you first install your refrigerator, make sure the control is still set to the recommended setting (3 Snowflakes).

Adjusting the Controls

If you need to adjust the temperature in either the refrigerator or freezer compartment, use the settings listed in the following chart as a guide. Press the Temp button to display the desired number of snowflakes from 1 snowflake (least cold) to all 5 snowflakes (coldest).

NOTE: Except when starting the refrigerator, do not adjust the control more than one setting at a time. Wait 24 hours between adjustments for the temperature to stabilize.

Condition/Reason	Adjustment
Refrigerator too warm	Fridge Temp: One more snowflake
Freezer too warm or too little ice	Freezer Temp: One more snowflake
Refrigerator too cold	Fridge Temp: One less snowflake
Freezer too cold	Freezer Temp: One less snowflake

Cooling On/Off

Internal Control Panel

To turn cooling off, press and hold both the Fast Cool and Moisture Control buttons at the same time for 3 seconds. When cooling is OFF, "Cooling Off" will appear on the display screen.



To turn cooling back on, press and hold both the Fast Cool and Moisture Control buttons at the same time for 3 seconds. When cooling is ON, "Cooling Off" will disappear and the previously selected settings will appear on the display screen.

External Control Panel

To turn cooling off, press and hold both the Freezer Temp and Fridge Temp buttons at the same time for 3 seconds. When cooling is off, "Cooling Off" will appear on the display screen.



To turn cooling back on. Press and hold both the Freezer Temp and Fridge Temp buttons at the same time for 3 seconds. When cooling is on, "Cooling Off" will disappear and the previously selected settings will appear on the display screen.

Additional Features

Door Open Alarm

The Door Open icon lights up whenever either door is opened.

When either door is open for 5 minutes and cooling is on, an alert tone will sound three times, and the Door Open icon will flash seven times. This pattern will repeat every 2 minutes until all the doors are closed properly. The feature then resets and will reactivate when either door is left open again for 5 minutes.

NOTES:

- To mute the audible alarm while keeping the doors open, such as while cleaning the inside of the refrigerator, press
 any button on the control panel. The alarm sound will be temporarily turned off, but the Door Open icon will still be
 displayed on the dispenser control panel.
- Both doors must be fully closed to turn off the Door Open icon.

Fast Cool

The Fast Cool feature assists during times of high refrigerator use, full grocery loads or temporarily warm room temperatures.

Press FAST COOL to set the freezer and refrigerator to the coldest temperature settings. Press FAST COOL again to return to the selected temperature set point.

NOTES:

- The Fast Cool icon will be illuminated while the refrigerator is in Fast Cool mode.
- The Fast Cool feature will turn off automatically after 24 hours.

Moisture Control

The moisture control feature turns on a heater to help reduce moisture on the door hinge seal. Use in humid environments or when you notice moisture on the door hinge seal. The refrigerator uses more energy when Moisture Control is ON.

NOTE: The moisture control icon will light up to indicate the feature is ON. To turn on/off the moisture control feature:

- Internal Control Panel Press and hold MOISTURE CONTROL for 3 seconds.
- External Control Panel Press and hold LIGHT for 3 seconds.

Water Filter Status Light and Reset

The filter reset control allows you to restart the water filter status tracking feature each time you replace the water filter.

Press and hold WATER FILTER for 3 seconds, to reset the water filter status to Good. The water filter icon will turn blue.

Air Filter Status Light and Reset

The filter reset control allows you to restart the air filter status tracking feature each time you replace the air filter.

Press and hold AIR FILTER for 3 seconds, to reset the air filter status to Good. The air filter icon will turn blue.

Water Dispenser (on some models)

A IMPORTANT

Allow 3 hours for the refrigerator to cool down and chill water. Allow 24 hours to produce the first batch of ice. Discard the first three batches of ice produced. The dispensing system will not operate when the refrigerator door is open.

Flush the Water System

Air in the water dispensing system can cause the water dispenser to drip. After connecting the refrigerator to a water source or replacing the water filter, flush the water system. Flushing the water dispensing system forces air from the water line and filter and prepares the water filter for use. Additional flushing may be required in some households.

NOTE: As air is cleared from the system, water may spurt out of the dispenser.

- 1. Using a sturdy container, depress and hold the water dispenser paddle for 5 seconds.
- 2. Release the dispenser paddle for 5 seconds.
- 3. Repeat steps 1 and 2 until water begins to flow.
- 4. Once water begins to flow, continue depressing and releasing the dispenser paddle (5 seconds on, 5 seconds off) until a total of 4 gal. (15 L) has been dispensed.

Dispense Water

A IMPORTANT

The dispensing system will not operate when the refrigerator door is open. The display screen on the dispenser control panel will turn off automatically and enter "sleep" mode when the control buttons and dispenser paddles have not been used for 2 minutes or more. While in "sleep" mode, the first press of a control button will only reactivate the display screen, without changing any settings. After reactivation, changes to any settings can then be made. If no changes are made within 2 minutes, the display will re-enter "sleep" mode.

To dispense water, press a sturdy glass against the water dispenser paddle. Remove the glass to stop dispensing.

Dispenser Light

When you use the dispenser, the light will automatically turn on. If you want the light to be on continuously, you may turn

on the light. The light icon will illuminate when the light is ON.

ON: Press LIGHT quickly to turn on the dispenser light. OFF: Press LIGHT quickly to turn off the dispenser light. NOTES:

• If you unintentionally press and hold the Light button for 3 seconds or longer, you will turn on the Moisture Control feature. If this happens, press and hold LIGHT for 3 seconds again to turn off the Moisture Control feature. The dispenser lights are LEDs that cannot be changed.

Dispenser Lock

The dispenser can be turned off for easy cleaning or to avoid unintentional dispensing by small children and pets.

NOTE: The lock feature does not shut off power to the refrigerator, to the ice maker, or to the dispenser light. It simply deactivates the controls and dispenser paddles.

- Press and hold FAST COOL for 3 seconds to lock the dispenser.
- Press and hold FAST COOL for 3 seconds again to unlock the dispenser. The lock icon will illuminate when the dispenser is locked.

Ice Maker

A IMPORTANT

For models with a water filter, after connecting the refrigerator to a water source or replacing the water filter, fill and discard 3 full containers of ice to prepare the water filter for use.

Turning the Ice Maker On/Off

To turn on the ice maker, simply lower the wire shut-off arm. To manually turn off the ice maker, lift the wire shut-off arm to the OFF (arm up) position and listen for the click.

NOTE: Your ice maker has an automatic shutoff. As ice is made, the ice cubes will fill the ice storage bin and the ice cubes will raise the wire shut-off arm to the OFF (arm up) position. Do not force the wire shut-off arm up or down.

Ice Storage Bin

- 1. Wash the ice storage bin with mild soap and warm water.
- 2. Slide the ice storage bin under the ice maker and push it toward the back as far as it will go.
- 3. Lower the arm on the ice maker to the ON position.

NOTE: It usually takes approximately 24 hours for the ice maker to begin producing ice. You may notice the ice has an "off-taste." If so, discard the first 3 batches of ice produced. After that the "off-taste" should be gone.

Ice Production Rate

The ice maker should produce approximately 8 to 12 batches of ice in a 24-hour period. Allow 3 days to completely fill the ice container.

To increase ice production, lower the freezer and refrigerator temperature. Wait 24 hours between adjustments.

The quality of your ice will be only as good as the quality of the water supplied to your ice maker. Avoid connecting the ice maker to a softened water supply. Water softener chemicals (such as salt) can damage parts of the ice maker and lead to poor quality ice. If a softened water supply cannot be avoided, make sure the water softener is operating properly and is well maintained.

Do not use anything sharp to break up the ice in the bin. This can cause damage to the ice storage bin and the dispenser mechanism.

Do not store anything on top of or in the ice maker or ice storage bin.

Source(s): Whirlpool WRF560 Refrigerator User Instructions

Product(s): Whirlpool Stainless Steel 20 Cu Ft Refrigerator with Water in Door (Model: WFR560SEHZ, Newmar Part Number: 146572) and Whirlpool 19.6 Cu Ft Monochromatic Stainless Steel French Door Refrigerator w/ Thru-the-Door Water Dispenser (Model: WRF560SEYM, Newmar Part Number: 130238)

VACUUMS

RoadVac by InterVac Central Vacuum Quick Start (Model: CS-RM)

This article provides basic operation instructions for a RoadVac by InterVac Central Vacuum system (Model: CS-RM).

Operating the Vacuum

To operate the vacuum, make sure 120 volt power is being supplied to the vacuum outlet. The vacuum must be plugged in, and the power switch must be in the OFF position when using the remote control on the pistol grip.

The vacuum will only turn ON when the Remote Control Pistol Grip button has been pressed or when the switch on the vacuum has been turned ON.

Pressing the Pistol Grip button for less than a second will turn the vacuum ON or OFF.





Do not hold down the button, as it will greatly reduce battery life. When the Pistol Grip Transmitter button is held down continuously, it will continue to transmit for 9 seconds, and then turn OFF.

If the performance (range) in which the Pistol Grip functions away from the receiver has reduced, replace the battery to correct the issues.

Note: Replacing the battery may require the Pistol Grip Remote to be reprogrammed. For more information about the Pistol Grip, refer to the file in Newgle named "Intervac Pistol Grip Remote Control Description, Installation and Programming".

Replacing the Vacuum Double-Collar Bag

Replacement bag: Part #Y11 high filtration 5-layer fiber bag

- Remove the front panel on the vacuum cleaner by sliding the latch/lock and removing the front panel with dust bag attached.
- 2. Remove full bag and discard.
- 3. Notice: The #Y11 double-sided bag has two openings. The collar which attaches to the back of the vacuum chamber is clearly marked "Push this collar over pipe in the back of the vacuum chamber first."
- 4. Hold the dust bag by the edges of the cardboard in your hand. Push onto the pipe in the back of the chamber holding at about a 45 degree angle, and then push down the lower part of the collar against the back wall until flush.
- 5. Push the front cardboard collar of the dust bag all the way over the pipe on the front panel.
- 6. Slide the front panel into the small slots on the side of the vacuum's frame. Ensure dust bag is completely inside compartment, then push it into the frame until the lock/latch clicks into place.

Changing the Motor Filter

Replacement: Part #Y22

- 1. Remove the front panel with dust bag.
- 2. Inside the vacuum chamber, you will see the filter with the arrow pointing towards the back wall. Replace the filter with a new or cleaned filter, with the arrow pointing towards the back wall.
- 3. If the filter is dirty, you can wash it by hand in a mild soap solution. Do NOT clean in washing machine. Let filter dry completely before reusing.

Source(s): InterVac CS Series Installation and Operating Manual

Product(s): InterVac Central Vac System (Model: CS-RM, Newmar Part Number: 142013)

WASHERS AND DRYERS

Washer and Dryer Overview

This article provides an overview of the washer and dryer operation, information about coaches that are prepped for an after-market installation, as well as an explanation of the washer's p-trap.

Overview

Depending on your model, year, and available options, your coach may be equipped with a stackable washer and dryer, or an all-in-one laundry center located in a cabinet. They are built for life on the road, so they are compact to save space, weight, and resources, without sacrificing performance.

Some coach floorplans may also provide the option for washer and dryer hookups, in lieu of the appliances. If a washer and dryer unit is not installed in your coach, it may be prepped at the factory so that a unit can be added later. Coaches not ordered and/or installed by the factory will not be covered by Newmar's warranty.

Operation

The plumbing and other preparations for the installation of a compact washer and dryer are optional features on your coach. The washers and dryers function like those in a home. Most operate on 120 volt electricity; however, some dryers may require 240 volt electricity.

Newmar does not recommend using your washer and dryer during transit.

For information about your installed washer and dryer, refer to Newgle's product pages, which are specific to the appliance manufacturer and model.



Before operating the washing machine:

- 1. Remove the outside drain cap in the exterior water compartment. The drain cover is used to prevent leakage of waste material when not in
- 2. Attach the sewer or macerator hose to the drain outlet. The drain line or macerator hose should be used to direct waste to the dump station for
 - proper disposal. For more information about draining the waste water holding tanks, refer to the Waste Water Disposal article in Newgle.
- 3. Open the gray tank valve by pulling on the appropriately labeled T-handle or operating the electric gate valve (if equipped). The tank will start to drain to the drain outlet or macerator hose (if equipped and connected) as soon as the T-handle is pulled or the electric gate valve is operated. Opening the gray tank valve will allow the washing machine water to drain instead of overfilling the waste water tank.



Remove outside drain cap before operating washing machine.

A IMPORTANT

If the outside drain cap is not removed and the gray tank valve is not in the "open" position, the gray tank may overflow.





NOTICE

Remove outside drain cap before operating washing machine.

P-Traps

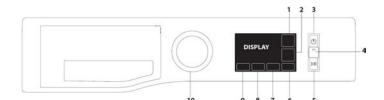
Each of the sink drains, the shower drain, and the washing machine drain (if equipped) has a water trap to prevent holding tank odors from entering the coach. These traps must have water in them in order to trap the odors. While stored, the water may evaporate, allowing an odor to enter the coach. If this occurs, run water from the faucet into the drain, allowing water to fill the trap. Run water into the washing machine. Set the cycle to spin to drain the water to fill the p-trap.

Splendide Front-Loading Washer Quick Start (Model: WFL1300XD)

This article provides basic operation instructions for a Splendide Front-Loading Washer (Model: WFL1300XD).

Control Panel

- 1. SUPER WASH / MUTE button
- 2. POST CYCLE CARE / KEY LOCK button
- 3. ON/OFF button
- 4. PREWASH button and indicator light
- 5. START/PAUSE button
- 6. EXTRA RINSE button
- 7. DELAY START button
- 8. SPIN button
- 9. TEMPERATURE button
- 10. WASH CYCLE SELECTOR KNOB



Detergent Dispenser Drawer

Compartment 1: Pre-wash detergent (powder)

Compartment 2: Detergent for the wash cycle (powder or liquid)

- If liquid detergent is used, it is recommended that the removable plastic partition A (supplied) be used for proper dosage.
- If powder detergent is used, place the partition into slot B.

Compartment 3: Additives (fabric softeners, etc.)

• The fabric softener should not overflow the grid.

Extra Compartment 4: Bleach

Note: Splendide recommends using 1 to 2 tbsp. of a bio-friendly fabric softener, or similar brand per wash load. These softeners tend to appear light in color and dissolve more quickly in less water, minimizing build-up within your machine.

Note: Use powder detergent for white cotton garments, for pre-washing, and for washing with hot temperatures.

Note: Follow the instructions given on the detergent packaging.

DETERGENT DISPENSER DRAWER Wash Rime Spin Dain On Dispenser Drawer On Dain On Dispenser Drawer Dain On Dispenser Drawer Drawe

Display

The display is useful when programming the washing machine and provides plenty of information.

Section A: The duration of the available wash cycles and the remaining time of a running cycle appear in section A (Factors such as load size, modifiers, options selected, and water pressure may affect the time shown in the display. Tightly packed loads, unbalanced loads, or excessive suds may cause the washer to lengthen the cycle time as well); if the DELAYED START option has been set, the countdown to the start of the selected wash cycle will appear.

Section B: In section B, pressing the corresponding button allows you to view the maximum spin speed and temperature values attained by the machine during the set wash cycle, or the values selected most recently, if these are compatible with the set wash cycle.

Section C: The "wash cycle phases" corresponding to the selected wash cycle and the "wash cycle phase" of the

running wash cycle appear in section C: Wash, Rinse, Spin + Drain.

Section D: References D indicate the wash options available.

Delay Start: The "Delay Start" symbol [clock icon], when lit, indicates that the set "delayed start" value has appeared on the display.

Mute: The "Mute" symbol [speaker icon] indicates the possibility to silence the key tones. While the mute is active, almost all sounds will be turned off. Only the sound signals and the alarms remain active, as well as the sound of the end of cycle. To activate/deactivate, press and hold the mute button.

Key Lock: To lock the control panel, press and hold the "Key lock" button for approximately 3 seconds. The symbol will light up on the display to indicate that the control panel has been locked (with the exception of the "ON/OFF" button). This prevents unintentional changes to programs, especially with children near the machine. To unlock the control panel, press and hold the "Key lock" button for approximately 3 seconds.

Locked Door Indicator: When lit, the symbol indicates that the door is locked. To prevent any damage, wait until the symbol turns off before opening the door. To open the door while a cycle is in progress, press the START/PAUSE button; if the LOCK symbol is off, the door can be opened.

First-Time Use: Once the appliance has been installed, and before it is used for the first time, run a "Clean Washer" cycle with liquid chlorine bleach and no laundry.

Daily Use

- 1. Press the ON/OFF button.
- 2. Open the door. Load the laundry while making sure not to exceed the maximum load quantity indicated in the wash cycle table.
- 3. Pull out the detergent dispenser drawer and pour the detergent into the relevant compartments, as described in the "DETERGENT DISPENSER DRAWER" section. Close the door.
- 4. The machine automatically displays the default temperature and spin speed values for the selected cycle, or the most recently used settings for that specific cycle.
- 5. Select the desired wash cycle.
- 6. Select the desired options.
- 7. Press and hold the START/PAUSE button to start the wash.

A IMPORTANT

For more information about wash settings, cleaning and maintenance, and winterization, refer to Splendide's Instruction Manual.

Source(s): WFL1300XD Splendide Washing Machine Instruction Manual

Product(s): Splendide WFL1300XD 24-in Front-Loading Washer (Model: WFL1300XD, Newmar Part Number: 156340)

Splendide Tumble Dryer Quick Start (Model: DV6500X)

This article provides basic operation instructions for a Splendide Tumble Dryer (Model: DV6500X).

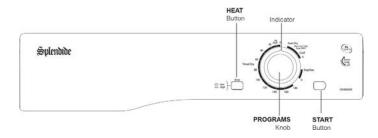
Control Panel

The START button begins drying a selected program.

The HEAT button selects drying temperature:

- IN: HIGH heat.
- OUT: LOW heat.

The Drying Guide allows you to consult a user friendly table of fabric types and load capacities. The Special Programs Guide gives a guide to the available programs.



The PROGRAMS knob sets the program: rotate it clockwise, never counter-clockwise, until the indicator is pointing to the program you want to select. The programs knob will advance to the '0' position after the program ends.

Choosing a Program

- 1. Plug dryer into a grounded 3 prong outlet.
- 2. Sort your laundry according to fabric type.
- 3. Open the door and make sure the filter is clean and in place.
- 4. Load the machine and make sure that the items are not in the way of the door seal. Close the door.
- 5. Choose the drying program by checking the Programs table as well as the indications for each type of fabric. Set the temperature with the HEAT button. Select a program or drying time by rotating the PROGRAMS knob clockwise.
- 6. Press the START button to begin. During the drying program, you can check on your laundry and take out items that are dry while others continue drying. When you close the door again, press START in order to resume drying.
- 7. About 10 minutes before the program is completed, it enters the final AIR FLUFF phase (fabrics are cooled), which should always be allowed to complete.
- 8. Open the door, take your laundry out, clean the filter and replace it.
- 9. Unplug the dryer.

Laundry

Sorting Your Laundry

- Check symbols on clothing labels to make sure that the articles can be tumble dried.
- Sort laundry by fabric type.
- Empty pockets and check buttons.
- Close zippers and hooks and tie loose belts and strings.
- Wring out each item in order to eliminate as much excess water as possible.
- Do not load dripping wet clothes into the dryer.

What not to tumble dry

- Articles that contain rubber or rubber-like materials or plastic film (pillows, cushions, or PVC rainwear), any other flammable objects, or objects that contain flammable substances (towels soiled with hair spray).
- Glass fibers (certain types of draperies).
- Items that have been dry cleaned.
- Items with the ITCL Code. These can be cleaned with special at-home dry cleaning products. Follow instructions completely.
- Large bulky items (quilts, sleeping bags, pillows, cushions, large bedspreads, etc.). These expand when drying and would prevent airflow through the dryer.

A WARNING

No washer can completely remove oil. Do not dry anything that has ever had any type of oil on it (including cooking oils). Do not dry items containing foam, rubber, or plastic in this dryer. Doing so can result in death or fire.

A WARNING

Keep flammable materials and vapors, such as gasoline, away from dryer. Do not dry anything that has ever had anything flammable on it (even after washing). Failure to follow these instructions can result in death, explosion, or fire.

Maximum Load Size

Do not load more than maximum capacity. These numbers refer to dry weight:

Natural fibres: 6 kg max (13 lb)

Synthetic fibres: 3 kg max (6.6 lb)

Do not overload the dryer as this could result in reduced drying performance.

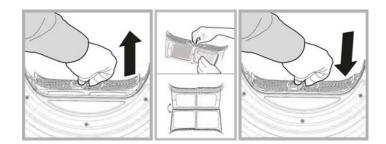
Cleaning & Maintenance

When you should switch off the electricity

Unplug the dryer when not using it, when cleaning it and during maintenance activities.

Clean the filter after each cycle

The filter is an important part of your dryer: it accumulates lint and fluff that is formed while drying. Small items could also become trapped in the filter. When finished drying, therefore, clean the filter by rinsing it under running water or with your vacuum cleaner. Should the filter become clogged up, the airflow inside the dryer will be seriously compromised: drying times lengthen and you will consume more energy. It may also damage your dryer.



The filter is found in front of the dryer trim.

Removing the filter:

- 1. Pull the plastic grip of the filter upwards (see diagram).
- 2. Clean the filter in all its parts, opening it and removing the lint both outside and inside.
- 3. Properly insert the filter back in place. Ensure the filter is fully located flush into the tumble dryer trim.

Do not use the dryer without replacing the filter.

Check the drum after each cycle

Turn the drum manually in order to remove small items (handkerchiefs) that could have been left behind.

Cleaning the drum

Do not use abrasives, steel wool or stainless steel cleaning agents to clean the drum. A color film may start to appear on the stainless steel drum, this may be caused by a combination of water and, or cleaning agents such as fabric conditioner from the wash. This colored film will not affect the dryer performance.

Cleaning the dryer

- External parts in metal or plastic and rubber parts can be cleaned with a damp cloth.
- Periodically check the vent tube and any permanent venting fixture to make sure that there has been no accumulation of fluff or lint, and remove it.
- Remove lint that collects around the filter and the outlet vents.

Do not use solvents or abrasives. Your dryer uses special bearing components which do not need lubrication. Have your dryer checked regularly by authorized technicians to ensure electrical and mechanical safety.

Source(s): Splendide Tumble Dryer DV6500X Care, Use, and Installation Booklet

Product(s): Splendide DV6500X 120v Dryer (Model: DV6500X, Newmar Part Number: 162308)

CHASSIS

This chapter provides information from your chassis manufacturer, detailed operating instructions for the fuel, leveling, and steering systems installed in your coach, as well as guidelines for proper use and maintenance of your wheels and tires.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

A IMPORTANT

Refer to your chassis owner's manual for information relating to vehicle identification and safety, dash instruments, controls, and switches, steering and braking systems, driver assistance features, maintenance recommendations, etc.

FREIGHTLINER TRUCK

Freightliner Chassis Contact Information

This article provides contact information for Freightliner Chassis.

24/7 Direct: Customer Assistance or Concerns

- Phone: 1-800-FTL-HELP (800.385.4357)
 - For Super C coaches, press option 2; for all other Freightliner chassis, press option 1
- Web: http://www.fcccrv.com/owners/
- Email: fcccservice@daimler.com

Chassis Manuals

Refer to Freightliner's Driver and Maintenance Manuals in Newgle for all chassis-related information, including, but not limited to:

- Vehicle Identification
- Dash Instruments, Controls, and Switches
- Steering and Brake Systems
- Driver-Assistance Features
- Emergency Procedures
- Inspection and Maintenance

Freightliner Super C General Warranty Information

This article is designed to aid the customer in finding warranty information for Super Star, Supreme Aire, Grand Star, and Summit Aire coaches, which are built on a Freightliner Truck Chassis.

Newmar Warranty

Refer to the information provided during the coach purchase for what is covered under the Newmar warranty. The Newmar Warranty is also viewable on Newgle and in the Newmar Owner's Guides starting in 2024.

Chassis Warranty

The chassis warranty is through Freightliner Trucks. The engine/ drivetrain warranty is through the engine or drivetrain manufacturer (i.e.: Cummins or Detroit).

Breakdowns requiring towing may be covered by the warranty for the engine or chassis manufacturer. The coverage amounts, distance limits, and length of coverage (since purchase) vary based on the chassis model year and which component manufacturer is responsible for the breakdown.

Freightliner Trucks also offers extended warranty coverages in several tiers. Coverages vary based on the tier level purchased. Customers may request chassis warranty details by emailing cx@transwest.com.

A IMPORTANT

Newmar is not the provider of extended, chassis, or drivetrain warranties. It is the customer's responsibility to know what is covered and to pay any overages specified by the chassis, drivetrain, or extended policy coverages. Daimler Trucks North America (DTNA) and its dealers can determine coverage for a specific coach with a provided Vehicle Identification Number (VIN).

FREIGHTLINER M2 PLUS

Freightliner Super C M2 PLUS Instrumentation Control Unit (ICUC) Quick Start Guide

This article provides an overview of the Freightliner M2 PLUS Instrumentation Control Unit (ICUC) installed on Super C coaches beginning with the 2024 model year.

Instrumentation Control Unit: ICUC

The instrumentation control unit (ICU) provides the driver with engine and vehicle information. An M2 Plus vehicle will be equipped with an ICUC. This section provides general system and operating instructions for ICUC components.

The instrument cluster unit is comprised of six physical gauges, indicator lamps (telltales), a six inch portrait driver display screen, steering wheel mounted switches, and audible warning systems. Warning and indicator lamps illuminate in red (warning), amber (caution), green (status on), or blue (informational).



The driver display screen provides information on various vehicle systems as well as warnings, cautions, and notications on systems status.

Ignition Sequence

When the ignition is turned on, the ICU runs a self-check. Observing the ignition sequence is a good way to ensure the ICU is functioning properly.

WARNING

Do not crank the engine until the ICU self-check is complete.

Note: Air gauges in the ICUC do not complete a sweep of their dials during the ignition sequence.

When the ignition is turned on, the following actions should occur in the ICUC:

- Freightliner and engine logo displays on the driver display until startup is complete
- Speedometer and tachometer complete a full sweep of their dials
- Warning and indicator lamps illuminate, then are extinguished (if not active)
- Audible alert sounds for any active faults
- Active alerts are displayed on the ICUC screen.

If the ICUC receives active fault codes, it displays them one after the other until the ignition is turned off. The alerts are displayed until they are acknowledged. If there are no active faults, the ICUC displays the home screen after the self-check completes.

A IMPORTANT

If any red or amber warning and indicator lamps do not illuminate during the ICUC self-check or do not go out (if not active) after the self-check completes, take the vehicle to an authorized Freightliner service facility as soon as possible.

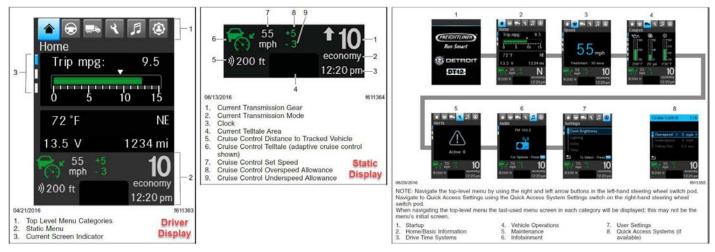
If active faults are present, take the action outlined in "Warnings, Indicators, and Messages" tables in [the Freightliner Business Class M2 PLUS Driver's Manual], then take the vehicle to an authorized Freightliner service facility as soon as possible.

ICUC Screen Navigation

In the ICUC, the driver display screen is broken up into three areas: a navigable menu at the top of the screen, a static display at the bottom of the screen, and the central display area (with screen indicator dashes to communicate how many display screens are available in the current menu category).

To adjust the brightness of ICUC screen, go to User settings. The ICUC top level menu categories allow a driver to quickly carry out common actions. Top level menu categories are Home, Drive Time Systems, Vehicle Operations, Maintenance, Infotainment, and User Settings.

The static menu display at the bottom of the screen displays the current vehicle speed, transmission gear, cruise control information, a clock, and active telltales.



ICUC Steering Wheel Switch Pods

To navigate the ICUC menus, use the 'Menu Right' and 'Menu Left' arrows on the left-hand steering wheel switch pod to move between the top-level menus. Use the 'Menu Up' and 'Menu Down' buttons to move from screen to screen within the selected category.

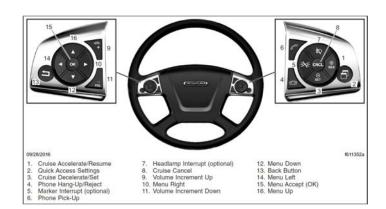
For Quick Access Systems menus press the Quick Access System Settings button in the right-hand switch pod. If Quick Access Systems menus are not available, the button will bring up the home screen.

Driver Display Overview: ICUC

ICUC Alert Messages

Alert messages include warnings, cautions, and notices that require the driver's attention. The header text and color indicates the priority of the on-screen message, listed from the highest to the lowest:

- Warning (red)
- Caution (amber)



Informational (blue, green, white, and grey)

Warnings alert the driver to situations or conditions that may pose a threat to control of the vehicle. Follow all instructions given in the message. Cautions alert the driver to situations or conditions that may result in damage to vehicle components or a derating of engine power. Informational notices alert the driver to situations or conditions that may affect vehicle performance.

Digital Gauges and System Monitors: ICUC

ICUC Gauges

In the ICUC there are six digital gauges and system screens for the Diesel Particulate Filter (DPF) and Tire Pressure Monitoring System (TPMS). The six digital gauges under the Vehicle Operations menu of the driver display are:

- Engine Oil Temperature
- Turbo Boost Pressure
- Transmission Oil Temperature
- Front Axle Oil Temperature
- Rear Axle Oil Temperature
- Application Air Pressure

In the ICUC, if a value measured by a digital gauge exceeds the normal range, an amber caution or red danger popup message will appear. However the bar graph color will remain green and the bar graph icons will remain white.

NOTE: The order of ICUC digital gauges and therefore the screen on which they display can be changed under Gauge Settings under Settings.

Warnings, Indicators, and Messages

Audible Alerts: ICUC

An audible alert sounds whenever one of the following conditions exists:

- Engine oil pressure falls below the minimum preset value.
- Coolant temperature rises above the maximum preset value.
- Air pressure falls below approximately 70 psi (483 kPa).
- Parking brake is set with the vehicle moving faster than 2 mph (3 km/h).
- System voltage falls below 11.9 volts.
- Door is unlatched with the parking brake off.

Optional audible alert sounds whenever one of the following conditions exists:

- Driver seat occupancy sensor reads someone in the seat with the seat belt not fastened and the parking brake off.
- Key is in the ignition and the door is unlatched.

Warnings, Indicators, and Messages

Warning and indicator lights (telltales) with icon symbols are displayed on the physical dashboard and on ICU screens. The positions of the telltales and warnings vary, but most telltale symbols are standard. See the below tables for a listing of different warnings and telltales in addition to messages and popup screens.

The colors of telltales and warnings indicate the hazard level: red (warning), amber (caution), green and blue (active status), grey (passive status), white (informational). Blue is currently used to indicate an active phone call, that a software download is available, and that utility lamps and high beams are on.

A IMPORTANT

Depending upon local jurisdictional emissions guidelines, vehicles and/or engines that are domiciled outside of the U.S. and Canada may not be compliant with EPA10 or GHG21 regulations. Noncompliant vehicles may not be equipped with all of the telltales shown in the [...] tables [within the full M2 PLUS Driver's Manual].

For a list of all telltales, indicator icons, and messages, refer to the complete M2 PLUS Driver's Manual in Newgle.

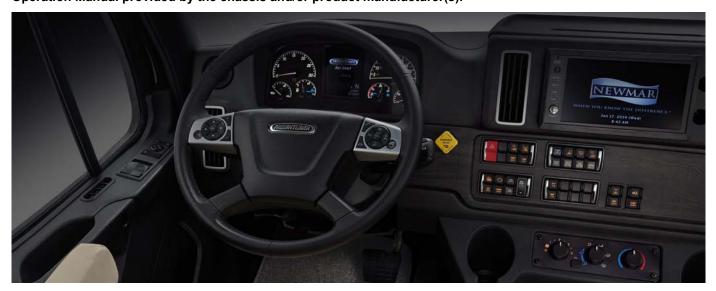
Source(s): Freightliner Business Class M2 PLUS Driver's Manual (STI-522-1, 2/10/2023)

2026 Super Star Cab and Dash Overview (Freightliner M2 PLUS Chassis)

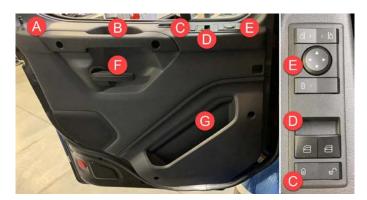
This article provides a general overview of the cab and dash components, controls, and switches installed in a 2026 Super Star Super C built on a Freightliner M2 PLUS (M2-106) Chassis.



Dash components, controls, and switches will vary based on the chassis manufacturer, coach model, floorplan, and/or options. Any subsequent images or graphics are examples and may not reflect the exact configuration of your coach. This information is meant for quick reference only and should not take the place of the complete Operation Manual provided by the chassis and/or product manufacturer(s).



Driver's Door and Console



(A) Lock Button

To lock either door from inside the cab, push the lock button downwards. To unlock the door without unlatching it, pull the lock button upwards.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023) Section 2.1

(B) Door Panel-Integrated Grab Handle

"... [T]he inner door grab handle and steering wheel may be used to provide a secure handhold[...] The grab handles, access steps, and steering wheel are all part of the cab access system. Use these when getting into or out of the cab."

A CAUTION

Slipping or falling from the vehicle can result in personal injury or property damage. Always maintain three-point contact with the vehicle when entering or exiting the cab. Three-point contact means both feet and one hand, or both hands and one foot.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023) Section 2.2, Section 2.3, Section 2.5

(C) Power Door Lock Switches

- 1. Door Lock Switch
- 2. Door Unlock Switch



Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.8

(D) Power Window Switches

- 1. Driver Side Power Window
- 2. Passenger Side Power Window

Power windows are standard on M2 Plus vehicles. With power windows, the driver's door has switches mounted in the top of the door that separately control the driver and passenger windows. Additionally, the passenger door has a switch mounted in the top of the door that controls the passenger-side power window.



A CAUTION

There is no anti-pinch protection when the window is almost closed. Be sure to clear all objects from the window before closing.

The window switches have three positions: lower window, neutral, and raise window. Press forward on the switch to lower the window. Hold the switch down in the forward position for approximately one second to activate the express function; the window will continue to roll down after the switch is released. Press the switch in the rearward position to raise the window.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.7

(E) Exterior Mirror Adjustment and Heat Switches

- 1. Mirror Selector Switch (Driver Side)
- 2. Mirror Selector Switch (Passenger Side)
- 3. Mirror Directional Switch
- 4. Mirror Heat Switch
- 5. Blank Switch

The standard outside mirrors are mounted on the door frame. There is a primary heated power rear view mirror and a convex mirror. The power mirrors are controlled with a left-hand or right-hand mirror selector switch, and a directional switch. Select the left (driver) mirror, or the right (passenger) mirror using the selector switch. The mirror can then be adjusted by pressing the directional switch arrow for the direction the mirror should be adjusted.

The outside door mirrors can be heated to keep them clear of fog, frost, and ice. To heat the mirrors, press the outboard part of the mirror heat switch on the door. When the mirror heat switch is on, an amber indicator light on the switch illuminates.



Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.8

(F) Door Lever

To open the door from the inside, lift up on the door lever. This will unlatch the door whether or not it is locked.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023) Section 2.1

(G) Molded Storage Pocket

Storage pockets are molded into the driver and passenger doors.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.1

Battery Disconnect and Light Test Switches



(A) Smart Battery Shut-Off Switch (Battery Disconnect)

M IMPORTANT

The keyswitch should be in the OFF position before turning the smart battery shut-off switch on or off.

The smart battery shut-off switch is a red switch located inside the cab on the outboard side of the driver's seat. A vehicle in daily use has the smart battery shut-off switch turned on, indicated by a red LED in the switch.

Turning the smart battery shut-off switch OFF minimizes the power draw on the battery, preserving battery life and the ability of the vehicle to start after being parked for a number of days. Set the smart battery shut-off switch to off if the vehicle is going to be parked for more than two days. To avoid accidental activation, the smart battery shut-off switch must be pressed and held for two seconds when turning it on or off.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 8.5

(B) Pre-Trip Light Test Switch

When the driver presses the pre-trip light test switch, all exterior lights are activated so the driver can exit the vehicle and verify they are working properly. Check the operation of all exterior lamps manually or, if equipped, by using either the LIGHT TEST switch on the dash or the Lamp Check button on the key fob.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.4, Section 22.7

Left Component Panel



(A) Exterior Lighting Controls

The headlamp switch is a rotary switch located to the left of the steering column, above the ignition switch.

- 1. Fog lamps (optional): Activate by pulling the switch out when the marker lights or headlights are on.
- 2. Automatic Headlamps
- 3. Off
- 4. Marker Lights
- 5. Headlights

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.3

(B) Dash HVAC Vent

Several HVAC vents are installed throughout the dash panel to aid in air distribution.

(C) Battery Boost Switch

This switch allows the chassis battery to be boosted from the house battery bank or the house battery bank boosted from the chassis battery, allowing the solenoid to operate from either source that has power to engage the boost solenoid.

Source(s): Battery Boost (Emergency Engine Start) Switch Overview, Charging House and/or Chassis Batteries

HOUSE BATT BOOST CHASS

(D) Ignition Switch and Key

The ignition switch has four positions: ACCESSORY, OFF, ON, and START.

OFF: In the OFF position, the key slot is vertical; the key can be inserted and removed only in the OFF position. If equipped, the following can be operated in the off position (regardless of whether the key is inserted): low-beam headlights, taillights, brake lights, road lights, dome lights, clearance lights, hazard warning lights, turn signals, power windows, cigarette lighter, horn, clock, CB radio, electric oil pan heater.

ACCESSORY: In the ACCESSORY position, the key is turned counterclockwise. The following functions will operate when the switch is in the ACC position: ICU, radio/stereo system, mirror heat, air dryer, backup lights.



ON: In the ON position, the key is turned clockwise and all electrical systems are operable. The warning and indicator lamps will illuminate. The low air pressure and low oil pressure warning telltales (or messages) may appear until the engine starts and the pressure builds up.

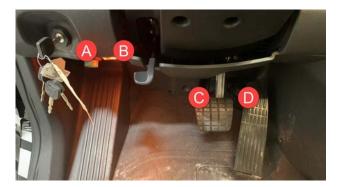
START: Turn the key clockwise past the ON position to reach the START position to start the engine. Release the key the moment the engine starts. Do not operate the starter longer than thirty seconds. Allow the starter to cool between attempts. If the starter overheats, the starter protection system will prevent operation of the starter until it has cooled.

A IMPORTANT

Do not crank the engine until the ICU self-check is complete.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.1

Foot Pedals and Diagnostics



(A) Telematics Diagnostic Port

Your vehicle may be equipped with one or more devices that gather certain information (listed below) about the vehicle and the environment in which it is operating. These devices may periodically send this information ('telematic information') to Daimler Truck North American LLC (DTNA). Additionally DTNA and its dealers may manually retrieve 'telematics information' from devices on the vehicle for the purposes described below.



Newmar does not ship the coach from the factory with the diagnostic device as shown in the photo.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2024-05-07), Section 25

(B) Footwell Lamp

If equipped, amber lamps illuminate both foot wells when the driver or passenger doors are opened. These lamps can also be activated with the foot-well light switch.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2024-05-07), Section 6.2

(C) Brake Pedal

The brake pedal decreases the engine speed and the speed of the vehicle and/or stops the vehicle. The brake pedal is located on the driver's side floor, to the left of the accelerator pedal.

(D) Accelerator Pedal

The accelerator pedal increases the engine speed and the speed of the vehicle. The pedal is located on the driver's side floor to the right of the brake pedal.

Overhead Instrument Panel



(A) Air Horn

Air horn(s) may be mounted on the roof of day cabs, or under the driver-side floor for sleeper cabs. The air horn is controlled by a wire lanyard that hangs down inboard by the driver's door. Pull downward on the lanyard to sound the air horn.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.6

(B) Sun Visors

The underside of the overhead console also holds the sun visors and the optional dome/reading light assembly.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.24

(C) Overhead Console Lamps

Interior lighting includes dome lamps, console lamps, reading lamps, and courtesy lamps. The overhead console lamps consist of two lamps with the form and function of the cab dome lamps, two reading lamps, and an amber lamp that provides ambient light for the center dash area. The overhead console lights can be individually turned off and on by pressing on the lamp cover.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.2

(D) Detroit Assurance Collision Mitigation System (CMS)

The Detroit Assurance collision mitigation system (CMS) is a safety system that uses a radar mounted on the front frame crossmember and a windshield-mounted multipurpose camera to communicate information to active features that can control the truck. The system can track vehicles up to 820 ft (250 m) ahead, and if necessary sounds a warning and applies the brakes. The right-hand steering wheel switch pod contains adaptive cruise control (ACC) controls and access to Detroit Assurance settings via the 'quick access system settings' button.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 6

Instrumentation Control Unit (ICUC)

The instrumentation control unit (ICU) provides the driver with engine and vehicle information. An M2 Plus vehicle will be equipped with an ICUC. The instrument cluster unit is comprised of six physical gauges, indicator lamps (telltales), a six inch portrait driver display screen, steering wheel mounted switches, and audible warning systems.

Warning and indicator lamps illuminate in red (warning), amber (caution), green (status on), or blue (informational). The driver display screen provides information on various vehicle systems as well as warnings, cautions, and notifications on systems status.



(A) Speedometer

The U.S. version of the speedometer registers speed in both miles per hour (mph) and kilometers per hour (km/h), with mph in larger numbers. The metric version of the speedometer face reverses this arrangement, with km/h in larger numbers.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.22

(B) Coolant Temperature Gauge

During normal engine operation, the coolant temperature gauge should read 175 to 195°F (79 to 91°C). If the temperature remains below 160°F (71°C), inspect the cooling system to determine the cause.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.19

(C) Primary and Secondary Air Pressure Gauge

Air pressure gauges register the pressure in the primary and secondary air systems. Normal pressure, with the engine running, is 100 to 120 psi (689 to 827 kPa) in both systems.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.21

(D) Fuel/Diesel Exhaust Fluid (DEF) Gauge

The fuel and DEF levels can be measured in a dual purpose fuel/DEF level gauge. The diesel fuel and DEF levels are indicated on the gauge. A low fuel warning lamp illuminates amber when the diesel fuel level registers 1/8th of capacity. The low DEF warning lamp illuminates amber when the DEF level reaches 10% of capacity.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.21

(E) Engine Oil Pressure Gauge

The engine oil pressure gauge displays the current engine oil pressure. If engine oil pressure falls below the minimum levels [...], the CHECK engine lamp will illuminate. If the condition does not improve, the STOP engine lamp will also

illuminate and an audible warning will sound. The engine will then de-rate or shut down, depending on the type of engine protection system installed.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.20

(F) Tachometer

The tachometer or rev counter indicates engine speed in revolutions per minute (rpm) and serves as a guide for shifting the transmission and keeping the engine in the appropriate rpm range. The tachometer has only one unit of measurement, 0-2500 rpm. For low idle and rated rpm, consult your vehicle's engine identification plate.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.22

(G) Driver Display

In the ICUC, the driver display screen is broken up into three areas [...]: a navigable menu at the top of the screen, a static display at the bottom of the screen, and the central display area (with screen indicator dashes to communicate how many display screens are available in the current menu category). The ICUC top level menu categories allow a driver to quickly carry out common actions. Top level menu categories are Home, Drive Time Systems, Vehicle Operations, Maintenance, Infotainment, and User Settings.

The static menu display at the bottom of the screen displays the current vehicle speed, transmission gear, cruise control information, a clock, and active telltales. To navigate the ICUC menus, use the "Menu Right" and "Menu Left" arrows on the left-hand steering wheel switch pod to move between the top-level menus. Use the "Menu Up" and "Menu Down" buttons to move from screen to screen within the selected category. For Quick Access Systems menus press the Quick Access Systems Settings button in the right-hand switch pod. If Quick Access Systems menus are not available, the button will bring up the home screen.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.2

ICUC Steering Wheel



(A) Left-Hand Steering Wheel Switch Pod (Infotainment Controls)

- (1) Volume Increment Up
- (3) Volume Increment Down
- (5) Back Button
- (7) Menu Accept (OK)

- (2) Menu Right
- (4) Menu Down
- (6) Menu Left
- (8) Menu Up

▲ WARNING

A driver can be distracted from the traffic situation if operating communication equipment integrated in the vehicle when driving, possibly causing loss of control of the vehicle resulting in property damage, physical injury, or death.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.5

(B) Electric Horn

The electric horn is activated by pressing down on the top of the steering wheel center pad. The horn will sound for the duration that the button is pressed, up to 60 seconds. The electric horn will operate regardless of the position of the ignition key.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.6

(C) Right-Hand Steering Wheel Switch Pod

- (1) Cruise Accelerate/Resume: Press to resume the set speed. Press and hold to increase the set cruise speed by 5 mph increments (Detroit Diesel engines only). Single press increases cruise speed by 1 mph. If no previous set speed is stored, pressing the button sets the cruise speed.
- (2) Quick Access System Settings: For Quick Access Systems menus press the Quick Access System Settings button in the right-hand switch pod. If Quick Access Systems menus are not available, the button will bring up the home screen.
- (3) Cruise Decelerate/Set: Deceleration mode reduces the vehicle speed at a constant rate. While in cruise control, activate deceleration mode turning on the engine brake using the right-hand stalk switch. The vehicle decelerates at a constant rate until the vehicle comes to a stop, unless the accelerator pedal is applied to override the deceleration, or the right-hand stalk switch is moved to "off" position. Moving the lever to "off" resumes the previously set cruise control speed.

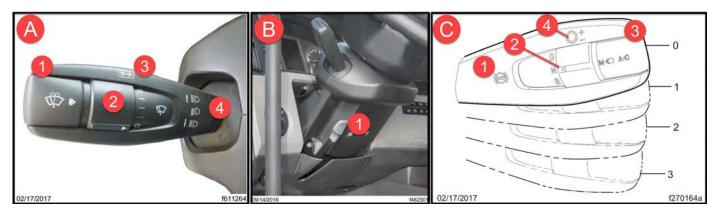
A WARNING

Do not use the cruise control system when driving conditions do not permit maintaining a constant speed, such as in heavy traffic or on roads that are winding, icy, snow-covered, slippery, or roads with a loose driving surface. Failure to follow this precaution could cause a collision or loss of vehicle control, possibly resulting in personal injury or property damage.

- (4) Phone Hang-Up/Reject: Source/Power: Press to turn the radio on/off and toggle between sources (AM, FM, Bluetooth, etc.). If Bluetooth is active, press to reject/cancel a call. Features of both the navigation and infotainment system depend on cellular and satellite reception. In certain situations, such as driving through tunnels, mountains, or parked in multistory parking lots, reception may be impaired due to interference or there may be no reception at all.
- **(5) Marker Interrupt:** The marker interrupt switch is located in the right-hand switch pod of the steering wheel for the ICUC system. Pressing it temporarily flashes the marker lamps.
- **(6) Phone Pick-Up:** Phone/Power: Press to show the Bluetooth menu. When a phone is connected, press to accept an incoming call, or long press to display the dial menu. Features of both the navigation and infotainment system depend on cellular and satellite reception. In certain situations, such as driving through tunnels, mountains, or parked in multistory parking lots, reception may be impaired due to interference or there may be no reception at all.
- (7) **Headlamp Interrupt:** The headlamp interrupt switch is located in the right-hand switch pod of the steering wheel for the ICUC system. Pressing it temporarily flashes the headlamps.
- **(8) Cancel Cruise Control:** Press the CNCL button in the center of the right-hand steering wheel switch pod to cancel the cruise control setting.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.3, 4.4, 7.1, and 7.3

ICUC Steering Column



(A) Left Steering Stalk: Windshield Wiper and Washer Controls and Turn Signals

(1) Windshield Washer Switch: The windshield washer button is located at the end of the turn signal lever. Momentarily press the windshield washer button to initiate a single wipe without activating the washer pump. The wipers will swipe one full cycle and return to the inactive position.

To operate the windshield washers, press and hold the button in. After a short delay, the washer will pump windshield washer uid onto the windshield for as long as the washer button is pressed. The windshield wipers turn on at low speed while the washer button is pressed. After the button is released, the wipers continue to operate for one to several wipe cycles, depending on how long the wash button was pressed initially.

- **(2) Windshield Wiper Switch:** The wipers are operated by a rotary switch on the turn signal lever. There are ve settings: off, two intermittent settings, and two continuous speeds. Symbols mark each setting on the dial. Turn the wipers on by rotating the rotary switch up. Rotate the switch further to increase the speed of the wipers through the two intermittent settings, then to continuous low and high speeds. Rotate the switch down to slow the wipers down. Rotate the switch as far down as it will go to turn the wipers off.
- (3) Turn Signals: The turn-signal lever is mounted on the left-hand side of the steering column. Pulling the turn-signal lever up activates the right-turn signal; pushing it down activates the left-turn signal. The lever is typically a non-canceling combination turn-signal, windshield wiper/washer switch, and high beam headlamp control unit. When a turn signal is activated, a green telltale lamp flashes on the instrument panel.

 On a self-canceling turn signal lever, the lever automatically returns to the neutral position when the steering wheel

(4) Headlight Control Symbols: With the low-beam headlamps on, push the turn-signal lever away from you to turn on the high-beam headlamps. To turn off the high-beam headlamps, pull the lever to the middle position. With the low-beam headlamps on, pull the lever towards you to flash the high-beam headlamps momentarily. When the high-beam headlamps are on, a blue telltale illuminates on the instrument cluster. NOTE: The ignition switch must be on for the high beams to work.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023). Section 4.2, 4.3, 4.4

(B) Adjustable Steering Column

(1) Steering Column Locking Lever:: To unlock the steering column to adjust it, pull the steering column locking lever out and away from the column. With the column unlocked, the steering wheel can be adjusted up-and-down and tilted fore-and-aft. Once the wheel is in the desired position, lock the position by pushing the lever in toward the column until it goes no further and is parallel to the column itself.

▲ WARNING

returns to the straight-ahead position after a turn.

Make sure that the steering column is locked before driving the vehicle. Never attempt to adjust the column while driving the vehicle. Doing so could cause loss of vehicle control, personal injury, and property damage.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.1

(C) Automated/Automatic Transmission Multifunction Control

(1) Engine Brake: Whenever vehicle braking is required on good road conditions, the engine brake may be used in conjunction with the service brakes. There is no time limit for operation of the engine brake. However, an engine brake does not provide the precise control of, and is not a substitute for, service brakes. The engine brake control is located on the right-hand steering-column-mounted lever. At the top position, the engine brake is off, and at the three lower positions, the brake is on and the intensity (low, medium, high) increases with each step down.

NOTE: Cruise control and safety systems may activate the engine brake regardless of the lever position.

Engine Brake Positions:

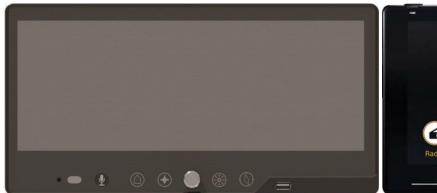
O - Off 1 - Low 2 - Medium 3 - High

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.10 and 14.1

- (2) Drive/Neutral/Reverse Switch: Use the direction switch to request drive (D), neutral (N), or reverse (R).
- (3) Shift Mode Switch (Economy/Performance/Manual): The driving mode can be changed using the Mode switch on the shift control.

(4) Gear Shift Symbol: For automated and automatic transmissions, gear shifts can be requested manually; push the lever away to request a downshift, or pull the lever toward you to request an upshift.

Multimedia Receiver





Xite XSG4 12.3" SDHD Touchscreen Infotainment System (Optional)

The XSG4NA infotainment system can be found in a many size variations including [the] 12.3" touchscreen format. This robust system offers a powerful intuitive new interface used to access the system's premium feature set and entertainment in combination with on-board applications and connected services.

Source(s): Xite Infotainment System with Single 12.3" Touchscreen Quick Start (Model: G4 S12.3 SDHD and G4 S12.3 HD360 + SD), and Xite Solutions 125XS90116CKT62 12.3" Touchscreen Monitor - Newmar # 169249

Sony 10.1" Mobile ES™ High-Resolution Digital Media Receiver

Operates and displays the multi-media and navigation functions, as well as the selected camera view (if equipped). Features may include Sirius XM radio, multi-media playback and connections, Bluetooth pairing, Apple CarPlay and Android Auto, camera and video inputs, and more.

Source(s): Sony 10.1" Mobile ES™ High-Resolution Digital Media Receiver Quick Start (Model: XAV-9500ES), and Sony XAV-9500ES-KT01 10" Radio w/ Carplay/AA - Newmar # 169190

Switch Cluster

Dash-mounted switches are backlit to illuminate the text and icon on the switch. Press the upper half of the switch to turn the desired lamp(s) on or off. If the lights have a dimming function, hold the switch down to cycle the light between bright and dim.



(A) Parking Brake Control

The yellow diamond-shaped knob operates the parking brake valve. Pull the knob out to apply [...] spring parking brakes. Push [...] parking brake [...] knob in to release the [...] spring parking brakes. Before the spring parking brakes can be released, the air pressure in either air brake system must be at least 65 psi (447 kPa).

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.5 and 4.6 and <u>How to Operate</u> the Parking Brake

(B) Hazard Warning Switch

The hazard warning light switch is located on the dash in what is referred to as the master module. The hazard lights can be activated regardless of the ignition switch position. To activate the hazard lights, push the center of the switch once. The switch will blink at the same rate that the hazard lights flash. Push the switch again to turn them off. All the turn signal lights on the vehicle and trailer, as well as the turn signal indicators in the ICU, flash simultaneously when the hazard lights are activated.



Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.5, Section 23.1

(C) Blank Switch

Select switches throughout the switch panel may be left intentionally blank.

(D) Foot Well Lamps Switch

If equipped, amber lamps illuminate both foot wells when the driver or passenger doors are opened. These lamps can also be activated with the foot-well light switch.



Select Freightliner M2 PLUS chassis may be built with a standard lighting package, which does not include the cab foot well lighting feature.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.5 and 5.2

(E) LDW Off Switch

When the engine is turned on, LDW is automatically activated. Pressing the physical LDW OFF switch deactivates LDW for fifteen minutes. When LDW is deactivated, the switch illuminates.

NOTE: There is no audible self-test of the "rumble-strip noise" of LDW when the key is turned on.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 6

(F) Dock Light Switch

The Dock Light Switch located in the dash area operates the exterior dock lights, which provide additional light to the sides and rear of the coach to assist with parking in low-light conditions.

Source(s): How to Operate the Dock Light

(G) Blank Switch

Select switches throughout the switch panel may be left intentionally blank.

(H) Cab Ceiling / Dome Light Light Switch

The Cab Ceiling Light Switch on the dash turns the puck lights in the cockpit ceiling on and off.

(I) Gen Start / Gen Stop Switch

The generator can be started from the rocker switch on the dash, from other remote start switches (if equipped), from the start switch on the generator itself, or from the SilverLeaf touchscreen (if equipped).

Source(s): Generator and GenStart/Stop Switch Overview for Diesel Coaches

(J) ATC Spin Switch

The ATC spin feature is intended to be used under specific slippery conditions that require momentary increased wheel spin. Using this option for an extended period of time may damage the vehicle brake system. Pressing the ATC SPIN switch shuts ATC off and allows drive wheel spin.





Pressing the switch again, or cycling the ignition key, cycles the system back to normal operation.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 4.7

(K) RGEN Off

Some vehicles may be equipped with a regen inhibit switch. To stop a regen in progress or prevent the start of a regen, press the upper half of the switch. Regen is delayed until the switch is no longer active.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2024-05-07), Section 5.7

(L) Shutdown Override Switch (SHDN OVRD)

Some vehicles may have a shutdown override switch, which can be used to momentarily override the shutdown sequence. This switch resets the shutdown timer, restoring power to the level before the derate. The switch must be pressed again after five seconds to obtain a subsequent override.

A IMPORTANT

Do not attempt to restart the engine while the vehicle is moving. Bring the vehicle to a safe stop, then restart the engine.

To restart the engine, turn the ignition to OFF, leave it there a few seconds, then turn the ignition to START. The engine will run for a short period and shut down again if the condition does not improve.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 3.38, Section 9.5

(M) Blank Switch

Select switches throughout the switch panel may be left intentionally blank.

(N) Shade Up/Shade Down Switch

This pleated shade is located above the front cab of the Super C coaches and can be used to block out unwanted sunlight or offer additional privacy. To operate the power sky window shade, press and hold the Shade switch on the dash. The pleated shade can be operated at any time, including during travel, and the switch can be released at any time to stop the shade in any desired position.



Source(s): Super C Power Sky Window Shade Overview

(O) Antenna Up Indicator

The Antenna Up indicator illuminates when the antenna is up, the chassis disconnect is on, and the park brake is released.

(P, Q) Blank Switches

Select switches throughout the switch panel may be left intentionally blank.

(R) Differential Lock Switch (DIFF LOCK)

The driver-controlled differential lock (DCDL) feature (side-to-side wheel lock, traction control, or traction equalizer) is available on vehicles with single- or tandem-drive axles.

The DCDL provides maximum traction for slippery conditions by forcing the wheels on each drive axle governed by the switch to rotate together. When the DCDL is engaged, the clutch collar completely locks the differential case, gearing, and axle shafts together, maximizing the traction of both wheels. Use the DCDL if the interaxle lock does not provide sufficient traction.



A status screen showing engaged locks is found in the vehicle operations menus on the driver display. Each differential lock is controlled by a switch on the dash.

A IMPORTANT

Locking the wheels when the vehicle is traveling down steep grades or when the wheels are slipping could damage the differential and/or lead to loss of vehicle control, causing personal injury and property damage.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 16.4

(S) Suspension Dump Switch (SUSP DUMP)

The suspension dump switch is a two-position guarded rocker switch. It allows the air in the vehicle air suspension to be quickly exhausted, lowering the rear of the vehicle. This makes it easier to connect to, or disconnect from, a trailer.

Source(s): Freightliner M2 Super C Chassis Suspension Dump Switch Overview

(T) USB and/or USB-C Outlets

The USB and/or USB-C outlets are for charging only and are not connected to any entertainment equipment. They simply provide convenient accessory charging without filling your 120 volt outlets with chargers. The round USB/USB-C outlets typically work from the 12 volt electrical system; depending on the location, they may be powered from the house or the chassis 12 volt system.

Source(s): USB Outlet, Auxiliary Input, and 12 Volt Receptacle Overview

(U) 12 Volt Power Outlet (Receptacle)

Your coach may be equipped with one or more 12 volt receptacles conveniently located in the dash area. These 12 volt receptacles allow you to plug in a variety of 12 volt DC accessories, including cell phone battery chargers, camera battery chargers, etc. These are fused at 20 amps.

Source(s): USB Outlet, Auxiliary Input, and 12 Volt Receptacle Overview

Dash Air Conditioning and Heat Controls



(A) Fan Speed Switch

The fan speed switch controls the speed of the fan that forces fresh or recirculated air through the air outlets. In the default mode fresh, or outside, air circulates through the heating and air conditioning system. If equipped with air conditioning, recirculation mode is available. This limits the amount of outside air entering the cab. The fan has eight speeds.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.3

(B) Vent Selection Switch

The air selection switch allows you to control the flow of air through the face, floor, and defrost vents. Before using any of the defrost modes, clear the screen at the base of the windshield if snow or ice is present. With the intermediate modes between each telltale, there are nine modes to choose from on a system without air conditioning and eleven modes to choose from in a system with air conditioning.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.4

(C) Temperature Control Switch



Turn the switch to the left (counterclockwise) for cool air, or to the right (clockwise) for hot. There are 21 positions on the temperature control switch.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.4

(D) Recirculation Mode

Press the recirculation button to prevent dusty or smoky air from entering the cab or to decrease the time required to cool or heat the cab interior during extreme outside temperature conditions. When recirculation mode is active, the LED next to the recirculation button illuminates. To prevent the buildup of odors or oxygen depletion inside the cab, after 20 minutes the system switches from full recirculation mode to partial recirculation mode for ve minutes. The system cycles from full to partial recirculation as long as the mode is enabled. Recirculation mode is not available when the air vent selection is set to partial or full defrost mode.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.4

Passenger's Door and Console



(A) Power Window Switch

Power windows are standard on M2 Plus vehicles. [T]he passenger door has a switch mounted in the top of the door that controls the passenger-side power window.

A CAUTION

There is no anti-pinch protection when the window is almost closed. Be sure to clear all objects from the window before closing.

The window switches have three positions: lower window, neutral, and raise window. Press forward on the switch to lower the window. Hold the switch down in the forward position for approximately one second to activate the express function; the window will continue to roll down after the switch is released. Press the switch in the rearward position to raise the window.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.7

(B) Lock Button

To lock either door from inside the cab, push the lock button downwards. To unlock the door without unlatching it, pull the lock button upwards.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 2.1

(C) Door Panel-Integrated Grab Handle

"... [T]he inner door grab handle and steering wheel may be used to provide a secure handhold [...] The grab handles, access steps, and steering wheel are all part of the cab access system. Use these when getting into or out of the cab."

A CAUTION

Slipping or falling from the vehicle can result in personal injury or property damage. Always maintain three-point contact with the vehicle when entering or exiting the cab. Three-point contact means both feet and one hand, or both hands and one foot.

(D) Door Lever

To open the door from the inside, lift up on the door lever. This will unlatch the door whether or not it is locked.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 2.1

(E) Power Door Lock Switches

To lock either door from inside the cab, push the lock button downwards.

NOTE: The cab door locks can be operated when the doors are open.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.8

(F) Molded Storage Pockets

Storage pockets are molded into the driver and passenger doors.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.1

Driver and Passenger Seat

Isringhausen (ISRI) Freightliner Cascadia Elite Driver and Passenger Seat

WARNING

Keep hands, tools, and other objects away from the scissor points under the seats. Failure to do so could cause personal injury.

Unless otherwise noted, all seat adjustments should be made while seated and before the engine is started. Due to the high degree of adjustability found in high-back air suspension seats, it is possible to set the seat back recline adjustment and the seat slide adjustment in such a combination that the seat back will come into contact with the rear wall of the cab. It is the responsibility of the driver to adjust the seat to prevent damage to the seat and the cab interior. All controls for adjusting air suspension seats are located within easy reach of the occupant. All adjustment controls for a suspension seat are located on the seat base.



Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023), Section 5.8-5.18 and <u>2025 Super Star Isringhausen (ISRI) Freightliner Cascadia Elite Driver and Passenger Seat</u> Operation

2026 Super Star Isringhausen (ISRI) Freightliner Cascadia Elite Driver and Passenger Seat Operation

This article provides information about the driver and passenger seat controls on a 2026 Super Star Super C coach equipped with Isringhausen (ISRI) Elite seats provided by Freightliner.

Operating Instructions

Before driving, adjust the seat to support good sitting posture. Good posture supports the safe operation of the vehicle and the driver fitness and comfort. When correctly seated, all instruments and controls should be within easy reach and the driver should have a clear view of the road and mirrors.

- For your safety, and for the safety of other drivers, the seat can only be adjusted while seated, when the vehicle is fully stopped, and while the hand brake is pulled.
- Before you start driving, the seat must be adjusted to an optimal position for your body and the correct seating posture must be taken, particularly when switching vehicles.
- Never use a damaged or faulty seat.
- The following mechanisms must lock audibly into position; horizontal slides, backrest recline, seat cushion length, and tilt. Pull the levers completely during the whole duration of seat adjustment, otherwise improper use could damage parts over time. The control levers must return to their normal position after adjustments are made.

- Don't operate several control elements at the same time.
- Make sure to always use your seat belt for the whole duration of your drive. Never belt in more than one person per seat belt. Do not fasten anything on the passenger seat other than the person sitting in it or an accredited child seat.
- Keep hands away from the adjustment mechanism and suspension system. Failure to follow this may cause injury to your hand and fingers.
- Do not adjust the seat to a position where it can contact other components in the cab. Make sure that the seat is able to oscillate in any direction freely. Otherwise, damage could occur to the seat or cab.
- The seat is designed to hold a maximum driver's weight of 330 lbs.

Seat Belts

Seat belt assemblies are designed to secure persons in the vehicle to help reduce the chance of injury or the amount of injury resulting from accidents or sudden stops. For this reason, Daimler Truck North America LLC urges that the driver and all passengers, regardless of age or physical condition, use seat belts when riding in the vehicle.

A WARNING

Always use the vehicle's seat belt system when operating the vehicle. Failure to do so can result in severe personal injury or death.

▲ WARNING

Inspect and maintain seat belts. When any part of a seat belt system needs replacement, the entire seat belt must be replaced, both retractor and buckle side. Any time a vehicle is involved in an accident, and the seat belt system was in use, the entire vehicle seat belt system must be replaced before operating the vehicle. Do not attempt to modify the seat belt system; doing so could change the effectiveness of the system. Failure to replace worn or damaged seat belts, or making any modifications to the system, may result in personal injury or death.

Seat Adjustments

Due to the high degree of adjustability found in high-back air suspension seats, it is possible to set the seat back recline adjustment and the seat slide adjustment in such a combination that the seat back will come into contact with the rear wall of the cab.

It is the responsibility of the driver to adjust the seat to prevent damage to the seat and the cab interior.

All controls for adjusting air suspension seats are located within easy reach of the occupant. All adjustment controls for a suspension seat are located on the seat base.



Note: Switches and controls are developed by several manufacturers including Isringhausen, Freightliner, and Lippert. The following is a description of adjustments that are available:

COMPONENT

1 - Horizontal Slides (Slide Handle)



SUMMARY OF FUNCTION AND OPERATION

Enables the drivers to perform their job in a comfortable position. It provides a better view and easier accessibility of the dashboard. Pull the lever completely and move seat forwards/backwards. Once you have found your desired position, release the lever to lock the seat in place.

A WARNING

Make sure that you are adjusting the horizontal slides to a position where reaching and pressing the pedals requires no effort. Do not put your feet on the slide handle.



When the seat glide is all the way forward and the seat is tilted on the lowest setting, it restricts the seat from gliding all the way rearward. The seat must be tilted upward and then retracted.

2 - Tilt Adjustment



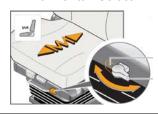
Enables the driver to reduce the load on the underside of the thighs and the back. The load depends on the inclination of the seat and backrest and the contour of the cushion. Pull lever and adjust the tilt by loading/unloading the front seat cushion area.

3 - Seat Cushion Adjustment



Enables the driver to adapt the length of the cushion to the length of their thighs. It helps to keep the feet and lower legs from "falling asleep" and provides a safer and more fatigue-proof posture. Adjust the cushion so that 3 fingers fit in between the cushion's front edge and behind the operator's knee. Pull the lever and move the seat cushion forward/backward. Release the lever to lock the seat.

4 - Horizontal Isolator



For damping horizontal shocks during off-road driving or while pulling a trailer, particularly with liquids.

- Lever to the right: Horizontal isolator released.
- Lever to the left: Horizontal isolator blocked.

5 - Damper Adjustment



Protects the spine of the driver, as the damper absorbs the vertical shocks and vibrations. By adjusting the damper, the suspension characteristics of the seat can be optimally adapted to every roadway and every driver.

- Lever Up: Soft Suspension; minimum damper force for flat roads.
- Lever Down: Hard Suspension; maximum damper force for rough roads.

Damper adjustment must be adapted in the case of changing road conditions.

A WARNING

The damper shall be adjusted stiff enough, so in rough road conditions the driver's feet never lose contact with the pedals. Don't adjust the damper so soft that on rough roads the seat can knock through. In general, heavy drivers don't have to use a soft adjusted damper.

6 - Height Adjustment



It supports the driver so that the pedals can be reached comfortably by the feet and passed through all the way without force.

- Pedals must be actuated without stretching the legs completely.
- View of vehicle and instruments shall be clear.

Pull or push handle and adjust the seat to desired height.

7 - Heating System

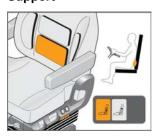


Avoid temperature-induced tension and fatigue by adjusting the temperature to your personal preference (in a close body region/microclimate area).

A WARNING

Misuse of the seat heating system can lead to overheating or damage to the seat. This can include a wrong connection or using the seat for purposes it was not designed for, such as drying of wet clothes. Do not place anything - like for example jackets, blankets, pillows, or bags - over the seat. It is also not allowed to use protective covers. It is not permitted to have the heater on while the seat is unoccupied. It is the driver's responsibility to make sure that the passenger seat heater is set to off when empty.

8 - Lower Lumbar Support



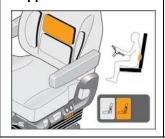
Promotes an upright posture and prevents fatigue by tuning the backrest contour.

- Relaxation of muscles
- Load relief in the spine
- Increase in comfort

The lumbar support prevents driving in a slouched, hunched, or in a hollow-back position. Please note that your whole back must touch the backrest from the buttocks to the shoulders. It is recommended to change the sitting position from time to time.

Lower Lumbar: This modified shape of the lower backrest adjusts the position of the driver's pelvis: This is achieved by turning the pelvis forward and upright. Press the button in the appropriate direction in order to support the pelvis in its forward position. This turns your spine into its idea double S-shape.

8 - Upper Lumbar Support



Upper Lumbar: This modified shape of the lower backrest compensates driver's hollow back. Press the button in the appropriate direction to match the shape of the lower backrest contour in order to support the driver's back.

Side Bolster Support: This feature is not used by Newmar. This switch may be replaced with a blank non-functional switch.

9 - Backrest Adjustment



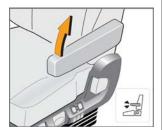
Enables the driver to stay in a comfortable position for a longer period of time by providing a custom inclination of the backrest. An upright position avoids postures with a high load on the back. Pull handle completely over the full adjustment stroke and adjust the backrest position by applying your back towards the backrest.

A WARNING

Don't adjust the backrest too far backwards when driving - this also applies to the passenger - in order to avoid the risk of sliding out of the belt during the full brake situation. Don't fold the backrest completely down to the seat cushion, in order to preserve the backrest's side bolsters.

Adjust the backrest to an inclination where the steering wheel can be reached with angled arms.

10 - Armrest



Optimal adjustment of the armrests to relieve muscles in the spine and back.

- Enables relaxation of muscles in shoulder and neck area.
- Reduces the load on the spinal disc in the lower spine area.
- Adjust the armrest to a position where the elbows lay lightly on it.

Fold up armrest till final stop. Then fold down armrest completely. Now tilt up inclination to the desired height.

A WARNING

The armrest shall not be used as a method of ascent while entering the vehicle.

11 - Seat Belt Receiver



Seat belt assemblies are designed to secure persons in the vehicle to help reduce the chance of injury or the amount of injury resulting from accidents or sudden stops. Fasten the three-point seat belt by pushing the latch into the buckle. Listen for an audible click. Tug on the seat belt to make sure it is securely fastened.

12 - Seat Swivel Lever



NOTE FROM NEWMAR -

This swivel plate is not provided by Freightliner or ISRI and is added to the seat by Newmar.

- Seat will interfere with swivel flange when seat glides are retracted and the seat is tilted down further than halfway point.
- Rotation is impeded when the seat is retracted back on glide and the tilt is highest setting when trying to rotate. This causes the OEM plastic cover to interfere with the flange of the swivel plate.

To swivel the seat, use the lever to release it from the locked position.

Source(s): Isringhausen (ISRI) 5030/880 Instruction Manual: Basic, Premium, Elite (Version 2012/05/24), Freightliner Business Class M2 PLUS Driver's Manual (02/10/2023)

Product(s): Isringhausen (ISRI) Freightliner Cascadia Elite Captain/Passenger Seat

FUEL SYSTEMS

Chassis Diesel Engine Fuel Overview

This article provides information regarding the chassis diesel engine fuel, fuel filler cap, and the refueling process.

A IMPORTANT

Consult your chassis manufacturer information about your recommended fuel and fuel blends, additives, and maintenance requirements.

WARNING

CALIFORNIA Proposition 65: Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- Always start and operate the engine in a well-ventilated area.
- If in an enclosed area, vent the exhaust to the outside.
- Do not modify or tamper with the exhaust system.
- Do not idle the engine except as necessary.

For more information, go to www.P65warnings.ca.gov/diesel.

Refueling/Filling the Tank

The fuel gauge indicates the amount of fuel remaining in the fuel tank. Avoid running out of fuel. When fueling your vehicle:

- 1. Put your vehicle in park (P) or neutral (N) with the park brake set (depending on coach type).
- 2. Switch the engine off.
- 3. Remove the fuel cap by rotating it in a counterclockwise motion until it spins off.
- 4. Pull to remove the cap.
- Select the proper grade of fuel as specified by the engine manufacturer and fill.
 - Reminder: For coaches requiring diesel exhaust fluid (DEF), check the DEF level each time the coach is refueled.



DANGER

All pilot lights, appliances, and their igniters (see operating instructions) shall be turned off before refueling of motor fuel tanks and/or propane containers. Can cause ignition of flammable vapors, which can lead to a fire or explosion and result in death or serious injury.

WARNING

Never fill fuel tanks to more than 95 percent of their liquid capacity. This could make them more likely to rupture from impact possibly causing fire and resulting in serious personal injury and death by burning. Do not mix gasoline or alcohol with diesel fuel. This mixture could cause an explosion, possibly resulting in serious personal injury or death. Do not fill the fuel tanks in the presence of sparks, open ames, or intense heat. These could ignite the fuel, possibly causing severe burns.

Diesel Exhaust Fluid (DEF) Overview for Super C Coaches

This article provides an overview about the DEF tank installed on Super C Freightliner M2 Chassis.

Diesel Exhaust Fluid and Tank

Diesel exhaust fluid (DEF) is used in the ATS to lower NOx in the exhaust stream. DEF is colorless and close to odorless (it may have a slightly pungent odor similar to ammonia). It is nontoxic, nonflammable, and biodegradable. It is mildly corrosive to aluminum, but does not affect the strength or structure of the aluminum.





White crystals may be noticeable around components that come into contact with DEF. The crystals are easily removed with water. DEF consumption varies depending on ambient conditions and vehicle application.

Freezing Conditions

DEF freezes to slush at around 12°F (-11°C). It is not damaged or destroyed if frozen, and is fully usable when thawed. The DEF in the tank is allowed to freeze while a vehicle is non-operational. At start-up, normal operation of the vehicle is not inhibited if the DEF is frozen; an immersion heater with engine coolant flowing through it warms the DEF once the engine is running, allowing the SCR system to operate.

DEF supply lines with engine model year 2013 and newer are designed to survive freezing conditions while containing DEF, so purging is not required.

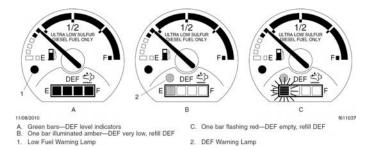
DEF Tank

Engines that are compliant with EPA10 and newer regulations are equipped with a DEF tank located on the driver's side of the vehicle behind the battery box or forward of the fuel tank. The DEF tank has a 19 mm filler neck inlet that prevents the hose from a diesel outlet from being inserted, and has a blue cap for easy identification.

Fuel/DEF Gauge

The diesel fuel and DEF levels are measured in a dual-purpose gauge.

Fuel level is indicated at the top of the gauge. Below the fuel level, a low fuel warning lamp illuminates amber when the fuel level drops below 1/8th of the capacity.



The lower portion of the gauge has a DEF warning lamp that illuminates amber when the DEF tank is near empty, and a lightbar that indicates the level of DEF in the tank. The DEF light bar illuminates as follows:

- Four bars illuminated green—Between 75% and 100% full
- Three bars illuminated green—Between 50% and 75% full
- Two bars illuminated green—Between 25% and 50% full
- One bar illuminated green—Between approximately 10% and 25% full
- One bar illuminated amber—DEF very low, refill DEF
- One bar flashing red—DEF empty, refill DEF

DEF Warnings and Engine Limits

A IMPORTANT

Ignoring the DEF warning lights results in limited engine power, with the application of a 5 mph (8 km/h) speed limit after the engine is shut down and started again.

DEF Level Low—Initial Warning

When the DEF level is low, the following lamps notify the driver. Refill the DEF tank in order to cancel the warning sequence.

- One bar of the DEF level indicator illuminates amber—DEF very low, refill DEF.
- The DEF warning lamp illuminates solid amber.

DEF Empty

When the DEF level reads empty, the following lamps notify the driver.

- One bar of the DEF level indicator flashes red—DEF empty, refill DEF
- The DEF warning lamp flashes amber
- The MIL lamp illuminates

Detroit engines: Power is limited, with a 55 mph (90 km/h) speed limit.

Cummins engines: Power is limited with progressively harsher engine power limits applied.

DEF Tank Empty and Ignored

If the empty warning is ignored and the DEF tank is not refilled, the red STOP engine lamp illuminates in addition to the MIL lamp and CHECK engine lamp (on vehicles with a Cummins ISB or ISC/L engine.)

If the DEF is not refilled, a 5 mph (8 km/h) speed limit is applied after the next engine shutdown or if a fuel refill is detected.

DEF Contamination and SCR Tampering

A NOTICE

Once contaminated DEF or tampering has been detected, the vehicle must be taken to an authorized service facility to check the SCR system for damage and to deactivate the warning lights and engine limits.

If contaminated DEF or tampering with the ATS is detected, the DEF warning light ashes and the MIL lamp illuminates to warn the driver. The CHECK engine lamp also illuminates on vehicles with a Cummins ISB or ISC/L engine.

- Detroit engines: Engine power is limited with progressively harsher limits applied. If the fault is not corrected, the STOP engine light illuminates and a 5 mph (8 km/h) speed limit is applied after the next engine shutdown or if a fuel rell is detected.
- Cummins engines: Engine power is limited with progressively harsher limits applied. If the fault is not corrected, the STOP engine light illuminates and a 5 mph (8 km/h) speed limit is applied after the next engine shutdown, or while parked and idling.

Source(s): Business Class M2 Driver's Manual (STI-455-7, 09/20/2021)

Auxiliary Compressed Air Fitting on Super C Coaches

This article provides a basic overview and typical location for an air connection fitting for customer use. This air connection is supplied by Freightliner. The pressure is supplied by the air compressor that operates as the engine is running.

The air connection fitting for the Super C (Super Star, Supreme Aire, and Summit Aire) coaches is typically located in the driver-side fuel door area. The fitting(s) may be labeled "Aux Air Outlet" or "Aux Air Inlet Brake Release."







This auxiliary input fitting can be used to inflate the air system from an outside source such as a shop air compressor or tow truck). The auxiliary output fitting can be used to inflate floats, bike tires, or car tires.

If necessary, the auxiliary output can be used to inflate a coach tire in an emergency when other sources of compressed air are unavailable; however, it will take some time due to low air pressure.

When using air from the auxiliary output connection, the engine should be running to operate the compressor. The air pressure is regulated by the air governor for the chassis air system.

The approximate pressure can be monitored by the gauges on the dash. The air connections are supplied and plumbed by the chassis manufacturer.

A NOTICE

You may not have enough air pressure to properly inflate tires, but you should be able to get enough to drive to the nearest tire service center.

LEVELING SYSTEMS

Leveling System Overview

This article provides an overview of the leveling systems installed in a Newmar coach.

A WARNING

Do not lift the wheels off of the ground while leveling the coach. The vehicle may drop and/or move forward or backward without warning, which may cause serious injury or death.

A WARNING

Never attempt to move the unit with the leveling jacks deployed. Always visually inspect the jacks prior to moving to ensure they are fully retracted, are in the stored position, and the system is turned OFF.

A WARNING

Be sure the ground on which you are parked will support the weight of your unit. Often material that seems "safe" to level on will not support the weight at the leveling jack points. Use caution when leveling on hot asphalt, sand, and grass, as the weight of the unit may cause the jacks to sink into the ground. Pads may need to be placed under the jacks to spread the weight over a larger area. Always look under your unit prior to leveling to make sure the jacks are clear of debris and other foreign materials that may interfere with leveling.

A WARNING

Never operate any leveling system with a person or pet under the unit. Serious injury or death may result!

Care and Maintenance

A IMPORTANT

The leveling system should be cycled at least once a month to keep the system in operating condition.

Leveling and Full Wall Slideout Sequence of Operation

This article provides step-by-step instructions for leveling the coach and operating the slideouts.

A IMPORTANT

In the past, Newmar has recommended leveling the coach prior to deploying the slideouts. As of 2015, Newmar makes the following recommendation for the extension and retraction of slideouts. The following sequence of operation relates to ALL coach years and models.

Motorhomes, like all vehicles, flex in travel. Flexing may be different due to terrain and the coach's fulcrums (resting on tires or jacks). As the coach flexes, this movement is more noticeable in the outside reveal on a wider slideout.

Extending the Slideouts and Leveling the Coach

- 1. Park the coach on a reasonably level campsite.
- 2. Leave the coach at ride-height with air in the air bags (if equipped with air suspension) or on normal suspension (coaches without air suspension).
- 3. Plug the coach into shore power (if available) or start the generator to increase the voltage for better slideout operation.
- 4. Look at the "reveal" or "gap" of the two vertical wall trims around the slideouts to make sure there is plenty of clearance so the trim will not rub when extending the slideout. If the gap looks good, then the slideout can be operated. Most often, the gap will look best when sitting on the tires with the air suspension inflated (at ride-height), and not on the jacks.



A IMPORTANT

In the unlikely occasion that the slideout trim has inadequate clearances, try leveling or repositioning the coach and rechecking the clearances before extending the slideout.

- Close all compartment doors, and verify that the path of the slideout is unobstructed and free from any surrounding objects, both inside and outside of the coach.
- 6. Once the appropriate conditions are met, follow the operating instructions posted in your coach to extend the slideouts (image for example only).
- 7. Dump the air suspension (if equipped). This step is included in the auto-leveling process for most coaches.
- 8. Deploy the leveling jacks. (Refer to the leveling system manufacturer's documentation for complete operation instructions.)

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A NOTICE

To extend the jacks, the ignition may need to be in the engine run or on position and the park brake may need to be applied. If these conditions are not met, you may hear a deny tone from the leveling system keypad and the jacks may not deploy.

Retracting the Jacks and Slideouts

- 1. Retract the leveling jacks.
- 2. Start the coach.
- 3. Allow the coach air suspension to fill and return to ride height (units without air suspension will return to normal suspension).
- 4. Turn the engine off.
- 5. Close all compartment doors, and verify that the path of the slideout is unobstructed and free from any surrounding objects, both inside and outside of the coach, including any water or debris that may have collected on the slideout roof or the topper awning. Note: If pooling has occurred after rain, one way to remove water on the slideout roof or topper is to tilt the coach using the leveling system to aid in water runoff.)

A IMPORTANT

Debris left on the roof or topper may prevent the slideout from sealing properly when retracted, as well as prevent the mechanical lock arms from closing properly when the slideout is extended.

6. For a full wall slideout, visually inspect the front vertical trim for adequate clearance before complete retraction (when the slideout trim spacing can be observed). The spacing should look even from top to bottom (see image for reference).

A IMPORTANT

In the unlikely occasion that the slideout trim has inadequate clearances, try leveling, or if necessary, repositioning the coach, and rechecking the clearances before fully retracting the slideout.

- 7. Retract the slideouts. Inspect all slideouts for complete retraction.
- 8. If the coach is equipped with manual lock arms, make sure to lock them.
- 9. Unplug the coach from shore power when you are ready to depart.

Equalizer EQ Smart-Level Hydraulic Leveling System Quick Start

This article provides the step-by-step instructions for operating an Equalizer EQ Smart-Level leveling system, which began being installed in coaches in production after 5/17/2019.

Panel Indicator LED's

During typical operation, the LED's on the bottom left-hand corner of the keypad should NOT be illuminated. The only LED that should light is the OPERATING



LED, which should flash during operation.

Power	Engage Park Brake	Jack	Ignition On	
ON red when Power is ON	ON red when park brake is not set	ON red when jack(s) are deployed	ON red when ignition is in the ON position	
OFF when power is OFF SLEEP MODE flashes every 1 second	OFF when park brake is set	OFF when jack(s) are stowed	OFF when ignition is off	
Operating	Excess Slope	Low Voltage		
ON red w/ AUTO LEVEL or ALL RETRACT OFF when keypad is idle or sleeping	ON red following an AUTO LEVEL attempt if system cannot overcome slope OFF when slope is not excessive	ON red when voltage is below 10.5 VDC OFF when voltage is above 10.5 VDC		

If the LOW VOLTAGE or EXCESS SLOPE LED's illuminate, you have an error condition that must be corrected prior to operating the jacks.

A NOTICE

After an AUTO LEVEL process, the operation light should turn off and the Excess Slope light should be off. This indicates that the system has finished leveling and is within the .5-degree (approx. 7/16 inch over 4 feet) front-to-rear and side-to-side leveling specification.

If the Excess Slope light is on, then the system was not able to complete the process within the .5-degree specification. There are several possibilities to, includ[ing], but not limited to: Low Voltage, jack(s) running out of travel, or system/component failure.

Auto Level Operation

Push and release the POWER button to engage power.

- The LED light next to the POWER button should be lit RED when power is on.
- Also, depending on if the park brake disable is connected and the park brake is released, you may not be able to extend jacks.

NOTE FROM NEWMAR

To extend the jacks, the ignition key must be in the engine run or on position and the park brake must be applied. If the ignition key is not in the run or on position, and/or if the park brake is not set, you will hear a deny tone from the keypad.

Press the AUTO LEVEL button and release. The system will send out a continuous series of beeps and the "Operating" LED will be on to let you know AUTO LEVEL is operat[ing] and will automatically level the coach.

- Do not move around or exit the coach during this operation doing so will fault out the operation or result in an incomplete leveling/stabilization operation.
- When completed, the Keypad will signal the successful completion with a dual-stage tone.
- The Keypad may be left on once level has been achieved.
- The Keypad will enter "sleep mode" after five minutes of inactivity.

A NOTICE

AUTO LEVEL will be denied if the jack indicator lights are on. To clear this, press [ALL RETRACT], and then perform AUTO LEVEL.

Setting the Null

Null is the term used to indicate the "levelness" of the coach. A Null setting should have been performed by the installer [Newmar]. If the coach is not level following an attempt to AUTO LEVEL, you will need to level the coach and reset the null.

- 1. To set the null, push and release the POWER button on the Keypad to engage power. The LED light next to the POWER button should be lit RED when the power is on.
- Level the coach by deploying jacks manually, or by simply parking the coach on a level site. You do not need to have the jacks deployed to set the null. Use a bubble level on a flat surface in the center of the coach as a reference.
- 3. Once the coach is level, turn the power off at the panel.
- 4. Depress and hold the AUTO LEVEL button and press and release the POWER button and listen for a series of beeps.
- 5. After the Keypad has beeped 5 to 6 times (the Keypad will continue to beep as long as the AUTO LEVEL button is held), release the AUTO LEVEL button. [Y]ou should get a confirmation beep. The new null has been set and the panel will store/remember this setting.
- 6. Press and release the ALL RETRACT button to retract the jacks to the stowed position.

Use the ALL RETRACT button to retract the jacks prior to travel. This system does provide the ability to retract the jacks using the UP buttons for each pair of jacks. However, these buttons are not intended to be used for retracting the jacks to their stowed position prior to travel. The Up arrows are to be used only for retracting the jacks to help level the coach. The ALL RETRACT button must be pressed to ensure the system is ready/safe for travel. All jacks should automatically retract and return to [the] stowed position when the ALL RETRACT button is pressed and released. The pump will run in retract for approximately 5 seconds after the last jack has been fully retracted - or until a time limit of 90 seconds has been reached.

A IMPORTANT

It is always the responsibility of the coach operator to visually confirm that the jacks are fully retracted and safe for travel.

Helpful Hints

- Do not allow motion in the coach during the AUTO LEVEL operation (don't move around in the coach). This could cause the system to fault out or level/stabilize improperly.
- The Auto-Level is a microprocessor-controlled system. Proper and adequate battery voltage and permanent chassis ground are essential.
- Your system is equipped with override ability. Refer to the procedure for proper use of this. It is usually better to
 review this procedure prior to its actual use, rather than having to learn a new procedure in difficult environments
 and/or situations. This is designed to get the jacks retracted if there has been a power/control failure. [This
 information can be found in Newgle in the Equalizer EQ Smart-Level manual.]
- If the system has not been used (with the jacks stowed) for over 24 hours, it is recommended that you engage the ALL RETRACT button prior to travel in order to re-pressurize the system.
- A lubricant, like WD40, may be used to clean and lubricate the cylinder shafts.

Manual Operation

NOTE FROM NEWMAR

To extend the jacks, the ignition key must be in the engine run or on position and the park brake must be applied. If the ignition key is not in the run or on position, and/or if the park brake is not set, you will hear a deny tone from the keypad.

Push and release the Power Keypad button to engage power. All lights will come on, [and] then most will go out. The LED light next to the POWER button should be lit RED when power is on. You will need to have the ignition key switch in the [ON] position to extend the jacks. If you attempt to extend jacks by pressing the Down Keypad buttons or all the jacks with the Auto-Level button, you will hear a "deny" tone from the keypad if the ignition key is in the improper position. Also depending on if the park brake disable is connected, and the park brake is released, you may not be able to extend jacks.

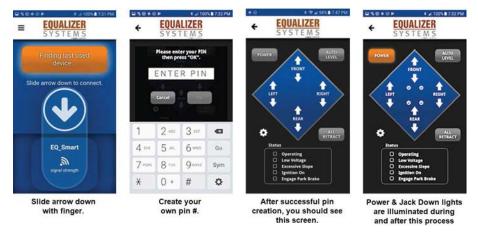
Using the Down Keypad buttons, extend the jacks until they contact the ground (this is referred to as "planting" the jacks). As you extend the jacks, an LED light on the Keypad will indicate the jack(s) is out of the "stowed" position. Jacks may only be operated in pairs using the manual keypad buttons. Use a bubble level on a flat surface in the center of the coach. Level the vehicle by using the Down or Up Keypad buttons until the vehicle is level. Jacks may be operated only in pairs. Press the POWER button to turn off the control panel (Keypad).

To retract, push and release the Power Keypad button to engage power. Press the ALL RETRACT button to retract the jacks prior to travel. This system does provide the ability to retract the jacks using the UP buttons for each pair of jacks. However, these buttons are not intended to be used for retracting the jacks to their stowed position prior to travel. The Up arrows are to be used only for retracting the jacks to help level the coach. The ALL RETRACT button must be

pressed to ensure the system is ready/safe for travel. All jacks should automatically retract and return to the stowed position when the ALL RETRACT button is pressed and released. The pump will run in retract for approximately 5 seconds after the last jack has been fully retracted - or until a time limit of 90 seconds has been reached.

EQ Smart-Level Bluetooth Operation

- If the face of your keypad indicates that your controller is compatible with a Bluetooth device, download EQ Smart-Level in the Android or Apple App Store. When downloading the app, make sure your Bluetooth setting is turned on or the app will not connect to your coach. Once the app is downloaded, please follow the instructions to level your coach.
- If your keypad does not indicate compatibility, your Bluetooth connectivity may be through your multiplex system.
- The operation of the system from a smartphone is the same as from the control panel with the exception that you cannot perform the orientation setting or null programming from the Bluetooth.



Source(s): Equalizer Systems EQ Smart-Level Motorized Version Installation/Operation/Warranty Guide (Effective June 2021, EQ021R4)

Freightliner M2 Super C Chassis Suspension Dump Switch Overview (Coaches with Equalizer Leveling)

This article is intended to clarify the operation (dump and inflate procedure) of the Freightliner Air Bag Dump Switch located on the dash of 2026 Super Star and Supreme Aire coaches equipped with an Equalizer leveling system.

A NOTICE

Do not operate the vehicle over uneven ground such as ramps, speed bumps, curbs, etc. with the air springs deflated. Doing so may lead to air bag separation from the piston, preventing the suspension air springs from re-inflating.

A NOTICE

Never exhaust air from the suspension while driving. When the air is exhausted, the suspension will not absorb road shocks, and components may be damaged.

The suspension dump switch is a two-position guarded rocker switch. It allows the air in the vehicle air suspension to be quickly exhausted, lowering the rear of the vehicle. This makes it easier to connect to, or disconnect from, a trailer.

To lower the rear of the vehicle quickly, press the upper half of the rocker momentarily (at the LED). To raise the suspension to its normal height, press the upper half of the rocker switch again.





NOTE FROM NEWMAR -

If the Equalizer leveling jacks have been deployed, the air bags will be dumped as part of this process. The dash suspension switch will be inoperable until the leveling jacks are stored and the air bags have re-inflated as part of the auto-level process. The dash suspension dump switch should not be used for any part of the coach leveling process.

When the panel lights are on, the tractor icon is backlit in green.

A IMPORTANT

The suspension dump switch is guarded to prevent unintentional switch activation. This switch does not have a diagnostic blink function when inactive.

When the suspension dump switch is pressed, three responses are possible: a normal response, a slow response, and an abnormal response.

Normal Response

The LED in the switch blinks while the suspension is deflating or filling. When it is completely deflated, the LED comes on steady and stays illuminated. In normal operation, the suspension may dump or fill so quickly that the blinking of the switch is barely noticeable. If operation of the switch is not possible for any reason (vehicle is moving faster than 5 mph, ignition is turned off, etc.), the LED will stop blinking and turn off.

Slow Response

If operation of the switch is slowed for any reason (by cold weather, low air pressure, etc.), the switch will continue to blink until the suspension completes a dump or fill. As in the normal response, the LED comes on steady and stays illuminated when the suspension if fully deflated.

Abnormal Response

If the LED blinks for more than 10 seconds, the suspension dump mechanism may not be operating properly. Bring the vehicle to an authorized Freightliner service facility for testing. If the ignition is turned off while the vehicle is in dump mode, the power to the dump solenoid is cut off to prevent battery drain, and the suspension system will autofill the rear air springs. The suspension will also autofill if the vehicle is operated with the suspension dumped, and the speed is over 5 mph (e.g. -- driver forgot to inflate the bags or there was a system failure).

Source(s): Freightliner Business Class M2 Driver Manual (with added Note from Newmar) and Freightliner Cascadia Driver's Manual (with added Notes from Newmar)

WHEELS AND TIRES

Wheels and Tires Size and D.O.T. Code

This article provides basic information about the wheels and tires, including the tire size, inflation, and D.O.T. codes. Newmar's quality extends to every inch of your coach, right down to the tires and wheels. The durability and longevity of your tires will provide you with the confidence and peace of mind you need to relax and enjoy the ride.

The primary areas of concern are the tire size, inflation, and operational information. The sidewall of the tire contains detailed information about the construction, inflation, and carrying capacity of the tire. Become familiar with this information, and operate the vehicle within the capacity parameters outlined.

A WARNING

Proper tire maintenance is critical to the safety, operation, and durability of your coach. Failure to follow and monitor tire pressure guidelines may result in premature tire failure.

Tire Size

The sidewall of the tire contains information that is important to know to ensure proper use of the tire, as well as to maintain long life. Take the time to become familiar with the size, load rating, and pressure information listed on the sidewalls of the tires.

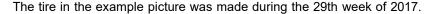
This tire size is 315 / 80 R 22.5. From this size, we can determine the physical dimensions of the tire, as well as its basic construction. The tire size breaks down like this:



- The first number, "315", is the section width of the tire in millimeters. The section width is the measurement of the tire from the outside sidewall to the inside sidewall.
- The second number is the height of the sidewall, expressed as a percentage of the section width. In this case, the number is "80", so the sidewall height accounts for 80 percent of the tire's section width.
- The "R" in the tire size indicates that this tire is "radial" in construction. The belts are wrapped around the tire in a radial design, from bead to bead.
- The final number is "22.5", which is the rim size the tire was designed to fit. This tire fits a 22.5" diameter wheel.

D.O.T. Code

The last four digits on tires manufactured after the year 2000 signify the week and year of manufacture.





Tire Care and Maintenance Basics

This article provides information about the care and maintenance of your coach tires, including examples of labels and tire pressure charts. To ensure your tires are operating safely, regularly inspecting your tires and checking your tire pressure is absolutely mandatory.

A NOTICE

For specific recommendations related to tire pressure, rotation, or replacement, please contact the tire and/or chassis manufacturer.

Tire Pressure Overview

Tire pressures should be checked and adjusted before and after each trip. Always check and adjust the pressures while the tires are cold. Never add or release pressure from the tires when they are hot (after having driven a mile or more).

For safe operation and maximum weight carrying capacity, it is imperative that the tires be inflated to and maintained at the listed tire pressures on the Federal ID Tag. This tag is affixed to the interior wall just behind the driver's seat in your coach.

NOTICE!

On first trip, tighten wheel lugs at start and at 10, 25 and 50 miles. Tighten to manufacturer's specifications.

Thereafter, check wheel lugs before each trip, after excessive braking and following winter storage.

AD-24

A WARNING

Failure to follow proper inflation guidelines may result in tire failure, which can cause loss of vehicle control or accidents resulting in property damage, bodily injury, or death.

A IMPORTANT

The tire pressure settings can change depending on whether they are used in single or dual tire situations.

A IMPORTANT

Make sure the tire pressures are the same across an axle, while never exceeding the maximum air pressure limit stamped on the wheels or tires, or leaving a tire below the minimum pressure listed on your tire inflation chart.

If you are operating your coach while staying significantly under the maximum weight carrying capacity, you may experience an unnecessarily firm ride. To correct this condition, it is recommended for you to weigh the coach when it is fully loaded as you would travel, with full fuel, water, and LP tanks, all travelers, and your belongings, as well as any towed equipment. Weigh each axle end separately, and use the heaviest end weight to determine the axle's cold inflation tire pressure.

For units operating significantly under maximum weight carrying capacity experiencing an unnecessarily firm ride. We recommend for you to weigh the coach loaded as you will be traveling with fuel, water, Lp, belongings, persons and weight of towed equipment, weighing each axle end separately and using the heaviest end weight to determine the axle's cold inflation tire pressure use the inflation chart provided by the tire manufacture for you specific brand, series,& size and load range of tire use the dual and single weight charts according to the tire configuration you are inflating.

Make sure tire pressures are the same across an axle, while NEVER exceeding the maximum air pressure limit stamped on the wheels or tires nor under inflating a tire below the lowest pressure on the tires inflation chart. For more detailed information refer to the tire inflation pressure article in Newgle.

	295/60R22.5 J													
	PSI	85	90	95	100	105	110	115	120	125	130		Maximum load & pressure on sidewall	
F	кРа	590	620	660	690	720	760	790	830	860	900	Maximum load & pressure on sidewall		
LBS	Single	5260	5505	5750	5990	6230	6465	6700	6930	7160	7390	S	7390 LBS at 130 PSI	
LD3	Dual	9650	10100	10550	10990	11430	11860	12290	12720	13140	13560	D	6780 LBS at 130 PSI	
KG	Single	2385	2495	2610	2715	2825	2930	3040	3145	3230	3350	S	3350 KG at 900 kPa	
NG	Dual	4375	4580	4785	4985	5185	5380	5575	5770	5960	6150	D	3075 KG at 900 kPa	

Example of a Tire Inflation Chart

Use the inflation chart provided by your specific tire manufacturer according to brand, series, size, and load range. Also, pay attention to the chart when referring to dual or single tire configurations, as they will change based on which tire you are inflating.

A IMPORTANT

Do not use the example to find your recommended tire pressures. Refer to your tire manufacturer's owner's manual and specific tire inflation guidelines.

A NOTICE

Exact tire inflation charts will not be provided by Newmar. Each tire manufacturer provides this information, as it changes by brand, make, tire series, tire size, as well as if it is used in a single or dual setup. For more information about your tires and the inflation specifications, please refer to the Item Home Page of your tire manufacturer.

ELECTRICAL

This chapter includes overviews of the 12 volt and 120 volt electrical systems, as well as information about electrical equipment that may be installed in your coach, including, but not limited to fuse panels, lighting, EMS, generators, inverters, converters, solar panels, transfer switches, etc.

A WARNING

Due to the risk of electrical shock, service should be performed by a qualified electrician or authorized service technician. The electrical system may have multiple 120/240 volt power sources. All power sources must be turned off, and any auto generator start features must be disabled before servicing.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

A CAUTION

Newmar coaches are set up, configured, and tested to operate properly with the electrical system that was installed at the time of production, including, but not limited to the battery, solar, inverter, and any multiplex system(s). Modifications to any part of the electrical system may cause adverse effects to the coach function and should not be done. If the coach's electrical system is modified, including, but not limited to batteries, solar, or inverter systems, Newmar will not warranty or aid in the diagnosis of electrical, battery, multiplex, and/or charging system issues.

12 Volt Electrical System Overview

This article provides general information about the components and functions of the 12 Volt Electrical System (DC) in Newmar coaches.

Power Sources

The 12 Volt Electrical System allows certain components to maintain a low voltage from the battery bank. The battery bank is controlled by the coach charging system, which consists of a charge bridge solenoid, a bi-directional isolator relay delay (BIRD), or a battery isolation manager (BIM). When the coach engine is running, the alternator charges the chassis batteries and may assist in charging the house batteries through the BIM, BIRD, or Charge Bridge.

THIS CONNECTION IS FOR LOW-VOLTAGE BATTERY OR DIRECT CURRENT ONLY. DO NOT CONNECT TO 120 OR 240 VOLTS AC.

When the coach is connected to shore power or when the coach generator is in use (when shore power is unavailable), the converter or inverter/converter combination recharges the house batteries, and with the assistance of a BIM, BIRD, or Charge Bridge, it can also charge the chassis batteries. In addition to the alternator and converter, the coach may also be equipped with solar panels to provide an additional option for charging your house batteries.

Alternator

The alternator is a belt-driven component attached to the coach engine and is supplied by the chassis manufacturer. The alternator supplies power for chassis components such as batteries, lights, wipers, dash HVAC, and power seats, as well as all of the driver controls located in the cockpit. The alternator charges the chassis batteries, but with the addition of a BIM, BIRD, or Charge Bridge, it may also assist in charging the coach's house batteries.

Generator

When shore power is unavailable, the generator takes mechanical energy and converts it into alternating current to supply 120 volts to the coach and charge the coach's house via the converter or inverter/converter and the chassis batteries via BIRD, BIM, or charge bridge. The generator is typically located in the front of the unit between the frame rails on diesel coaches. On gas units, the generator may be located anywhere between the mid and rear section of the coach. Generators can be powered by gas, liquid propane, or diesel fuel.

Converter and Inverter/Converter Combination

All Newmar coaches are equipped with a converter or inverter/converter combination. A converter transforms alternating current or shore line power 120 Volts to low-voltage direct current to provide power to the coach's 12 Volt house and chassis batteries. On the other hand, an inverter transforms direct current to alternating current to provide power to specified appliances and entertainment systems.

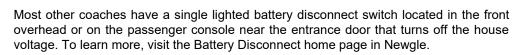
Solar Panel

Some current Newmar coaches have a 10-watt solar panel wired to the chassis batteries. Prior models may have a 5-watt or 10-watt solar panel wired to the chassis-side KIB panel.

Power Distribution

Battery Disconnect

Newmar uses an Intellitec disconnect relay connected to the battery bank to disconnect certain loads when storing the coach. However, not all loads are disconnected, which is important to remember when a coach is put into storage and not plugged into shore power. Before placing the battery disconnect in the "off" position, make sure the inverter (if equipped) is turned off.





A IMPORTANT

When the battery disconnect is 'off', meaning you have disconnected components from the batteries, there are still some loads on the batteries connected to the hot side of the Battery Disconnect Relay. Some of these loads may be Radio Memory, Entry Steps, and LP Detector. These will draw from the batteries, even when the disconnect is 'off'. Pull the fuse for each of the 'HOT' circuits to stop the batteries from being drained.

Bi-Directional Isolator Relay Delay (BIRD)

Current gas, front diesel coaches and some older diesel pusher coaches, use an Intellitec Bi-Directional Isolator Relay Delay (BIRD) with a separate solenoid. The BIRD monitors both the chassis and house battery and is the only place in the coach where they both merge. The BIRD only functions when the engine or generator is running or when the coach is connected to shore power. To learn more, visit the Bi-Directional Isolator Relay Delay home page in Newgle.



Battery Isolation Manager (BIM)

Many of the diesel coaches use a Precision Circuits all-in-one Battery Isolation Manager (BIM). The BIM monitors both the chassis and house battery and is the only place in the coach where they both merge. The BIM only functions when the engine or generator is running or when the coach is connected to shore power. To learn more, visit the Battery Isolation Manager home page in Newgle.

Charge Bridge Solenoid

2026 and newer high-end coaches equipped with a KIB/ATC coach management system use the charge bridge solenoid and a battery isolation relay module.

Wiring Diagrams Fuse Blocks and Mini-Breakers

When a 12 Volt wire is ran, most of the circuits are protected with fuses or mini-breakers. These can be located at various areas in the coach but are typically located near the main breaker panel.







The following photos are examples only. However, they may also be found in areas such as:

- Interior: Rear bedroom, Rear bathroom, Closet, Front Overhead Cabinet
- Exterior: Power cord compartment, Left (front electrical compartment located beneath the driver window), Front firewall or basement compartment (gas coaches)

There are also some circuits that are protected with an inline fuse. Some fuse blocks have fixed relays integrated on a board. The fuses, mini breakers and relay board pictured are examples of the type of components that may be found in or near the the power cord compartment.

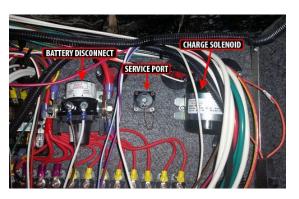




Basic 12 Volt Power Flow

Since a battery is only an electrical storage component, 120 Volt power must be present to charge the batteries from the converter or inverter/converter combination unit. It is necessary to have 12 Volt power supplied from the coach's house battery bank in order to operate the interior lights and other 12 Volt loads such as slideout control systems, water pumps, vent fans, monitoring systems, etc.

Most of this power flows through the battery disconnect to the fuse block or mini-breakers, which prevents overloading the circuit prior to progressing to the 12 Volt load. There are some 12 Volt circuits that do not go through the house battery disconnect; however, these loads still pass through a fuse or mini-breaker before progressing to the load.



A IMPORTANT

When a 12 Volt load or component is not working, both 12 Volt power (+) and 12 Volt ground (-) are needed for the load to complete the 12 Volt circuit.

120 Volt Electrical System Overview

This article provides general information about the components and functions of the 120 Volt Electrical System (AC) in Newmar coaches.

Power Sources

There are three types of alternating current (AC) power sources available to the coach: shore power, generator power, and inverter power. Shore power is provided by the RV park or by home service outlets and should be used whenever possible. Generator power should mainly be used when shore power is not available, specifically while traveling, when 120 Volt power is necessary to run high amperage loads, or when dry camping requires 120 Volt for battery charging. Inverted power is mainly used for light 120 Volt loads when shore power is not available and generator power is not desired.

Inverter Power: This type of power starts at the battery bank. The battery bank supplies 12 Volt power through cables to the inverter, which uses the 12 Volt direct current to produce 120 Volt alternating current. The inverter performs this action by using a transformer to increase the voltage and modify the higher voltage into a useable alternating current power. Power then goes to the inverted sub panel, which is dispersed through the individual breakers to the outlets or appliances.

The inverter may provide battery charging while 120 Volts is supplied via the generator or shore power. The inverter performs this action by using the transformer to decrease the voltage and rectify the alternating current into useable direct current voltage. This is regulated by internal sensing circuitry based upon the battery bank's state of charge and several

other factors, depending on the coach's particular inverter brand and type.

Generator Power: Generator power is produced within the generator and is output through the main wiring to the transfer switch. From the transfer switch, the power moves to the main breaker box where it is dispersed to individual circuits (outlets) and hard-wired components such as a water heater or boiler. From the inverted circuits, generator power will then travel through the inverter's internal transfer switch and back to the inverted subpanel to be dispersed through the individual breakers to the outlets or appliances.



Shore Power: Most RV parks provide 30 Amp, 120 Volt at the site; however, many parks also provide 50 Amp, 240 Volt service to accommodate the electrical needs of newer and larger coaches.

Shore power is supplied to the coach via a power cord. Two sizes of power cords are found in Newmar coaches: 50 Amp and 30 Amp. The 50 Amp cords are made up of four conductors #8 stranded wire and a molded plug. The 30 Amp cords are made up of three conductors #10 stranded wire and a molded plug.

Shore power enters through the 30 or 50 Amp power cord to the power cord reel (if equipped). From the power cord reel, it travels to the transfer switch and then to the main breaker box where it is dispersed to the individual circuits to supply power to hard-wired components such as air conditioners, water heaters, etc. and then to the inverter (if equipped).

The inverted circuits move from the inverter's internal transfer switch to the inverter subpanel (a smaller breaker box). From the subpanel, the power circulates to the individual breakers and to the electrical outlets and appliances.



Shore Power Adapters

A IMPORTANT

Newmar Corporation does not recommend use of adapter, cheater, or dog-bone style connectors that will modify the existing shore power cord to a different style of outlet. Use of this type of adapter will greatly reduce the amount of available current in the unit, as well as create the potential for electrical failure and/or fire.

If an adapter is used, there are three common sizes of power cord adapters available to adjust to a smaller amperage outlet:

- 1. 30 amp to 20 amp
- 2. 50 amp to 20 amp
- 3. 50 amp to 30 amp









It is important to understand the risks involved and the possible effects of using adapters in conjunction with your coach. Some of these risks and possible effects include:

- Melted or damaged adapters causing poor connection (or no connection at all)
- Melted or damaged 30 or 50 Amp plugs causing fluctuations in voltage that may damage electronics
- Insufficient amperage causing the tripping of a breaker at the post or a limited use of appliances

Low voltage can also be caused by use of adapters, long extension cords, or extension cords with an insufficient wire size.

A IMPORTANT

Newmar Corporation cannot assume liability for failures occurring to the RV, its electrical system, or any of its components from the use of any electrical adapter.

Automatic Transfer Switch: Current coaches with a generator will also have a transfer switch installed in the cord compartment. An automatic transfer switch converts two inputs and connects them to a single common output.

The shore power cord is connected to one of the inputs, while the generator is connected to the transfer switch's second input.

Automatic transfer switches are logic-controlled to convert under a given set of conditions. The transfer switches used in RVs are typically generator priority switches which connect to shore power under normal use.



As soon as the transfer switch detects the presence of 120 Volt power on the generator input lines, it will switch over to the generator's inputs and drop the connection to shore power.

Transfer switches are designed so that only one input can be connected at a time in order to prevent any backfeeding of electrical power. In addition, RV transfer switches generally have a built-in delay allowing the generator to warm up and speed up before actually switching the load. This prevents stalling or stumbling while the engine is still cold and not producing full power.

Main Service Panel Breaker Box: The main service panel or 120 Volt breaker box is typically located inside a bathroom, bedroom, or front overhead cabinet depending on the coach model and floor plan. The breaker box contains the main 50 Amp (or 30 Amp if equipped) breaker and the individual breakers protecting each circuit from overload conditions. Any unit equipped with two air conditioners or more must have 50 Amp service. The task of the breaker is to "trip" if the current exceeds the amperage rating on the breaker to prevent damage to the wiring of the circuit.

The breakers are resettable by simply flipping the breaker to the 'off' position, and then back to the 'on' position once the overload condition is removed. All 120 Volt circuit breakers are located in the main service panel unless the coach is equipped with an inverter/charger. These units are also equipped with a subpanel.



A IMPORTANT

Breakers positioned next to each other are on different poles in a 50 Amp panel. If only part of the electrical circuits are working, you may have a poor connection at shore power. In this instance, power is most likely only being provided to one pole or leg.

Subpanel: The subpanel is a smaller 120 Volt breaker box containing the breakers for the circuits which the inverter is wired to power.

It is typically located near the main breaker box unless the coach is equipped with an Energy Management System (EMS). In this case, the subpanel is often located within the EMS panel.

The subpanel is installed to limit the AC power use to specific circuits when the electricity is supplied by the inverter. Some inverters may be used to power a specific circuit. In this case, a subpanel is not used.

Automatic Generator Start (AGS): On coaches equipped with AGS, the generator will start and provide 120 Volt power if the incoming shore power voltage is not present and startup parameters are met. The AGS may be controlled via the KIB or SilverLeaf system.



A IMPORTANT

This function must be enabled in order for the AGS to function properly.

This allows the AGS to start on demand from the A/C for either heat (heat pump only) or cool.

Follow Silverleaf or KIB L-Panel instructions for proper zones, heat, cool and AGS settings. For more information about AGS operation via the SilverLeaf system, refer the year/model-specific SilverLeaf Touchscreen Guide in Newgle.

Power Distribution

50 Amp Energy Management System (EMS): The 50 Amp Precision Circuits Energy Management System is currently offered as standard or optional equipment on all coaches not equipped with a SilverLeaf Coach Management System. Its function is to provide power management for certain 120 Volt loads and as a system of energy management to minimize the overloading and tripping of circuit breakers. The EMS contains a main distribution panel with a self-contained control module and a remote display panel, which is typically located in the dash overhead electrical control cabinet.

The EMS control module automatically senses the available power being supplied to the coach. The module determines whether it is connected to a 50 Amp (240 Volt) or the generator. On 120 Volt service, the module is unable to determine if the source is providing 30, 20 or 15 Amp shore power. The coach owner will need to select the shore cord supply amperage to match if less than 30 Amps. Depending on available power, it can control/shed up to seven loads.



The EMS controls air conditioner loads using low-voltage switching and other 120 Volt, heavy-load appliances, such as block heaters, water heating elements, and air conditioners. The EMS will also control the 2012 Magnum inverter charge rate or switch to invert depending on the charging status. The charger will only reduce once it is in float status.

The current-sensing relay will display the amperage on each leg. The EMS will start shedding loads and look at the AC current when it sheds a load, determining when it has enough current available to turn on the load again.

When the EMS sheds a load, it only looks at one leg to see how much of a load was shed. For coaches equipped with the SilverLeaf system, refer to the SilverLeaf Functional Guide for more information on your EMS.

Converters: All Newmar coaches are equipped with a converter or an inverter/converter combination. Converters are used to transform alternating current power (120 Volt AC) to direct current power (12 Volt DC). Converters supply the coach with 12 Volt power to operate systems in the coach and provide battery charging.

Newmar currently uses three sizes of converters: 45, 60, and 80 Amp models. Previous units may have a 55 or 75 Amp converter or two 45 Amp converters with a total of 90 Amps available.



When replacing a converter, it is necessary to use the same size converter to ensure sufficient wiring and breakers for the converter's input and output ratings.

Possible causes of converter failure:

- Overheating caused by cooling fan malfunction or inadequate ventilation causing damage to the converter
- Blown fuses

Inverters: An inverter changes 12 Volt DC power to 120 Volt AC power. Coaches with an inverter only typically use it for powering the entertainment equipment like the TV, DVD, and Blu-ray players. The inverters used for this purpose are usually 600 watt to 1000 watt (1000 Watt inverters may also power a small refrigerator) and do not have battery charging capability.

The inverters are usually located in a basement compartment of the coach. Some inverters have a remote panel for an on/off switch in the overhead driver area or above the entry door. When power is supplied by either the generator or shore power, the inverter merely allows the power to "pass through" and will then stop pulling power from the batteries to try and supply 120 Volt power. There is a protective breaker on the inverter to prevent circuit overload.

Possible causes for inverter failure:

- Overheating caused by inadequate ventilation causing damage to the inverter
- Overloading the circuit causing "tripped" breakers

Inverter/Converter Combinations: Many Newmar coaches are equipped with inverter/charger combination units, sometimes referred to as inverter/converter units. These units range from 1200 to 3000 watts and serve as a three-stage charger and an inverter. Coaches equipped with this option will also be equipped with a 120 Volt subpanel.

The subpanel is used to limit the circuits powered by the inverter(s). This is necessary to avoid draining the batteries by supplying inverted power to all circuits. The subpanel is located next to the main service panel. On units equipped with an EMS, the subpanel is located in the same breaker box but is separated in the interior of the main panel. The coach battery bank supplies the inverter 12 Volt power and has a high amp fuse link on the positive lead from the batteries and is located near the battery bank.



The inverter/charger can be controlled by a remote panel, from another system like SilverLeaf, or at the inverter itself. The remote panel is typically located in the front overhead compartment or above the entry door and is used to control the inverter and the battery charging functions. If a remote panel is connected to the inverter, then the remote panel takes priority.

Three-Stage Charging Process: The charging cycle uses three states: bulk, absorption, and float. During the initial bulk stage, the inverter charges at nearly its full current ability. This causes the battery voltage to rise over time. After the battery voltage reaches the bulk voltage setting, the charger starts the absorption stage.

During this phase, the charge rate is gradually reduced while the battery voltage is held near the bulk voltage setting. This ensures that the battery is fully charged. The float stage is initiated when the battery has been held at the bulk voltage setting for the absorption period. At this point the battery voltage is allowed to fall to the float voltage setting, where it is maintained until another charge cycle is initiated. This reduces gassing of the battery and keeps it fully charged. A new three-stage charging cycle is initiated after an AC source is reapplied to the AC input terminals.

120 Volt Outlets: Several 120 volt receptacles are located throughout the interior of the unit. These receptacles require three-pin plugs that provide proper grounding to protect you from electrical shock. The breaker for the outlets are usually located in the breaker box. If the breakers are on the inverted circuitry, they will be located in the subpanel near the main breaker box.



A IMPORTANT

Do not use an adapter, cheater, or extension cord that breaks the continuity of the ground circuit to the ground pin. Never remove the ground pin from a plug to connect it to a two-pronged ungrounded outlet.

Ground Fault Circuit Interrupt (GFCI) Outlets: The Ground Fault Circuit Interrupt (GFCI) outlets protect the user from ground faults between a hot wire and ground. The 120 Volt electrical outlets in the kitchen and bath area are GFCI-protected receptacles. The electrical outlets located in the Slideouts are wired through the kitchen GFCI. The exterior electrical outlets are wired through the bathroom GFCI. On units equipped with the floor heat option, a separate GFCI is installed in the bathroom or near the main breaker box. Units with the holding tank heat pad option will have an additional GFCI located in the basement area; however, the exact location varies.



The GFCI outlets should be tested at least once a month. The 120 Volt electrical system must be energized to test the GFCI. The reset button needs to be pressed before starting the test. Then push the test button, which will cause the reset button to pop out, confirming the protected circuits have been

disconnected. Push the reset button again until a click is heard to reactivate the protected circuit. If the GFCI is working properly, the reset button will remain in the "IN" position. If an item plugged into a Slideout or outside receptacle is not working, check for a tripped GFCI in the kitchen or bathroom. Likewise, if the floor heat or holding tank heat pads are not working, check the GFCI for that circuit.

A WARNING

The GFCI will not reduce the shock hazard if the short is between a neutral and hot wire or two hot load wires.

Electrical Typical Amp Draw List

This article provides a basic overview of the typical amp draw of electrical components and appliances in a coach.

Amp Draw

Do you know how many Amps you are using at any single moment? It is surprising how quickly the current draw (Amps) of your appliances can add up for your coach's 30 or 50 Amp system. Knowing and understanding the electrical terminology, as well as the average amperage (current draw) of all the electrical appliances in your coach, can help you manage electrical use and prevent the inconvenience of tripping a breaker.

Below is a list of the typical appliances used and the approximate amps required to operate them.

- V= volt; volt is the measurement of electrical pressure
- A= amp; amp is the measurement of electrical current (volume) used by an electrical device.
- W=watt; watt is the measurement of how much electrical work is being done.

Appliance

Air Conditioner (depending on brand, BTU rating and options)

Inverter (depending on wattage rating, brand, and model)

Converter with continuous 12 volt power supply (depending on amp rating and brand)

Refrigerator (residential compressor-type)

RV Refrigerator (Absorption)

Required Amps

14.0 to 16.0 Amps 9.0 to 18.0 Amps 11 to 17 Amps 8.5 to 12.0 Amps 2.7 to 6.4 Amps Microwave Oven 11.3 to 14.2 Amps Washer and Dryer (2-piece) 16.0 Amps Television (depending on size, brand, and type) 1.0 to 3.0 amps Central Vacuum Cleaner 11.3 Amps Electric Hot Water Heater (depending on brand and type) 11.7 to 12.5 Amps Food Processor 6.0 Amps Ice Maker 4.0 Amps Electric Freezer (Compressor) 6.4 Amps Hair Dryer (1500w) 12.5 Amps Electric Coffee Pot 9.0 Amps Iron 10.0 Amps Radio 0.8 Amps Toaster 8.0 Amps Electric Frying Pan 10.0 Amps Coffee Maker 10.0 Amps

Conversions

Look at your electrical appliances, find the label containing amperage or wattage ratings, and calculate exact usage with the formulas:

- Watts/Volts = Amps
- Amps x Volts = Watts
- Watts/Amps = Volts

Most products requiring electricity provide how many amps or watts they typically utilize. If your electric water heater is always in use (~12.5 amps), and you start your air conditioner (~15.0 Amps) and put on a pot of coffee (~9.0 amps) and make some toast (~8.0 amps) while watching TV (~ 2.0 amps), you have far exceeded the 30 amp service, resulting in a tripped breaker. Many people don't take into consideration how much power may be used by the inverters charging circuits mostly because they are working automatically in the background. 50 amp service has two 50 amp power legs, providing a total service of 100 amps.

BATTERIES

Battery Basics

Introduction

As with anything technical, greater knowledge of the basics may help you increase performance, reliability, and longevity, as well as prevent future problems with your batteries. This article will provide information regarding your coach batteries; however, this is only one aspect of your coach's electrical system. To learn more about your batteries' role within the system, please refer to the 12 Volt Electrical article.

Commercial lead acid batteries have been used for over 150 years. The same chemical principal used to store energy now was also used many generations ago. Present day chassis battery power requirements are tremendous, considering today's vehicles and all of the electrical devices that must be supplied. All of these electronics require a reliable power source, and poor battery condition may lead to expensive electronic component failure. A battery is like a piggy bank - it stores energy, but cannot produce it. If you continue to withdraw without making any deposits, you will soon have nothing left.

Life Span of a Battery

Not long ago, motor homes only used a single 12 Volt house battery. Today, however, it is standard to have at least two

batteries, and up to 16 total in some Newmar coaches, powering inverters up to 3000 watts. As energy requirements increase, the average battery life decreases. The life span of a deep cycle battery will vary considerably with how it is used, how it is maintained and charged, temperature, and other factors. The life span is dependent upon usage but often ranges between six months to 48 months. Only 30 percent of all batteries actually reach the 48 month mark.

It is best practice to change the complete battery bank when a new battery becomes necessary, as the battery bank is only as good as the weakest cell. One simple way to extend battery life is to hook it up to a solar charger during the off months.

Common Battery Terms

Ampere (Amp) - A unit that defines the flow rate of electricity (current) in a circuit.

Amp Hour (AH) - Measurement of electrical storage capacity on a deep cycle battery. The standard amp rating is taken for 20 hours. Example: A 100 AH rated battery is determined like this: Draw from the battery for 20 hours provides a total of 100 amp hours, translating to about five amps an hour (5 amps x 20 hours = 100 AH). However, it is important to know that the total time of discharge and load applied is not a linear relationship. As your load increases, your realized capacity decreases. This means if you discharged that same 100 AH battery by a 100 amp load, it will not give you one hour of runtime. On the contrary, the perceived capacity of the battery will be about 64 AH.

Cold Cranking Amps (CCA) - Measures the number of amps a battery can deliver at 0° F for 30 seconds without dropping below 7.2 Volts (1.2 Volts per cell). A high CCA battery rating is especially important in engine-starting battery applications and in cold weather. This measurement is not particularly important in deep cycle batteries, though it is the most commonly known battery measurement.

Cranking Amps (CA) - Measures available current at 32° F and is also called marine cranking amps (MCA).

Depth of Discharge (DOD) - Measures the percent of rated capacity to which a cell or battery is discharged. It is the reciprocal of a battery's state of charge. Example: A battery that has a depth of discharge of 45 percent has a state of charge of 55 percent.

Reserve Capacity (RC) - Measures the number of minutes a fully charged battery can continuously deliver 25 amps at 80 ° F before the voltage drops below 10.5 Volts. This measurement represents the amount of time the battery can operate if a charging system failure occurs.

Electrolyte Specific Gravity (battery test) - Unit of measure that compares the weight of the electrolyte solution to the weight of water. This test is performed with a hydrometer or a refractometer that is made for testing batteries. This type of test is used to determine the battery's state of charge; however, it cannot be used on sealed batteries.

Battery Types

Liquid Lead Acid / Flooded

The Lead Acid battery consists of a plastic container with cells molded into it. Each cell contains plates, lead, and lead oxide (various other elements are used to change density, hardness, porosity, etc.) with 35 percent sulfuric acid and a 65 percent water solution. This solution is called an electrolyte, which causes a chemical reaction that releases electrons.

When testing a battery with a hydrometer, the amount of sulfuric acid in the electrolyte is measured. If the reading is low, the chemistry that makes electrons is lacking. The sulfur is now resting on the battery plates and will remain there until the battery is recharged and the sulfur returns to the electrolyte.

A CAUTION

Use only distilled water to fill flooded / liquid lead acid batteries.

Absorbed Glass Mat (AGM) / Dry Cell

The Absorbed Glass Mat battery is just like a flooded battery, except the electricity is maintained in the glass mats, as opposed to freely flooding the plates. Very thin fibers are woven into a mat to increase the surface area to hold sufficient electrolyte on the cells for their lifetime. The construction allows the electrolyte to remain suspended in close proximity with the plate's active material, enhancing both the discharge and recharge efficiency.

When Deep Cycle AGM batteries are not discharged more than 60 percent, the cycle life could be approximately a few hundred cycles. If you do not use or operate your equipment daily, AGM batteries will hold their charge better than most other types. In most cases AGM batteries will provide a greater life span and cycle life than a Wet Cell battery.

AGM batteries are also often referred to as Sealed Regulated Valve, Dry Cell, Non-Spillable, and Valve-Regulated Lead Acid batteries

A CAUTION

Follow battery manufacturer instructions. Do not add any liquid to AGM batteries.

Gel Cell Batteries

The Gel Cell is similar to the AGM battery because the electrolyte is suspended; however, the AGM battery is still considered to be a wet cell. The electrolyte in a Gel Cell has a silica additive that causes it to set (gel) or stiffen. The recharge voltage on this type of cell is lower than the other types of lead acid batteries, due to the likelihood of an adverse reaction to over-voltage charging. Gel Cell batteries are best used in very deep cycle applications and may last longer in hot weather applications.

A CAUTION

Follow battery manufacturer instructions. Do not add any liquid to gel cell batteries.

For more information about <u>Battery Inspection</u>, <u>Safety</u>, <u>Care</u>, <u>and Maintenance</u>, refer to Newgle.

Lithium Batteries

Lithium batteries are made differently and have several different characteristics from AGM, gel cell, or lead-acid batteries. They charge at different rates, discharge differently, and are affected by temperature differently. For more information on lithium batteries installed in Newmar coaches, refer to the corresponding year and model "Lithium Battery Quick Start Guide" in Newgle. If the coach was not originally equipped with a lithium battery system, Newmar does not recommend, condone, or offer suggestions for battery replacement using lithium batteries.

A CAUTION

Newmar coaches are set up, configured, and tested to operate properly with the electrical system that was installed at the time of production, including, but not limited to the battery, solar, inverter, and any multiplex system(s). Modifications to any part of the electrical system may cause adverse effects to the coach function and should not be done. If the coach's electrical system is modified, including, but not limited to batteries, solar, or inverter systems, Newmar will not warranty or aid in the diagnosis of electrical, battery, multiplex, and/or charging system issues.

Battery Bank Wiring

Parallel Battery Wiring

Parallel battery wiring refers to two or more batteries with all positive (+) terminals hooked together and all negative (-) terminals hooked together. This results in a battery voltage similar to that of the individual batteries, typically 12 Volt, to boost battery capacity. Two identical batteries wired parallel will provide twice the electrical storage capacity of one battery, without increasing voltage.

Series Battery Wiring

Series wiring refers to two or more batteries hooked together, with opposite terminals connected. The positive (+) terminal of the first battery should be connected to the negative (-) terminal of the second battery. The resulting voltage is the sum of the individual batteries. For example, if two six Volt batteries are hooked together, the resulting voltage will be 12 Volts.

Series/Parallel Wiring

Series/ Parallel battery wiring is used on Newmar units when four or more 6 Volt batteries are used for the house battery bank. Since 12 Volts is the desired working voltage from the battery bank, the batteries are connected to provide 12 Volts with more capacity. Two 6 volt batteries wired together in a series create a 12 Volt battery bank. Two or more of the 12 Volt battery banks can be connected together in a parallel format to provide more capacity.

In situations where multiple batteries are connected in a series, parallel or series/parallel, replacement batteries should be the same size, type, and manufacturer (if possible). Age and usage level should be the same as the companion batteries.

Battery Cycle vs. Battery Life

A battery cycle is one complete discharge and recharge cycle (100 percent to 20 percent, and then back to 100

percent). Battery life is directly related to how deep the battery is cycled each time. The most common cycles are 10, 20, and 50 percent. Be cautious of ratings that list the number of cycles, unless it also states how low the battery is being discharged.

For example, telephone type (float service) batteries have been advertised as having a 20-year life. However, the rating only stands true at five percent depth of discharge (DOD), and the life span is much less when used in an application where the batteries are cycled deeper on a regular basis. Those same batteries are rated at less than five years if cycled to 50 percent.

If a battery is discharged to 50 percent every day, it will last about twice as long as if it is cycled to 80 percent DOD. If cycled only 10 percent DOD, it will last about five times as long as one cycled to 50 percent. The most practical number to use is 50 percent DOD on a regular basis for the best use of effective storage and cost.

In addition, there is an upper limit. A battery that is continually cycled down five percent or less will usually not last as long as one cycled down 10 percent. At very shallow cycles, lead dioxide tends to build up in clumps on the positive plates rather than in an even layer.

Battery State/Voltage Chart (AGM, Lead Acid)

State of Charge	Specific Gravity	12 Volt	6 Volt	
100%	1.265	12.7	6.3	
75%	1.225	12.4	6.2	
50%	1.190	12.2	6.1	
25%	1.155	12.0	6.0	
Discharged	1.120	11.9	6.0	

A IMPORTANT

This battery state voltage chart is used as an example. Your specific battery manufacturer's chart may vary.

Note: Both voltage and specific gravity tests should be performed with no load on the batteries and without any supplied charging. Turn off all draws and charging. Allow the batteries to stabilize, and then proceed with the test.

House and Chassis Battery Bank Overview

This article provides a brief overview of the two different battery banks in a Newmar coach: House and Chassis.

Chassis Battery Bank

The chassis battery bank supplies power to everything a customer requires to drive the unit. Currently, Newmar's chassis batteries are all Liquid Lead Acid. Spartan and Ford chassis have serviceable batteries and Freightliner chassis batteries are sealed.

The type and brand of chassis battery may vary depending on coach year, make, and model. Chassis batteries may need to be disconnected and removed from the coach to maintain proper electrolyte levels or perform routine battery maintenance. House batteries may be either serviceable Liquid Lead Acid/Flooded or AGM/Sealed Cell.

The chassis batteries on your motorhome are installed and warranted by the chassis manufacturer. The coach (or house) batteries on your motorhome are installed by Newmar Corporation, but warranted by the battery manufacturer.



These batteries are used to operate the 12 volt items that are not a direct part of the chassis. Depending on the coach, the batteries may be located in the front of the coach under the front cap or on a pull out tray in an outside compartment.

A CAUTION

Do not use the motorhome with the coach batteries disconnected.

The chassis batteries are recharged by the vehicle's electrical system whenever the engine is running, with added BIRD,

BIM, or Charge bridge solenoids the vehicle's charging system will also charge house batteries if parameters are met. A decline in the coach battery voltage may be noticed while the chassis batteries are being charged.

The converter will automatically charge the coach batteries when the unit is connected to a 120 volt outside power source. The chassis batteries are isolated from the coach batteries, however with certain parameters met the BIRD, BIM, or Charge bridge will activate and allow charge to the chassis battery also. This prevents the chassis batteries from being drained by the interior 12 volt equipment, allowing ample voltage for engine ignition.

House Battery Bank

The house battery bank is necessary to operate everything a customer may require to live in the coach.

These batteries can be either 6 Volt deep cycle (all diesel coaches except coaches equipped with a lithium battery bank) or 12 Volt deep cycle, depending on the model and brand of the coach. Newmar house batteries may be serviceable or sealed.

For more information about the lithium battery system, refer to Newgle.



2026 Super Star Lithium Battery Quick Start Guide

This article provides general information, dead battery, and cold start instructions relevant to lithium batteries installed in a 2026 Super Star coach.

Lithium General Information

- 640 AMP HOURS / 8192 WATT HOURS (TOTAL SYSTEM, 1 PACK Standard with Lithium option). Optional 960
 Amp hours with two batteries.
- 2. Battery will not function UNDER -4° F (-20° C) (Internal Battery Temp).
- 3. Battery will not take a charge UNDER 32° F (0° C) (Internal Battery Temp) but will be usable.
- 4. Battery will not function OVER 131° F (55° C) (Internal Battery Temp).
- 5. Battery will not take a charge OVER 113° F (45° C) (Internal Battery Temp) but will be usable.
- 6. Battery readout on the HOME page is read in State of Charge (SoC) percentage. The SoC percentage can be seen on the HOME and POWER page of the KIB/ATC touch panel(s).
- 7. You can view the status of the Lithium batteries on the HOME screen on the KIB/ATC Touchscreen. A more detailed screen for the Lithium batteries can be accessed from the "POWER" tab at the bottom of the HOME screen.
- 8. At the RESERVE CAPACITY shut down, the battery will turn off but can be restarted by pressing and holding the blue button on the side of the Battery Management System (BMS) located in the battery compartment or in the front overhead cabinet. anytime you turn the BMS on from reserve shutdown, it is necessary to get a charge going into the batteries by starting generator or plugging into shore power and verifying on the KIB/ATC screen the batteries are charging from the Victron inverter if not turn the inverter on to charge the lithium system

A IMPORTANT

You must have a charging source for the Lithium batteries after turning them on after the FIRST RESERVE CAPACITY shutdown!! If the battery(s) are not charged and are depleted, it will require a slow charge to bring them up to voltage until they can accept a full charge. Initially, the BMS will continue to be able to be turned on as long as there is voltage. However, if the BMS is turned on too many times before charging, the battery(s) may become depleted. This may cause battery damage and leave them inoperable, and you may need technical assistance to charge the batteries for the BMS to start again.

- 1. A charging source is defined as the generator running or the coach plugged into shore power with the Victron inverter/charger turned on to charge the system.
- 2. It is recommended to plug into 50A shore power or have the generator running when available to get the full amount of charge to the Lithium batteries.

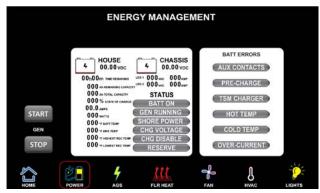
Storage Temperature and Relative Humidity (RH)

- 1. Recommended storage Temperature: 59° to 95° F (15° to 35° C).
- 2. Recommended Storage RH: 45% RH to 75% RH.

- 3. If the batteries need to be stored for greater than 3 months, the battery SoC should be at least 50%.
- 4. Battery needs at least one charge and discharge cycle every 6 months.
- 5. A charge and discharge cycle is defined as a cycle from 100% SoC to 30% SoC to 100% SoC.

Battery Status

Press the POWER icon on the KIB 10.1" Central Monitor Capacitive Touch Panel to view the information provided by the lithium BMS module. The Energy Management screen displays the battery status and any errors. This is a status-only screen and no settings can be changed.





Automatic Generator Start (AGS)

- 1. This system is equipped with an AGS.
- 2. This AGS system works differently than traditional systems Newmar uses.
- 3. This AGS is triggered on State of Charge (SoC) and not low voltage for the House Batteries
- 4. When the House batteries drop to 30 percent, the AGS will activate and start the generator to begin charging the House batteries if it is enabled on the KIB/ATC panel and no lockout flags are present on the screen.
- 5. There is no longer an AGS for the chassis batteries.
- 6. As the chassis batteries deplete, the system will monitor the chassis batteries. When these batteries drop to 12.8 VDC, it will trigger the charge bridge to engage and use the house batteries as a "Maintainer" of the chassis battery. It will stay locked in for 60 minutes, then disengage the charge bridge. It will repeat this scenario as often as the chassis battery drops below the 12.8 VDC. This will happen regardless if there is a charging source for the Lithium batteries or not, down to a set value SoC of the Lithium batteries. Low Chassis Voltage will not trigger the generator to start.
- 7. If no charge source is on the Lithium batteries and the Lithium batteries drop to 30 percent or less SoC, the system WILL NOT engage the charge bridge for the maintaining of the chassis batteries. This way the system will save the Lithium batteries when at a lower SoC.
- 8. The HVAC AGS operates the same as in earlier systems.

Turning on the Lithium Battery Packs after Being Drained to Reserve Capacity

A IMPORTANT

It is the customer's primary responsibility to understand and maintain the battery systems in the motorhome.

- 1. If the Lithium batteries are off due to draining to reserve capacity, press and hold the blue button on the side of the Battery Management System (BMS) located in the battery compartment or in the front overhead cabinet. This will turn on the BMS, allowing voltage from the Lithium packs to power the house system.
- 2. At the FIRST reserve capacity shut down, the battery will turn off but can be restarted by pressing and holding the blue button on the side of the Battery Management System (BMS) or in the front overhead cabinet. When turned on, the word RESERVE will show above the battery SoC percentage until there has been a charge detected on the BMS for 2 minutes, then the RESERVE will disappear.

▲ IMPORTANT

Make sure to apply voltage from shore power or start the generator and ensure the inverter charger is operating and providing the charging source to the coach for the lithium battery(s) after turning them on from reserve capacity shutdown.

Cold Start (Lithium Off with Dead Chassis Batteries)

A IMPORTANT

It is the customer's primary responsibility to understand and maintain the battery systems in the motorhome.

- 1. If internal temp of the batteries are not below -4° F (-20° C), turn ON both Lithium packs.
- 2. With the Lithium packs ON, hold down the BATTERY BOOST switch, to the left of the steering wheel, on the HOUSE function of the battery boost 2-way switch. This should boost the chassis batteries to similar voltage of the Lithium packs.
- 3. Start the generator.

A IMPORTANT

Make sure there is adequate ventilation and the coach is not in an enclosed building, if you intend to start the generator.

- 1. While still holding down the battery boost switch, start the chassis engine.
- 2. Wait for about 20 seconds so the alternator can start charging, then release the battery boost switch. This should start charging the chassis along with the Lithium packs.
- 3. Turn on the Oasis or furnace whichever you coach is equipped with and get the Lithium battery temp above 32° F so the batteries can take a charge.

Cold Start (Lithium Batteries Internal Temp Below -4° F (-20° C))

It is the customer's primary responsibility to understand and maintain the battery systems in the Motorhome.

- 1. If the internal temp of the batteries reach below -4° F (-20° C), you will need to get the internal battery temp above the -4 F (-20 C) before the batteries can be utilized. See "Lithium General Information" above for temperature information.
- 2. If you have a good chassis battery, start the coach. After starting the coach, start the generator.
- 3. The Lithium battery system has an "AC SENSE" function that, when the Battery Management System (BMS) are off, and there is AC power available, it will sense that there is AC voltage and turn on the BMS. This may not turn on the batteries IF they are still below the usable temperature but it will turn them on when the temp gets above the -4° F (-20° C) threshold.
- 4. OPTION 1: Get a space heater (make sure the space heater is not positioned where it could damage any wiring or wire insulation) and warm up either or both of the batteries. When the temp gets just above -4° F (-20° C), if the coach is plugged in or generator is on, the BMS will turn on the power from the Lithium batteries automatically. From there, turn on the Oasis and warm up the battery internal temp above 32° F so the batteries will take a charge.
- 5. OPTION 2: With the coach started, start the generator. Hold down the BATTERY BOOST switch, located to the left of the steering wheel, on the CHASSIS function of the battery boost 2-way switch. Hold the switch for approximately two minutes. After two minutes, the bi-directional relay delay (BIRD) will engage the charge bridge on its own and the coach will stay powered. This will boost the HOUSE circuit to be able to run the Oasis on the burner from the chassis so the batteries can warm up.

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: Power

The Power icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface will display the Battery Management System page to provide the user with access to the Gen Start and Stop buttons to start or stop the generator. This feature is only available on coaches equipped with a factory-installed lithium package. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

The Battery Management System page displays:

- Battery and AC Power details (time remaining, state of charge, AC amperage).
- Status (battery on, generator running, shore power, charge voltage, battery reserve). These will be highlighted in red if the status is active.
- Battery Errors (the status is only highlighted red if the battery system is experiencing issues).

From the Battery Management System page, the user has also has access to the Gen Start and Stop buttons to start or stop the generator. This is a manual start/stop signal and will disable all AGS function(s) that are enabled. The EMS button will open the Energy Management System page (refer to the 2025 KIB Energy Management article in Newgle for more information).

The power information that is displayed on coaches with a factory-installed lithium package is supplied by the Lithionics battery management system and is not controllable from the KIB panel. For more information about lithium battery usage, including the readings and faults, refer to the Xantrex Lithionics Li3 Lithium Battery System documentation in Newgle.





Lithium Battery Remote Reset Switch Overview

This article provides a basic overview of the factory-installed battery remote reset switch installed in select coaches with lithium batteries.

Starting with the 2024 model year, coaches equipped with a lithium battery system have a lithium battery on/off switch in the front overhead control cabinet.

It may be labeled "BMS Battery Power On/OFF." Coaches equipped with dual BMS systems will be labeled "Battery Power - BMS #1 ON/OFF and BMS #2 ON/OFF."

The switch is illuminated blue when the battery system is active. This allows the user to activate or turn off the lithium system without pressing the switch on the RMS module(s).





system without pressing the switch on the BMS module(s) located in the battery compartment.

A IMPORTANT

If the lithium system shuts down due to low charge, it can be turned back on using the remote reset switch. However, it must be charged! Do not activate the system if the battery condition is low without charging!

Battery Boost (Emergency Engine Start) Switch Overview

This article provides the Newmar-recommended instructions for operating the battery boost switch. This switch is sometimes referenced in Newmar's sales materials as the "Emergency Engine Start Switch."

Dual Position Battery Boost Switch

2019 and newer diesel pusher coaches may have a dual position battery boost switch. This simply allows the chassis battery to be boosted from the house battery bank or the house battery bank boosted from the chassis battery, allowing the solenoid to operate from either source that has power to engage the boost solenoid. Once a click is heard, the solenoid has been energized and the battery voltage will be able to flow from the battery bank with the higher voltage to the battery bank with the lower voltage.

If you're in a situation where battery boost is necessary, press and hold down the switch while trying to start the coach. If the coach still does not start, try holding the switch in the opposite direction, and try again. If this is also unsuccessful in starting the coach, refer to the "Charging House and/or Chassis Batteries" article in Newgle for additional information prior to contacting Newmar for assistance.



Freightliner M2/M2 PLUS Super C Chassis Battery Overview

This article provides an overview of the Freightliner (M2) Super C chassis battery bank on a front diesel coach. Freightliner chassis batteries are sealed, non-serviceable batteries. They are provided with the chassis and warrantied through the chassis manufacturer (Freightliner).

The type and brand of chassis battery may vary depending on the coach year, make, and model. Chassis batteries may need to be disconnected and removed from the coach to perform routine battery maintenance. To access the chassis batteries, remove the cover located under the driver's door.

The chassis batteries are recharged by the vehicle's electrical system whenever the engine is running. With an added BIRD, BIM, or charge bridge solenoid, the vehicle's charging system will also charge the house batteries if the parameters are met.



The inverter charger will automatically charge the coach batteries when the coach is connected to a 120 volt outside power source or if the generator is running. The chassis batteries are isolated from the coach batteries; however, when certain parameters are met, the BIRD, BIM, or charge bridge will activate and allow charge to the chassis battery. This prevents the chassis batteries from being drained by the interior 12 volt equipment and allows ample voltage for engine ignition.

Freightliner M2 PLUS Super C Chassis Battery Disconnect Overview

This article provides basic operation instructions for a Chassis Battery Disconnect on Freightliner M2 PLUS Super C coaches beginning with the 2024 model year.

Smart Battery Shut-Off (PWR OFF) Switch

A IMPORTANT

The key switch should be in the OFF position before turning the smart battery shut-off switch on or off.

The smart battery shut-off switch is a red switch located inside the cab on the outboard side of the driver's seat. A vehicle in daily use has the smart battery shut-off switch turned on, indicated by a red LED in the switch.

Turning the smart battery shut-off switch OFF minimizes the power draw on the battery, preserving battery life and the ability of the vehicle to start after being parked for a number of days. Set the smart battery shut-off switch to off if the vehicle is going to be parked for more than two days.





Newmar recommends leaving the chassis battery disconnect turned on when the RV is in use or plugged into shore power.

To avoid accidental activation, the smart battery shut-off switch must be pressed and held for two seconds when turning it on or off.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (STI-522-1, 2/10/2023)

House Battery Disconnect Overview for Super C Coaches

This article provides basic operation instructions for a house battery disconnect switch on a Super C coach (Super Star, Supreme Aire, Grand Star, and Summit Aire).

The House Battery Disconnect Switch (labeled "Batt. Disc.") is used to control the disconnect relay connected to the battery bank and is typically located in the overhead control panel. This switch disconnects most loads when placing the coach in storage or when the coach is not in use. This is done to prevent the coach batteries from being drained during storage. The Battery Disconnect Switch is normally located in the overhead control panel.

To operate the battery disconnect, press up on the rocker switch to turn on the disconnect and reconnect the batteries. This will make the 12 volt system ready for use. When the battery disconnect switch is turned on, the indicator light will illuminate, indicating that the power to the battery bank is now active and powering the coach. Press down on the rocker switch to turn off the battery disconnect and disconnect the batteries. When the battery disconnect is turned off, the indicator light will also turn off.

Not all loads are disconnected, and, depending on the coach and its options, some systems may have memory circuits purposely not wired to the disconnect solenoid, including, but not limited to, the LP detector (if equipped), driver memory controls, and other memory-based features. In addition, the inverter is typically not on the disconnect and will need to be powered off separately. This allows the inverter to charge the batteries when plugged into shore power with the battery disconnect turned off.

Battery Inspection, Safety, Care, and Maintenance

This article provides information regarding the inspection, care, and maintenance for coach batteries. This content does NOT apply to lithium batteries.

Battery maintenance is an important issue often overlooked by many RV owners and technicians. As batteries age, their maintenance requirements change. This means longer charging time and/or higher finish rate (higher amperage at the end of the charge). Usually older, serviceable (unsealed) flooded batteries need to be watered more often, as their capacity decreases over time.

Safety Guidelines

WARNING

Prior to handling or working with a lead-acid battery, consult your battery owners' manual for instructions and safety precautions.

▲ CAUTION

Disconnect the 120 volt electrical power cord and the negative terminal from the coach batteries, and make sure all power sources are disable (ignition, generator, shore power, inverter) before working on the electrical system.

A WARNING

Remove rings, metal watch bands, and other metal jewelry before working around batteries. Use caution when using metal tools. If a tool contacts a battery terminal or metal connected to it, a short circuit could occur, which could cause personal injury, explosion, or fire.

Lead-acid batteries contain hydrogen-oxygen gases that may be explosive and sulfuric acid that may cause severe burns. To avoid injury, observe these precautions when handling or working with a lead-acid battery:

- Wear ANSI (American National Standards Institute) approved safety glasses or goggles, as well as a face shield.
- Wear proper clothing to protect your face, hands, and body.

- Work in a well-ventilated area.
- Never lean over a battery while boosting, testing, or charging.
- Keep all ignition sources away from the battery. Cigarettes, flames, or sparks could cause a battery to explode.
- Always shield eyes and face from the battery.
- Do not charge or use booster cables or adjust post connections without proper instructions and training.
- Keep vent caps tight and level.
- In the event of an accident, flush eyes or skin with water, and call a physician immediately.
- Keep out of reach of children.

Common Causes of Premature Battery Failure

- Deep discharges (leaving your lights on)
- Misapplication
- Replacement using an undersized battery not meeting Newmar's OEM specifications
- Loss of electrolyte due to overheating or overcharging
- Undercharging or loose alternator belt
- Excessive vibration (due to loose clamp or hold down on battery)
- Corrosion
- Freezing (A fully-charged vehicle battery will not freeze until the temperature is -75° F. Frozen batteries are not warrantable.)
- Failure to charge a battery during a period of six months or more (Inactivity can be extremely harmful to all lead acid batteries.)

Cleaning the Batteries

Check the vent plugs and replace them if they are cracked or broken. Keep the battery clean. Accumulations of acid film and dirt may permit current flow between the terminals, which could drain the battery.

To clean, wash the batteries with a diluted solution of baking soda and water to neutralize any acid present. This should be a mixture of a couple of tablespoons of baking soda per pint of water. Rinse thoroughly with clean water. Foaming around the terminals or on top of the battery is a sign that acid is being neutralized. Avoid getting the baking soda solution in the battery. Secure all vent caps.

Both house and chassis battery cable connections need to be cleaned and tightened, as battery problems are often caused by dirty and loose connections. Dry the battery cables and terminals to prevent corrosion. Do not use grease on the bare metal inside the cable terminals. Grease can act as an insulator, and electricity will not flow through it. A plastic ignition spray will protect the terminals after they have been cleaned.

A WARNING

Do not allow the battery fluid to contact your skin, eyes, fabric, or painted surfaces. The fluid could cause serious personal injury or property damage. Wear eye protection when working with any battery.

Storing the Batteries

Remember that when batteries are not used for an extended period of time, they may lose their charge. Periodic charging of the batteries during storage of the unit will increase the life of the battery. Check the external condition of the battery periodically. Look for cracks in the cover.

The batteries should be removed and stored in a warm place when not using your motorhome for an extended period of time. This will prevent unnecessary drain and corrosion of the batteries. The coach batteries are 6 volt RV/Marine deep cycle batteries. Mark the cables, positive and negative, for easy identification. Batteries are not to be stored on concrete floors.

Preventing Corrosion

Newmar sprays the battery connections once they are tightened with a battery protector and sealer to help prevent corrosion. When performing battery maintenance, you should reseal the battery terminal connections. The following measures may also prevent future corrosion:

Use a small bead of silicone sealer at the base of the post where it meets the battery case. Place a felt battery washer over the post and into the bead of silicone. Coat the washer with high temperature grease or petroleum jelly (Vaseline), then place the cable on the post and tighten. Coat the exposed cable end with the grease. The gas condensation on metal parts of the battery cause most corrosion issues.

Battery Replacement Recommendations

This article provides information about general battery location and replacement recommendations.

Battery Location and Wiring

On diesel coaches, the house batteries are normally located in one of the lower compartments.

The chassis batteries are normally on the passenger side in the rear compartment on diesel pushers and under the driver's side cab on the front engine on Super C coaches.

On coaches built on a Ford chassis, batteries are normally located in the front of the coach and can be accessed by opening the hood.



A battery wiring label is located inside the battery compartment and shows how the batteries are wired together. Replacement batteries must be wired according to the diagram shown.

Battery Replacement

Replacement batteries should be of the same brand and capacity as the originals. Newmar has used several brands and sizes of batteries over the years. For specifics about your coach's batteries, check the labels on the batteries for brand and amp hour ratings.

A CAUTION

Newmar coaches are set up, configured, and tested to operate properly with the electrical system that was installed at the time of production, including, but not limited to the battery, solar, inverter, and any multiplex system(s). Modifications to any part of the electrical system may cause adverse effects to the coach function and should not be done. If the coach's electrical system is modified, including, but not limited to batteries, solar, or inverter systems, Newmar will not warranty or aid in the diagnosis of electrical, battery, multiplex, and/or charging system issues.

Any time one battery is replaced, it is important to test the rest of the batteries in the system to make sure they are still functioning properly and efficiently. If one defective battery is replaced, while leaving another weak or defective battery, lowered performance, or ultimately damaging the new or good batteries, may result.

A IMPORTANT

Serviceable Lead Acid Batteries Only: Charging batteries release gasses as the fluids inside boil, so it is critical to check the battery fluid levels regularly, particularly after extended periods of heavy use. Be sure to top off any battery that is showing signs of depleted fluid levels.

For more information about coach battery basics, as well as other inspection, safety, and care and maintenance recommendations, refer to Newgle.

SHORE POWER CORD AND CORD REELS

Glendinning Cablemaster Power Cord Reel Quick Start (Models: CRR-50 and CRRA-50)

This article provides brief operation instructions for a Glendinning Cablemaster Power Cord Reel (Models: CRR-50 and CRRA-50).

Operation

To extend the power cord:

- Pull out sufficient cord length that will allow you to route shore power cord to the electrical distribution box.
- 2. Plug the molded end into the receptacle.

To retract the power cord:

- 1. Detach plug from receptacle using lever on plug.
- 2. Press and hold the button and the power cord will automatically retract (CAUTION it is advisable to monitor the progress of the power cord as it retracts and stores onto the reel).



Maintenance

Experience has shown that when only a short section of power cable is regularly used, the cable may be subject to "kinking". To relieve this condition, routinely extend the power cable completely and stretch it on any smooth surface. Allow the Cablemaster to retract the cable onto the reel. At least once a year, inspect all AC and DC wiring connections and make sure they are free of corrosion and connections tight.

Periodically inspect the exterior jacket of the power cable for nicks or cuts. If your power cable is dirty, any cleaner should be compatible with the outer jacket material of the power cable.].

Source(s): Cablemaster CRR-50 Manual: Installation and Operation Instructions

Product(s): Glendinning Cablemaster 50 Amp Power Cord Reel w/50' Power Cord (Model: CRR-50, Newmar Part Number: 116690)

ENERGY MANAGEMENT SYSTEMS

Energy Management System Overview

This article provides an overview of the energy management systems used by Newmar.

The energy management and auto generator start systems work behind the scenes to monitor the power supply and demand within the coach. The system is designed to minimize the occurrence of tripped breakers for shore power and the generator while heavy loads are being used. The system turns off other loads temporarily while heavier loads are in use and restores power when heavy loads are turned back off.

When 50 amp service is available, no action is required; however, 30 amp service (or less) requires setting the value of incoming power to be selected.

A NOTICE

Whenever possible, connect coaches equipped with 50 amp shore power cord to 50 amp service, and connect coaches with 30 amp shore power cords to 30 amp service accordingly. It is the best practice to avoid using adapters and cheater cord devices.

Auto generator features may vary by coach model and options. Most AGS systems start the generator if shore power is unavailable and the HVAC system signals for air conditioner operation. Many systems will also start automatically if battery levels reach the preset values. For more information about the energy management system, refer to the SilverLeaf Coach Management or Precision Circuits Power Control System documentation found in Newgle, depending on which system is installed in the coach.

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: Energy Management

The Power icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface will display the Battery Management System page. Press the EMS button to access the Energy Management System page.

This feature is only available on coaches equipped with a factory-installed lithium package. This system can shed various A/C loads, including the Oasis system electric elements, air conditioners, block heater, and floor heat. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.





Once the EMS page has been opened, the Power button will allow the user to turn the Energy Management system on or off. When the EMS is off, it will allow the supply of power to all systems unregulated and may result in an overload of the incoming supply power and tripped shore power breaker(s).

The power status information that is displayed on coaches with a factory-installed lithium package is supplied by the BMS, RVC transfer Switch and KIB and is not controllable from the KIB panel.

The voltage section to the right side of the screen will auto-select 220 volts and 50 amps when plugged into a 50 amp circuit and allows the user to select the correct amperage when plugged into 110V shore power. Setting the amperage correctly for the incoming power will allow the system to shed loads to reduce the chances of the breaker tripping for the incoming power source.

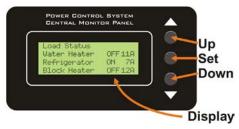
For more information about lithium battery usage, including the readings and faults, refer to the Xantrex Lithionics Li3 Lithium Battery System documentation in Newgle.

Precision Circuits Power Control System Monitor Panel Quick Start (Model: 00-10019-050)

This article provides basic operation instructions for a Precision Circuits Power Control System Monitor Panel (Model: 00-10019-050).

Monitor Panel

The PCS Monitor displays pertinent Power Control System status information. The UP and DOWN buttons are used to step through each individual Screen of information. Pressing & releasing either the UP or Down button will step to either the Previous or Next Display Screen. Once all the Screens have been seen, the next press of the Button will wrap back around through all the Display Screens once again. The SET Button only functions when the Service Type screen is displayed, to Select between 30A Service and 20A Service.



(Note: 50A Service or Generator Service overrides the SET Button.) If there have not been any key presses for awhile, the PCS monitor turns off the backlighting to save on power. The first press of any key will only turn on the back lighting.

Service Type

- No Service: PCS has 12V Battery power to run the electronics, however, it does not sense any 120/240VAC Power.
- 50-amp Service: PCS senses 240/208VAC between L1 and L2 to determine this mode of operation. PCS controls
 the loads so that the current does not exceed L1 limit of 50amps, L2 limit of 50amps, and a combined limit of 100
 amps.
- 30-amp Service: PCS senses 0VAC between L1 and L2. PCS adds the current of the two sensors and controls the loads so that the current does not exceed 30 amps.
- 20-amp Service: PCS senses 0VAC between L1 and L2, and the owner selects 20A on the Central Monitor Panel. PCS adds the current of the two sensors and controls the loads so that the current does not exceed 20 amps.
- Generator: PCS senses power to the Gen Hour Meter to determine this mode of operation. PCS controls the loads

so that the current does not exceed the ratings of the installed Generator, for example L1 limit of 35amps, L2 limit of 35amps, and a combined Limit of 63 amps.

Operation Mode

This Screen gives the general information about Load Status.

The First Line shows the Status of the Magnum Battery Charger. It will either be: Bat Charge Normal, under complete Magnum Control, or Bat Charge Reduced, which means an Owner activated appliance would have caused a circuit breaker to trip but instead the Bat Charger Rate has been reduced. Reducing the Battery will be the 1st thing that PCS will attempt in order to reduce overall RV Power. Battery Charge may not be reduced if the Battery is Low, or the Magnum Inverter is on Line 1 Circuit Breaker and the Overload is on Line 2 only.

The Second Line show the Status of the Magnum Inverter. It will either show Inverter Normal, under complete Magnum Control.

- Inverter Assist, PCS is requesting that the Magnum Inverter assist by temporarily generating 120VAC power from the batteries.
- Inverter Assist 12A, the end of this line shows the amount of 120VAC current that the Inverter is supplying.
- Inverter Assist Deny, means the Magnum Inverter can not Assist at this time, for one of many Magnum Inverter reasons, i.e. Battery Low, Over-current, etc. (See Magnum Owner's Manual).
- The Last Line shows if any Loads have been Shed to prevent circuit breaker tripping. Load(s) Shed = 7, depending on the model RV, there can be up to 7 Loads that PCS can control.

Load Status

Where the last Screen gave general information about all the controlled Loads, these next two screens gives detailed information about the status of each Load under PCS control.

Water Heater OFF 11A, indicates that the Water Heater power has been temporarily turned OFF, and the current at the instant the Water Heater was turned off last was 11 amps.

Refrigerator ON 7A, indicates that the Refrigerator has power. Again the 7amps of current is NOT the present current draw, but rather the current at the instant the Refrigerator was turned off last. A/C #2 ON, indicates that the A/C #2 has power. Since there is no current displayed, that only indicates that this load has not been turned OFF even once since the Battery has been reconnected and 12V power applied to PCS. PCS has never had a chance to "Learn" the current. The Current Displayed, is re-learned each and every time that the Load is turned OFF.

Looking at the list, it appears that PCS does not turn off Loads in Order Preference. PCS will always start shedding loads from the top of the list when PCS in 30A or 20A Service. However, in 50A Service, or running on the Generator there are two Main Breaker, Line 1 & Line 2. PCS will only shed loads if there is an overload detected on its associated Line. In other words, if shedding the Load will not help, skip it and move on. If then sometime in the future an overload is detected on the other Line, PCS will start at the top of the list again. The same is true with Magnum Battery Charge Reduction and Inverter Assist. Magnum can only help on the Line it is wired to, so if it will not help to Assist, don't bother.

Power Management

When the current exceeds the limit, because possibly the owner has turned on the Microwave, the PCS will independently limit the current on each line by performing the following in order: Reduce Magnum Battery Charge Rate, Inverter Assist, Load Shed. (If the Magnum Inverter is wired to the opposite leg, only Load Shedding will occur.

As each appliance is shed, PCS learns the current for that specific appliance, to ensure that there will be sufficient headroom to turn the appliance back on and be under the current limit. To ensure that Air Conditioner compressor pressure is bled, and to reduce quick cycling, there is a 2 minute delay from the time a Load has been shed, to the time power is restored.

Once the total RV current has dropped, for example because an owner operated appliance has been turned off, the PCS will reverse the above procedure, returning power to appliances whose operation was not immediately critical.

Line Status

PCS not only monitors total RV current but also has two built in Volt Meters, and monitors the voltage on each of the Lines.

L1 121Volts 15Amps, indicates that Line 1 has 121 Voltsrms and is presently drawing 15 amps.

! Brown Out !, if the display indicates Brown Out, the Display will hold the lowest captured voltage that may have occurred while the RV owner is away. Pressing any switch clears the display, and resumes displaying the present readings.

Wiring Status

Similar to an Outlet Tester that is plugged into outlets in your home to test for proper wiring, PCS monitors the wiring status of the Camp Ground Outlets you may plug into.

WARNING, IF THE DISPLAY EVER INDICATES "Wiring Status Error," IMMEDIATELY, unplug the RV from the outlet, and have the outlet inspected by a qualified technician.

The other lines on the Display to the right indicate proper wiring for 50A Service. For 30A Service L1=L2.

Source(s): Precision Circuits Power Control System 50A (Rev052207)

Product(s): Precision Circuit Energy Management System Remote Display (Model: 00-10019-050, Newmar Part Number: 127558)

FUSE PANELS

House and Chassis Fuse Panel Overview (Freightliner M2 Super C)

This article provides information and the location of the house and chassis fuse panels on Freightliner Super C coaches.

Inside the Coach

House Fuse Panel

On Super C coaches, the house fuse panel, which controls most of the components and appliances inside the coach, is located in the bathroom, in the front overhead next to the 120 volt breaker panel, or inside the rear wardrobe.

This panel contains fuses and breakers that are connected to the main appliances in the coach, from the refrigerator and television to the lights in the bedroom and slideouts. Some external components are fused in the house fuse panel. For example, the fuses for the water pump, water heater, security lights, and basement storage lights may be located in this panel.

An additional fuse panel is located under the carpeted floor access panel between the driver and passenger seats and/or carpeted cover behind the driver seat. It may also be located under a removable dash panel on the passenger side of the cab.









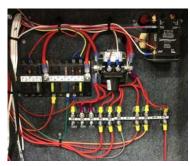
Outside the Coach

House Fuse Panel

House battery and disconnect fuses are located in the compartment with the shore power cord. These fuses control the battery boost, battery disconnect, keyless entry, hydronic heat, and LP detector. In this same location, 12 volt circuit breakers provide power to the house fuse panel, slideout motors, and power awnings.

Chassis Fuse Panel

Additional chassis circuit fuse panel(s) are located under the hood of the coach. The Freightliner chassis manual contains detailed information on what fuses are located under the hood.









GENERATORS

Generator Compartment Overview

This article provides basic information about the generator compartment.

A WARNING

This compartment is not to be used as a storage area. Storage of combustible materials or containers on or near any appliance in this compartment may create a fire hazard. Do not store such materials or containers in this compartment.

WARNING

This compartment is not to be used as a storage area. Storage of combustible materials or containers on or near any appliance in this compartment may create a fire hazard. Do not store such materials or containers in this compartment.

Do not place anything in and/or around the generator; placing items in the generator may cause generator issues and/or overheating. Always disconnect or disable remote start wiring before attempting service work.

Generator and GenStart/Stop Switch Overview for Diesel Coaches

This article provides basic operation instructions for a generator and GenStart/GenStop switch on a diesel coach.

Generator Function and Location

The generator is wired into the Automatic Transfer Switch and will power all of the 120 volt circuits in your coach. Your generator may be located in a side compartment or at the front of the coach in between the frame rails of the chassis. Some generators are mounted on slides for easy access and may need to be unlocked before free movement is allowed. The main breakers for the output legs are located on the generator start panel.

Operating the Generator

The generator can be started from the rocker switch on the dash, from other remote start switches (if equipped), from the start switch on the generator itself, or from the SilverLeaf touchscreen (if equipped).

The generator in your coach runs on the same diesel fuel as your main engine. The diesel fuel is drawn through a separate supply tube that is positioned in the tank in a manner that will not allow the generator to draw fuel and run if the tank level dips below the ¼ level.



GEN START P/HEAT

Depending on the ambient temperatures, the generator may pre-heat prior to cranking. This pre-heat condition is noted by flashing the light on the generator start switch until the cycle is complete (up to 15 seconds). Once it has pre-heated sufficiently, the starter will engage and the engine will start.

A WARNING

It is critical that the AGS system be turned off any time the generator is going to be serviced. Failure to deactivate the AGS system may result in damage, injury, or death if the Genset should start unexpectedly. Also, if the AGS system is set and the generator is turned off at any switch, it will clear the AGS settings.

Before starting the generator:

- 1. Turn off the air conditioners and any other large electrical loads, as recommended by the generator manufacturer.
- 2. If the generator previously ran out of fuel, add fuel to the tank.
- 3. Prime the generator by holding the generator switch in the stop position.

To start the generator:

- 1. Press and hold the generator start switch in the "Start/Preheat" position. It will automatically delay and pre-heat.
- 2. The indicator light will flash rapidly while pre-heating, and the generator will crank and start.
- 3. When the generator starts, release the switch.
- 4. The indicator light will stay illuminated while the generator is running.

To stop the generator:

- 1. Press the generator switch in the "Stop" position.
- 2. Release the switch.
- 3. The indicator light will turn off when the generator stops.

Service Required Indicator

- 1. The generator switch indicator light may flash in a series of three quick flashes, followed by a short pause, and then quickly flash three more times. These flashes indicate that service is required.
- 2. Refer to the owner's manual for your specific generator for more in-depth descriptions of flashing codes.

A IMPORTANT

Excessive cranking can damage the starter motor. Do not crank the generator more than 30 seconds at a time, and allow at least two minutes before trying again if the first attempt fails.

▲ CAUTION

Failure to turn off the 120 volt appliances when starting or stopping the generator may damage the transfer switch and/or electrical appliances.

A NOTICE

If your coach contains an Energy Management System, 8kw generator, and three roof air conditioners, the combined load may exceed the capabilities of the generator. Please remember to turn off one of the air conditioners as the 8kw generator is not intended to run all three roof air conditioners at the same time.

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: **AGS**

The AGS icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the Automatic Generator Start pages to view and/or control the system statuses, quiet time feature, and generator run time for charging the house and chassis batteries. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

AGS is a control system that automatically starts the generator-based demands.

A DANGER

Les véhicules et l'équipement propulsé par un moteur à combustion interne placé dans un véhicule de camping peuvent causer un empoisonnement au monoxyde de carbone ou l'asphyxie, ce qui pourrait entraîner des blessures graves ou la mort. Vehicles and equipment powered by internal comengines and placed in recreational vehicles can carbon monoxide poisoning or asphyxiation, whi result in death or serious injury. The flammable liquids used to power these items can cause a fire or explosion, which can result in death or serious injury.

A DANGER

b) Do not sleep in the vehicle storage area when vehicles

e) Do not store, transport, or dispense fuel inside this

Open the windows, openings, or air ventilation systems provided for venting the transportation area when vehicles are present.

Dessares graves ou la mort. Les liquides inflammables utilisés pour propulser ce machines peuvent causer un incendie ou une explos qui peut entraîner des blessures graves ou la mort. Pour réduire le risque:

- a) Ne pas circuler dans l'aire de rangement du véhicule si des véhicules s'y trouvent.
- ns l'aire de rangement du véhicule si
- are present.

 C) Close doors and windows in walts of separation (if installed) when any vehicle is present.

 (b) Ne pas dormir dans l'sire de rangement du véhicule : des véhicules s'y trouvent.

 (c) Fermer les portes et fenétres qui se trouvent dans les ciclosors (le cas échéani) si au moins an véhicule est ciclosors (le cas échéani) si au moins an véhicule est
 - d) Épuiser le carburant contenu dans les moteurs des véhicules entreposés après avoir coupé l'alimentation en carburant au réservoir.
 - e) Ne pas entreposer, transporter ou distribuer de carburant à l'intérieur de ce véhicule.
- provides lu vening in expend.

 3) Do not operate propane appliances, pilot lights, or electrical equipment when motorized vehicles are present.

 7) Own't its embtres, overdures on systèmes de ventilation d'air fournis pour ventiler la zone de transpo lorsque des vehicles la Youvent.

 9) Ne pas faire fonctionner d'appareits au propane, de veilleuses ou d'équipment électrique en présence de vehicules motorises.

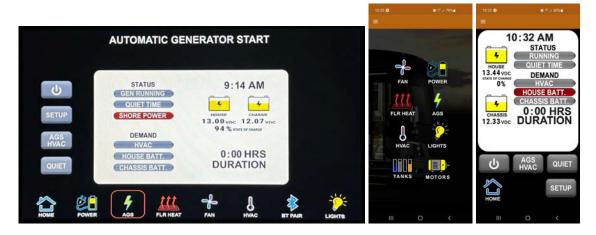
- HVAC requires AC voltage to operate.
- House or Chassis Battery is below set voltage and needs charged.



Once the AGS function is enabled to allow the generator to start based on the voltage parameters being met and/or the demand for air conditioning, the generator will start to provide 120 volt AC power. If the generator is manually started or stopped by a switch at any time after the AGS is enabled, it will disable the AGS system. In order for the AGS system to function again automatically, it will need to be enabled again.

There are four different screens to control the AGS: Status Page, Quiet Time Page, House Battery Page, and Chassis Battery Page.

Status Page



User Buttons/Icons

Power Button: Turns the AGS system ON/OFF.

Setup Button: Jump to the AGS Setup pages.

AGS HVAC Button: When enabled, the HVAC can request the generator to run. **Quiet Button:** When enabled, the AGS will not start during "QUIET TIME."

Home Icon: Jump to the Home page. This icon is on every LCD page.

Status Indicators

The Status Indicators report that the AGS is operating or what is disabling AGS operation.

Running: Generator is running.

Quiet Time: Generator (AGS) is disabled because of "QUIET TIME."

Demand Indicators

The Demand Indicators report what items are currently requesting the Generator to start.

HVAC: HVAC has demand for the generator to run.

House & Chassis Batteries: Low Battery has demand for the generator to run.

House & Chassis Voltage Readout: Displays the current battery voltages.

Duration: Displays how long the generator has been running (generator run time).

Setup Pages

Quiet Time Page

The purpose is to prevent the generator from automatically starting at specific times.

Start: Time after which the AGS will not be allowed to start. Use "HR" & "MIN" buttons to set the "START" time of "QUIET TIME."

Stop: Time after which the AGS will be allowed to start. Use "HR" & "MIN" buttons to set the "STOP" time of "QUIET TIME."



Note: The time of day is set in the HVAC section and must be set for operation. For example, RV parks have posted times when generators are not to run, and the user simply enters those times and enables the "QUIET" button on the status page. During this time, the generator will not run.

House Battery & Chassis Battery Pages



Duration: Time the AGS is to run the generator after a low battery demand occurs. Use "HR" & "MIN" buttons to set the amount of time the generator will run while charging the house or chassis batteries.

Volts: Low Battery Voltage selected setting for the generator to start. Use the up and down triangles to adjust the low voltage set point.



Example: If the house battery volts is "11.0 VDC" and the duration is "2:00 HRS," when the house battery voltage is less

than 11.0VDC, there will be a demand for the generator to start and run for 2:00 HRS. The chassis battery works the same way but with its own settings.

Notes: When there is a demand for the generator to run or stop, there can be up to two minutes of delay. During this time, the AGS is checking if there are any other demands.

Generator Maintenance

This article provides information on the care and maintenance of the generator. Before starting your generator for the first time each day, and subsequently after each eight-hour run cycle, perform the following checks to make sure it is ready to be used.

- 1. Make sure the carbon monoxide detectors in your unit are working.
- 2. Check for signs of fuel or exhaust leaks.
- 3. Make sure there is adequate clearance around the generator for proper ventilation. Also check for sloping ground or any other obstructions that may have occurred. Tall grass or other items that come in contact with the generator may interfere with ventilation or cause a fire.
- 4. Check the oil and coolant levels, and inspect for leaks.
- 5. Check the battery connections to make sure they are tight and clear of corrosion.
- 6. Inspect the generator compartment for road debris or damage that might affect the performance or safety.
- 7. Turn off major appliances (such as air conditioners, televisions, and other electronics that may excessively load the generator or may be sensitive to initial voltage surges).

The hour meter installed on the generator calculates the number of running hours of the generator motor. This is used for maintenance schedules. Regular oil changes and other maintenance performed at the prescribed intervals will greatly extend the life of your generator.

INVERTERS AND CONVERTERS

Inverter and Converter Overview

This article provides basic information about the role and operation of inverters, converters, and inverter/converter combination units.

Inverters: The inverter modifies direct current to alternating current to provide power to specified appliances and entertainment systems. The inverter performs this action by using a transformer to increase the voltage and modify the higher voltage into a usable alternating current power. For this function to occur, the inverter must be powered, set up, and turned on. A variety of inverters are used by Newmar; however, most have a control panel located in the overhead cabinet with other switches and controls.

Inverter/Converter Combination Units: The inverter/converter combination provides battery charging and allows the 120 volt power from shore power or the generator to pass through the inverter. The inverter performs this charging action by using the transformer to decrease the voltage and rectify the alternating current into useable direct current voltage. This is regulated by internal-sensing circuitry based upon the battery bank's state of charge and several other factors, depending on the coach's particular inverter brand and type.

This type of unit also performs the inverter function. For this function to occur, the inverter must be powered, set up, and turned on. A variety of combination units are used by Newmar; however, most have a control panel located in the overhead cabinet with other switches and controls.

Converters: A converter transforms alternating current or shore power 120 volts to low-voltage direct current to provide power to the coach's 12 volt house and chassis batteries. This function occurs automatically when 120 volts are supplied to the converter. Converters are usually located in the cord compartment of coaches that do not have an inverter/converter combination unit.

Victron MultiPlus Inverter Quick Start (Model: PMP-122301102)

This article provides basic operation instructions for a Victron MultiPlus Inverter (Model: PMP-122301102). Victron inverters are blue in color and are typically located in a basement compartment near the batteries or in between the frame rails.

Safety Instructions

A DANGER

DANGER OF ELECTRICAL SHOCK: The product is used in combination with a permanent energy source (battery). Even if the equipment is switched off, a dangerous electrical voltage can occur at the input and/or output terminals. Always switch the AC power off and disconnect the battery before performing maintenance.

The product contains no internal user-serviceable parts. Do not remove the front panel and do not put the product into operation unless all panels are fitted. All maintenance should be performed by qualified personnel.

Never use the product at sites where gas or dust explosions could occur. Refer to the specifications provided by the manufacturer of the battery to ensure that the battery is suitable for use with this product. The battery manufacturer's safety instructions should always be observed.

Description

The basis of the MultiPlus is an extremely powerful sine inverter, battery charger and automatic switch in a compact casing.

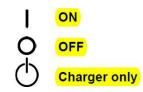
Automatic and Uninterruptible Switching - In the event of a supply failure or when the generating set is switched off, the MultiPlus will switch over to inverter operation and take over the supply of the connected devices. This is done so quickly that operation of computers and other electronic devices is not disturbed (Uninterruptible Power Supply or UPS functionality). This makes the MultiPlus highly suitable as an emergency power system in industrial and telecommunication applications. The maximum alternating current that can be switched is 16A or 50A, depending on model.

Adaptive 4-stage charging characteristics (bulk, absorption, float, storage) - The microprocessor-driven adaptive battery management system can be adjusted for various types of batteries. The adaptive function automatically adapts the charging process to battery use.

Operation

On/Off/Charger Only Switch

When switched to "on", the product is fully functional. The inverter will come into operation and the LED "inverter on" will light up.



NOTE FROM NEWMAR -

Unlike other brands of inverters that have been used by Newmar in the past, pass-through 120 volt electricity (shore or generator) will not pass through the inverter unless the Victron inverter is turned on.

An AC voltage connected to the "AC in" terminal will be switched through to the "AC out" terminal, if within specifications. The inverter will switch off, the "mains on" LED will light up and the charger commences charging. The "bulk", "absorption" or "float" LEDs will light up, depending on the charger mode.

If the voltage at the "AC-in" terminal is rejected, the inverter will switch on. When the switch is switched to "charger only", only the battery charger of the Multi will operate (if mains voltage is present). In this mode input voltage also is switched through to the "AC out" terminal.

A NOTICE

When only the charger function is required, ensure that the switch is switched to "charger only". This prevents the inverter from being switched on if the mains voltage is lost, thus preventing your batteries from running flat.

LED Indications



For a complete list of LED indications, refer to your Victron Operator's Manual.





Maintenance

The MultiPlus does not require specific maintenance. It will suffice to check all connections once a year. Avoid moisture and oil/soot/vapors, and keep the device clean.

Troubleshooting

A IMPORTANT

If the charger does not operate (Bulk LED flashes and Mains On LED illuminates), you can reset the error mode by switching off and back on the MultiPlus.

For more maintenance and troubleshooting information, please refer to the complete product user manual.

Source(s): Victron Energy MultiPlus Inverter User Manual (Model: PMP-122301102)

Product(s): Victron Energy MultiPlus Inverter (Model: PMP-122301102, Newmar Part Number: 161882)

Victron MultiPlus Inverter GX Touch 50 Display Quick Start Guide

This article provides basic operation instructions for a Victron MultiPlus Inverter GX Touch 50 display.

The Victron GX Touch 50 display is a multi-color screen and is located in the overhead cabinet. The GX Touch 50 [is] display provides an instant overview of your system and a way to easily adjust inverter settings.



The inverter is located between the frame rails. The LEDs on the face indicate the inverter's state of charge.



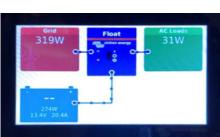
In this example, only the charger is on, and it is float-charging the house batteries.

Home Screen: The Home screen displays the battery status and voltage, the state of charging and alarms (if any), along with the AC input and loads. It also displays the time of day. To view the next screen, touch the screen and swipe from right to left.

Charging Screen: The Charging screen displays the battery charging status: bulk or float charging.

Menu Button: Touch the screen anywhere without swiping left to access the Menu button at the bottom.







Device List Screen: Press the Menu button to access the Device List screen. Press the line for which function, notification, or menu you'd like to access.

MultiPlus: Select MultiPlus to access settings and displays, such as Switch, State, Input Current Limit, DC Voltage, DC Current, and State of Charge. Press Switch to access a screen to turn on and off the charger and inverter. Press the upper left-hand arrow to navigate back to the previous screens or home page.

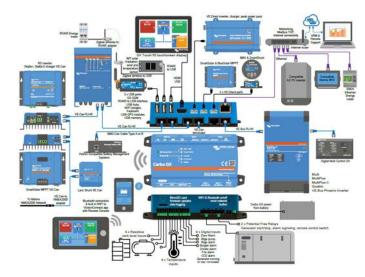


Notifications and Settings

The Notifications screen displays any active notifications. The Settings screen provides the ability to alter the charger/inverter settings. This is important when plugging into a power source of 30 amps or lower.



Overview of Connections



Source: Victron Energy Cerbo GX Manual

LIGHTING

Interior and Exterior Lights Overview

This article provides basic information about operation, maintenance, and replacement of interior and exterior lights.

Interior Lights

A Newmar coach's electrical and lighting system is designed for maximum reliability, functionality, and style. Your coach may feature traditional on/off switches or multi-switch touch panel light and accessory switch panels. Located throughout the unit, these switching devices are used to turn lights on and off, as well as to operate power shades and window treatments. Many coach models boast LED accent lights and LED wall sconces custom-designed for Newmar.

Flip the switch or touch the switch panel to operate the light or accessory you desire. Some lights may also have dimming features, allowing you to adjust the interior lighting for mood or comfort. For more details about the interior lights, refer to the documentation in Newgle.

Many of these bulbs are made as both filament and LED. Most LED bulbs are polarity-sensitive unlike filament bulbs. When attempting to replace filament-type bulbs with LED-type bulbs, it is possible for the light fixture to be wired in reverse polarity for the LED replacement bulbs. Switching to a different type of bulb may require a wiring change. Newmar recommends any wiring modifications be performed by an authorized service technician.

A IMPORTANT

When replacing halogen bulbs, do not touch the bulb, as the oil from your hands will reduce the bulb's life.

Turn off the lights to avoid possible short circuits, blown fuses, and burns while removing and replacing bulbs or lights. Depending on the year and model of your coach, it may be equipped with LED light fixtures with the lights embedded into the light housing.

A NOTICE

Many of the LED light fixtures have integrated LED assemblies that are non-serviceable and non-replaceable. When LED light bulbs burn out in this type of fixture, the complete light must be replaced. Replacement bulbs or light fixtures are available for purchase through the Newmar Parts Department.

WARNING

Do not substitute bulbs just because they will fit, as it may cause overheating, back feed, or damage to the light fixture or lens.

Exterior Lights

Replace any exterior light bulbs or fixtures as needed to maintain DOT safety requirements. When servicing interior or exterior lights, make sure you replace any light bulb with the same bulb number (normally stamped on the base of the bulb or printed on the bulb). Replacing the bulb with the identical part number will ensure the wattage and base are the same.

The coach may have headlights installed that are atmospherically vented, so condensation may occur in these headlight assemblies. Under normal driving conditions with the headlights turned on, the condensation will dissipate, allowing it to escape through the vent.

A IMPORTANT

Always check the operation of all headlights, turn signals, and clearance lights prior to traveling.

It is necessary to keep exterior lights clean, as dirty lights have diminished output and reduced visibility. To clean your exterior lights, use a mild soap designed for automotive car washing. Avoid using harsh cleaners, abrasive products, and petroleum-based products or other chemicals.

Ceiling Lights (All LTS) Switch Overview

This provides a basic operational overview for the Ceiling Lights (ALL LTS OFF) switch on 2025 and newer coaches.

The Ceiling Lights (ALL LTS OFF) switch may be located near the entrance door to provide easier access to turn the lights on and off. The switch will only turn on ceiling lights but will turn off all lights on the ATC/KIB network. The switch may be equipped with backlighting to provide better visibility in the dark.

A NOTICE

This switch only operates lights connected to the KIB/ATC system and may not affect any manual on/off lights installed in closets, wardrobes, compartments, etc.



KIB Backlit Multiplex Switch Panel Operation

This article provides brief operating instructions for KIB backlit multiplex switches. Some 2026 and newer coaches may be equipped with a backlit switch in the bathroom, garage, or bunk area on select floorplans.

Press the switch labeled with the circuit you wish to operate. The green LED indicator will illuminate on the KIB switch panel when the circuit is activated. Pressing the switch again will turn the circuit off and the indicator will change to blue when it is turned off.

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: Lights

The Lights icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the controls for the lighting settings for each area, such as outdoor, living room, kitchen, bedroom, and bathroom(s). The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

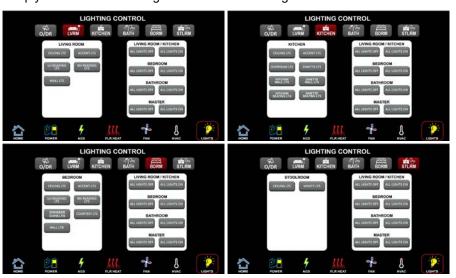
The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

Based on the coach model and floor plan, the following rooms, lights, and light switches will vary. The main/master light switch panel on the right side of the screen does not change based on the room selection. However, the panel on the left changes based on what lights may be controlled in the selected space, such as the living room, bedroom, kitchen, etc.

The following may appear:

- O/DR = Outdoor
- LVRM = Living Room
- KITCHEN = Kitchen
- BATH = Full Bath
- BDRM = Bedroom
- STLRM = Stool Room or 1/2 Bath

Simply touch the desired light button to turn the light on or off.







120 Volt Outlets Overview

This article provides information about the 120 Volt outlets located throughout the interior of the coach.



Several 120 volt receptacles are located throughout the interior of the unit. These receptacles require three-pin plugs that provide proper grounding to protect you from electrical shock. The breaker for the outlets are usually located in the breaker box. If the breakers are on the inverted circuitry, they will be located in the subpanel near the main breaker box.

In addition, some 120 outlets may also provide USB charge ports as well. Outlets with USB charge ports are powered when the outlet has 120 volts available from either shore power, the generator, or the inverter.



IMPORTANT

Do not use an adapter, cheater, or extension cord that breaks the continuity of the ground circuit to the ground pin. Never remove the ground pin from a plug in order to connect it to a two-pronged ungrounded outlet.

USB Outlet, Auxiliary Input, and 12 Volt Receptacle Overview

This article provides a functional overview of the USB outlet, auxiliary input, and 12 volt receptacles in a coach.

Standard USB and/or USB-C Outlets

USB outlets may be located in various places throughout the coach. The number of ports may vary. The USB and/or USB-C outlets are for charging only and are not connected to any entertainment equipment. They simply provide convenient accessory charging without filling your 120 volt outlets with chargers. The round USB/USB-C outlets typically work from the 12 volt electrical system; depending on the location, they may be powered from the house or the chassis 12 volt system.



The electrical outlet-style outlets with USB ports or the outlet-style 4-port USB outlets require 120 volt power when located outside of the cockpit area of the coach. Some outlets may also have an LED indicator light.







Auxiliary Inputs

USB ports labeled with auxiliary input are normally connected to the dash radio and allow input to the radio via USB and or 3.5 mm cable. Refer to the radio's operating manual for information about selecting auxiliary inputs.









12 Volt Receptacles

Your coach may be equipped with one or more 12 volt receptacles conveniently located in the dash area. These 12 volt receptacles allow you to plug in a variety of 12 volt DC accessories, including cell phone battery chargers, camera battery chargers, etc. These are fused at 20 amps.



Ground Fault Circuit Interrupt Outlets (GFCI) Overview

This article provides an overview of the purpose and function of a ground fault circuit interrupt (GFCI) outlet. The Ground Fault Circuit Interrupt (GFCI) outlets protect the user from ground faults between a hot wire and ground. The 120 volt electrical outlets in the kitchen and bath area are GFCI-protected receptacles.

A IMPORTANT

This information is generic in nature and IS NOT specific to your coach. The exact location of GFCI outlets vary by year, model, and floorplan and/or component options. The following location descriptions and images are for example use only.

Location Tips and Examples

The electrical outlets located in the slideouts are typically wired through the kitchen GFCI. The exterior electrical outlets are typically wired through a bathroom GFCI. On coaches equipped with the floor heat option, separate GFCI(s) are installed in a bathroom, cabinet, or closet and/or near the main breaker box. Some may be difficult to find and may require using a flashlight while looking inside cabinets.

Coaches with the holding tank heat pad option will have an additional GFCI located in the basement area; however, the exact location varies.

Note: Any component that gets plugged into a GFCI-protected circuit will not operate if the GFCI has tripped. In some cases, this may include other components and/or options installed, such as powered theater seating.

A IMPORTANT

Newmar recommends checking and resetting all GFCI outlets and 120 volt breakers, as well as replacing any blown 12 volt fuses when component(s) are inoperable.



Testing and Resetting GFCI Outlets

The GFCI outlets should be tested at least once a month. The Reset button needs to be pressed before starting the test.

- 1. The GFCI outlet must be supplied with 120 volt power for testing and general use.
- 2. Pressing the Test button on the GFCI outlet will trip and cease to supply power to the outlets on the GFCI, as well as any other outlets that are wired downstream of the GFCI outlet.
- 3. Pressing the Reset button will reset the GFCI outlet and all outlets downstream of the outlet. Some GFCI outlets may have a LED light as a visual indicator of the power status.
- 4. If a tripped GFCI outlet will not reset, disconnect everything plugged into them (i.e. hairdryer, coffee pot, or fan) or hooked up downstream; then try resetting the GFCI again.
- 5. If all loads are disconnected and 120 volt power is present to the GFCI outlet and the GFCI outlet will still not reset, it may require service or replacement by a qualified technician.

If the GFCI is working properly, the reset button will remain in the "IN" position. If an item plugged into a slideout or outside receptacle is not working, check for a tripped GFCI in the kitchen or bathroom. Likewise, if the floor heat or holding tank heat pads are not working, check the GFCI for that circuit.

WARNING

The GFCI will not reduce the shock hazard if the short is between a neutral and hot wire or two hot load wires.

Block Heater Outlet Overview (2026 and newer Super C Coaches)

This article provides a basic overview of the block heater outlet for Super C coaches (2026 and newer Super C Coaches).

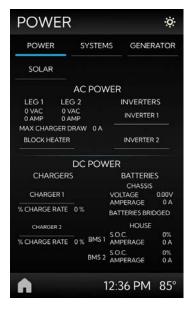
Super C coaches may have an outlet designed for use with the engine block heater or hard-wired into a junction box located near the engine compartment or under the cab.

This electric circuit may be controlled by the block heater button on coaches equipped with a high-end ATC/KIB user interface, coaches without may have a switch in the overhead cabinet to turn the power on/off to the block heater circuit.

Coaches equipped with energy management systems operating on shore power of 30 amps or less may have power shed to the block heater if the other loads exceed the amperage set on the energy management system.







SOLAR POWER

Dometic GoPower! 10-Watt Solar Panel Quick Start for Super C Coaches (Model: Flex-10-HB)

This article provides basic information about Dometic GoPower! 10-watt solar panels that began being installed on select Super C coaches during the 2023 model year. This content only applies to Super Star, Supreme Aire, and Summit Aire Super C coaches.

If installed, this 10-watt solar panel will trickle charge the chassis batteries when exposed to sunlight.

The solar panel is protected by a fuse located beneath the metal chassis battery cover. The fuse is often marked with a label noting the solar panel.

The panel does not have an indicator or regulator since it is only a trickle charge and is not capable of producing enough voltage to damage batteries.

Larger solar panels (optional equipment on select coaches, such as option # L010) may also charge the house battery bank. For more information about larger solar panels, as well as the associated remote panel and controller, please refer to Newgle.



Victron SmartSolar MPPT Solar Monitoring via VictronConnect App

This article explains the solar charger-specific VictronConnect app usage, which can be used to monitor the solar charger, see its historical values, and if there are operational warnings or errors.

Refer to the general VictronConnect app manual (in Newgle) for information about the VictronConnect app itself, such

as: how to install the app, how to connect to the solar charger, how to update firmware and more.

Note: Where battery voltage is referred in this chapter, a 12V battery is assumed.

VictronConnect app status screen

The status screen displays the solar charger model name together with the live solar charger information.

VE Smart Networking

The presence of the VE.Smart Networking symbol indicates that the solar charger is configured for VE.Smart Networking and is receiving battery temperature and/or battery voltage data from the VE.Smart Network.

Solar

- The solar gauge shows the solar output in relation to the maximum output power that the solar charger can generate at the set battery voltage and displays the dynamic real-time value of the solar array output power.
- The solar voltage measured at the solar terminals of the solar charger.
- The solar current flowing from the PV array into the solar charger.

Battery

- The battery voltage measured at the battery terminals of the solar charger.
- The current flowing from the solar charger into the battery.
- The battery state indicates the battery charge stage or if external control is active. These are the possible states:
 - Bulk: During this stage the solar charger delivers as much charge current as possible to rapidly charge the batteries. When the battery voltage reaches the absorption voltage setting, the solar charger activates the absorption stage.
 - Absorption: During this stage the solar charger switches to the constant voltage mode, where a pre-set absorption voltage is applied. When the charge current decreases below 2A or if the pre-set absorption time has elapsed, the battery is fully charged and the solar charger will enter the Float stage. Note that when an automatic equalisation is being performed this will also be reported as absorption.
 - Float: During this stage the float voltage is applied to the battery to maintain a fully-charged state. When the battery voltage drops below float voltage during at least 1 minute, a new charge cycle will be triggered.
 - External control: This will be displayed when another device is controlling the charge behaviour of the solar charger, bypassing its normal charge algorithm. Examples are when the solar charger is controlled by an ESS system or a managed battery.
- In case the charger is not charging a "Why is the charger off?" message will display. When clicking on this message, a new window will open with more information as to why the solar charger is not charging.

Virtual Load Output

The state of the virtual load output, being switched on or switched off.

VictronConnect app history screen

The history screen shows a summary of the data collected over the previous 30 days. Swipe the screen to the right or left to show any of the 30 days. To switch between portrait or landscape screen presentation click the fragmented square icon, or at the top left of the screen. The daily log shows:

- Solar yield: The energy (Wh) converted for that day.
- Solar Pmax: The maximum power (W) recorded during the day.
- Solar Vmax: The highest voltage (V) from the PV array during the day.
- Battery max and min: The first figure shows the maximum battery voltage (Vmax) for the day. The figure below is the minimum battery voltage (Vmin) for the day.
- Errors: This shows the daily number of errors, if any. To get more information about the error(s), click the orange dot. You may need to slide the display on your device





- up to see the errors.)
- Lifetime total: This shows the total energy converted by the installation (W and is not re-settable).
- Since reset: This shows how much energy has been converted by the installation since the last reset.

Clicking on any bar (day) in the graph will expand the information. It will show the time and percentage of the total charge time that the solar charger has spent in each Bulk, Absorption and Float charge stage.

You can use the charge times to see if the PV array is properly sized for your requirements. A system that never reaches the float stage may need more panels. Or perhaps the load should be reduced?

The history can be exported as a comma-separated file (CSV) by clicking the three connected dots symbol or the save symbol at the top right of the history screen. The symbol varies, depending on what platform VictronConnect is used. The history can be reset by clicking the clock with an arrow symbol at the top right of the history screen.

VictronConnect app error reporting

The VictronConnect app will indicate active errors while the app is actively connected to the solar charger. The error will show up in a pop-up window on the status screen together with the error number, name and a short error description.

The VictronConnect app also displays historical errors. To see these errors, navigate to the "History" tab and look at the bottom of each day column. An orange dot will indicate an error on that day.

Source(s): Victron Energy MPPT Solar Charger Manual





2026 KIB Capacitive Touch Panels with Standard User Interface Guide: Solar

The Solar icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the Solar Management System information broadcasted from the Victron MMPT controller. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

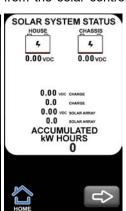
If a coach is equipped with a factory-installed Victron Solar controller, the KIB LCD touch panels, as well as the Connected Solutions App, will include a Solar Management System page.

This page displays data about the house and chassis battery voltages, array voltage and amperage, solar controller voltage and amperage outputs, and accumulated kW hours. The kW hours is the total output from the solar controller. The Solar Management System page also displays the type of charge being output from the solar controller.









TRANSFER SWITCHES AND SURGE PROTECTORS

Transfer Switch and Surge Protector Overview

This article provides an overview of the transfer switch and the integrated surge protector.

The transfer switch allows your coach to be powered by more than one power source, while only allowing one active power source connection at a time. When the generator is turned on, this switch automatically transfers to generator power.

Surge protection was used on select coaches to protect the coach from power surges during storms and poor shore power conditions from the incoming shore power connection. Today, most transfer switches have integrated surge protection.

A WARNING

Due to the risk of electrical shock, service should be performed by a qualified electrician or authorized service technician. The electrical system may have multiple 120/240 volt power sources. All power sources must be turned off, and any auto generator start features must be disabled before servicing.

There will be a slight delay between the start of the generator and the electrical connection. This delay allows the generator to reach normal operating speed without needing to supply a required load. When the unit is plugged into shore power, an audible click will be heard in the transfer switch box. The sound is normal and indicates that the relay inside the transfer switch is engaging the outside power source.

NOTE FROM NEWMAR

After market surge protection placed at the shore power supply source is an optional product, which provides an increased layer of surge protection. However, it is not required or installed by Newmar.

Southwire Surge Guard 50 Amp Automatic Transfer Switch Quick Start (Model: 40450RVC)

This article provides basic operation instructions for a Southwire Surge Guard 50 Amp Automatic Transfer Switch (Model: 40450RVC).

The 40450 series automatic transfer switch (ATS) has many different protective features to protect your coach from low quality power. Included in these are protection against high voltage, low voltage, and an incorrectly connected chassis ground. If one of these fault conditions is encountered, the ATS will open both contactors in order to protect the coach. Once the fault condition goes away, the ATS will delay for approximately 2.5 minutes before trying to close the appropriate contactor again.

A remote power monitor may be installed in select coaches and allows for continuous visual indication of source voltage and load current or diagnostics.

If the ATS fails to close the contactor or transfer when expected, check the 40450 display to see if an error message is displayed. The screen will flash an error message for that failure such as "Loss of Ground", "High Volt", or "Reverse Polarity". The error condition must be corrected in order for the transfer switch to function correctly.

condition must be corrected in order for the transfer switch to function correctly.

If there is no error message and the display instead reads "Delay Active" this means that the fault condition has cleared and that the switch is going through a 2.5 minute delay before it will attempt to close the contactor again. Wait until this delay is over to see if the ATS correctly closes its contactor.

If no display is available, check the level of the input voltage to ensure it is within the proper operating limits. Also check that the ATS is correctly connected to chassis ground and that the neutral conductor is correctly connected to ground at the power pedestal. Wait 2.5 minutes to check if the fault condition was temporary and has cleared. If so, the contactor will pull in at the end of the 2.5 minute period.

Test Procedure

- 1. Plug RV's shore power cord into utility power source.
- 2. Wait for the time delay, then observe remote display of shore power status.***
- 3. Turn on RV's generator (generator power source is dominant over shore power). A 30 second delay will occur.
- 4. Observe remote display for generator output status (Volts/Amps).
- 5. Switch off generator, observe remote display of transfer "Delay Active-Shore Power."
- 6. Shore power activated, observe remote display (Voltage/Amps). ***Acceptable shore and/or generator power range is 100-135 Volts. Load (Amperes) 0-50 Amps.

Note: During generator (only) power-up, the monitor display will be blank for approximately 30 seconds for generator warm-up.

Source(s): Southwire Surge Guard Installation and Operating Instructions Model 40450RVC/ Southwire Surge Guard Model 40450 RVC Troubleshooting Guide

Product(s): Southwire Surge Guard 50 Amp Automatic Transfer Switch (Model: 40450RVC, Newmar Part Number: 152216)

Surge Guard Automatic Transfer Switch Remote LCD Display Quick Start (Model: 40299)

This article provides basic operation instructions for a Surge Guard Automatic Transfer Switch Remote LCD Display (Model: 40299).

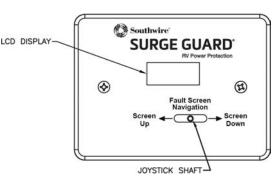
The optional Remote LCD Display is intended for use with Automatic Transfer Switch (ATS) unit 40350-RVC or 41390-RVC.

The Remote Power Control allows you to see detailed information such as voltages for Line 1 and Line 2, (typically 110-120VAC), current draws (0 to 50Amps), and status and conditions of the ATS, including time and date. Electrical faults, such as low voltage or an open ground connection, that cause the ATS to shut off power are shown on the remote display, allowing you to retrieve via the joystick a log of fault conditions kept by the ATS of electrical power at your location.

This is a helpful diagnostic tool that allows you to comprehend and correct problems with your RV's power. The display also features a right/left navigation lever allowing navigation through the various screens.







Features and Displayed Information

Main Screen

- Display of normal operating voltages and currents, for example 120V 25Amps for each Line (240V system). Shore
 power or generator power.
- Display of faulty power conditions responded to by ATS such as low voltages, high voltages, open ground, open neutral, reverse polarity, high frequency, etc.
- Display of delay condition when recovering from faulty conditions.

L1/L2 Volt and Current Screens: Displays line 1/2 voltage or current. This is handy as it allows you to view the voltage or current when there is a fault condition being displayed on the main screen.

Faults Screen: Allows you to view a history of up to 50 faults which have been logged by the ATS. Each fault that has been logged contains the fault, the voltages and currents at the time of the fault, and the time and date when it occurred.

Time/Date Screen: Displays the current time and date and allows you to set the current time and date on the ATS unit.

Joystick Lever: To navigate through screens and set the time and date.

Operating Instructions

Screen Navigation Using the Button/Lever

There are several information screens associated with the Remote Display which can be selected via the lever on the front of the unit. Pushing the lever to the RIGHT repeatedly will access the screens in the following order. Pushing the lever to the LEFT accesses the screens in the reverse order.

When the VIEW FAULTS screen is displayed, momentarily pushing the lever in accesses a log of faults which have been stored by the ATS unit. Viewing the fault log data will be explained in more detail below.

Display for Normal Operation

During normal operation, the Remote Display screen reads the status of the RV electrical power, showing continuous voltages and currents for power lines 1 and 2 coming into the RV on the main screen. A secondary screen showing SHORE or GEN will momentarily display approximately every 8 seconds, indicating whether your RV is running on power for your shore connection or whether the ATS has transferred you over to generator power.

Display During Fault Conditions

If there are any faults or problems with your electrical power, the Remote Display will show the particular faults on the LCD screen with a 3 second interval between each item. The faults displayed can be any combination of the ATS fault codes.

Display During Delay State

When the ATS is powered up, the Remote Display will display "Delay" and the elapsed time in seconds until it reaches 128 seconds. After the delay is completed, if shore power is good the ATS will connect power to the RV, and the unit will go to the normal operating screen showing voltages and currents as described above.

L1 VOLT | L2 VOLT Screens

These screens are useful for viewing the line voltages when the main screen is in delay or when L1 or L2 have a fault (line voltage that is too low or too high). The main screen will display line voltage between 102 and 132 volts; otherwise it will show that the line has a fault. The L1 VOLT and L2 VOLT screens however display a greater range, from 90 to 140 Volts. The L2 VOLT screen is only shown when using a 50 Amp ATS.

L1 CURR | L2 CURR

These screens are useful for viewing the line currents in amps when the Main Screen is in Delay or when it shows that L1 or L2 have a fault. The L2 CURR screen is only shown when using a 50 Amp ATS.

TIME/DATE Screen

View and/or set the current time and date on the ATS. To get to the TIME/DATE screen from the main screen, push the front lever right or left repeatedly until you see the time and date. To set, press the lever IN once quickly. You will see a blinking cursor. Push the lever left until the cursor is over the minutes digit.(Do not try to set the seconds - they reset to zero.) Once you have the correct setting for the minutes, continue on with setting the hour, date, month, year and so on by pushing the lever to the left.

Once you have entered the correct time and date, press and HOLD the lever IN for 3 seconds. You will see "TIME IS SET" once complete. You can now release the lever.

When you are on the TIME DATE screen and the cursor is not blinking, you can navigate to the other top level screens such as the main screen, or the L1 volts screen, etc.

VIEW FAULTS Screen

This allows you to view the faults recorded whenever the ATS detected a fault with electrical power. To view, momentarily push the front lever DOWN or IN. The screen will display fault 1, which is the most recent fault that occurred and was detected by the ATS. The screen will scroll through the following items for fault 1 every 3 seconds:

1. MODE- State of ATS when fault occurred (MODE SHORE = shore power; MODETGEN = transferring to Gen

L1 L0	Line 1 voltage is low (below 102 VAC)				
L1 HI	Line 1 voltage is high (above 132 VAC)				
L2 L0	Line 2 voltage is low (below 102 VAC)				
L2 HI	Line 2 voltage is high (above 132 VAC)				
REV POL	Reverse polarity condition (hot wire and neutral are swapped)				
OPEN NEUTRAL	Neutral wire connection is missing or mis- wired				
L1 OPEN	Line 1 connection missing or mis-wired				
L2 OPEN	Line 2 connection missing or mis-wired				
SHORE	RV connected to Shore Power				
GEN	RV connected to Generator Power				
DELAY	Delay mode waiting for power to come back on				
SINGLPHA	Connection at 110V instead of 220V				
POWER REM	Power has been removed due to fault				
OPEN GND	Open ground fault condition (ground wire missing or miswired)				
HI FREQ	AC line frequency high (more than 60Hz)				
LO FREQ	AC line frequency low (less than 60Hz)				

power, etc.)

- 2. FAULT CODE (L1 LO, L2 LO, etc.)
- 3. L1/L2 Volts and Currents at the time of the fault.
- 4. Frequency of Line 2
- 5. Time of Fault
- 6. Date of Fault

To see the next fault, push lever right, showing fault 2. Keep pushing the lever right to see up to 50 faults. Pushing the lever left goes backwards through the faults.

If no faults have occurred, you will still see fault number headings, but the information will be zeroed out. Voltages/currents will be zero, time will be 00:00:00 and date will be 00-00-00; or you may have only 5 faults and the other 45 fault numbers will be zeroed out as described, etc.

To exit the fault screens, push the lever DOWN/IN momentarily, returning to VIEW FAULTS screen from which you can navigate as previously described.

Source(s): Southwire Surge Guard Remote Power Control Monitor LCD Display with Navigation Installation and Operating Instructions

ELECTRONICS

This chapter provides operational instructions for the electronic systems installed in the coach, including camera and video, holding tank monitoring, multiplex systems, navigation, security and keyless entry, as well as WiFi.

NOTE: Audio-Visual (AV) equipment information is located in the Entertainment Systems category.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

DASH INFOTAINMENT SYSTEMS

Xite Infotainment System with Single 12.3" Touchscreen Quick Start (Model: G4 S12.3 SDHD and G4 S12.3 HD360 + SD)

This article provides basic operation instructions for an Xite Infotainment System with Single 12.3" Touchscreen (Model: G4 S12.3 SDHD and G4 S12.3 HD360 + SD).

This Quick Start Guide is intended to provide basic instructions to begin using your Infotainment Center. Failure to properly focus on the operation of your motor vehicle can result in death, serious injury and property damage. The Infotainment Center should never be used at a time or in a manner that distracts you from properly focusing on operation of the motor vehicle in which it is installed.

A IMPORTANT

Please review all disclaimers, warnings and detailed operating instruction in your Xite Owner's Manual prior to using your Infotainment Center.



Main Touchscreen Monitor

- (1) Bluetooth Microphone
- (2) LDR (Light Dependent Resistor) and IR (Infrared Receiver): LDR is used for the dimming of the display and is active when Auto dim in System Settings is set to Sensor. IR receiver is used with remote control operations.
- (3) Siri Button: Press to activate the voice command.
- (4) Menu: Press this button once to go to the Main Menu (or Home Page). When in the Main Menu, you can either use

the touch screen to select the desired icon (source) or you can keep tapping the Menu button to select different icons on the screen. When icon is highlighted for more than 1 second, the system will automatically open that icon. You can also access the Main Menu from any screen by tapping the function icon in the top left corner of the current screen.

(5) Fav: Your Infotainment Center is equipped with a favorite source hotkey. Press the FAV button once to directly access your favorite audio source. Favorite audio source is defaulted to Sirius XM, and it can be changed by going to Setup -> System -> Favorite Mode.

Note: When viewing video in full screen, touch the screen once to bring up the icon header which will display the function icon. Tap the icon to return to the Main Menu.

- **(6) Volume/Power Rotary Button:** Turn on the ignition to power up the Infotainment Center. When powered up, it will immediately go to the last mode (memory on playback) before it was turned off. In order to put the unit in standby mode, press and hold the rotary button once. During standby, your vehicles graphics together with date and time will be displayed. Press and hold the rotary button again to turn the unit on. Turn the rotary button left / right to adjust the volume to the desired level. A short press of the rotary button will Mute the audio.
- (7) DIM: Changes the screen brightness.
- (8) Navi: Press the NAVI button once to go to the navigation system. While viewing the navigation press the NAVI button to return to the active source (Radio, or SXM, etc.). If the navigation route is running, navigation audio voice prompts will continue to be heard over the speakers according to the Navigation audio settings you have selected in the Settings menu. To hear only the navigation audio voice prompts, press and hold NAVI button for 2 (two) seconds. This will mute the active source until you leave the navigation screen.
- **(9) USB Input:** To access and use iPod compatible devices or iPhone with CarPlay, please connect your iPod/iPhone device first with the USB cable that came with your device. USB drives with compatible media may also be plugged in here for use with the Media Center.

Note: When in standby mode, Infotainment Center consumes power. To completely turn the system off, remove the ignition key and/or ensure any auxiliary battery power to the system is turned off.

Main Menu

- (1) Information Bar: The top area of the screen is the source information bar. It displays the current source together with temperature, compass, and time information as well as the Bluetooth connection status. Select a source to be able to see all the information mentioned above.
- **(2) Main Menu:** Infotainment Center is designed for simple maneuvering. The screen shown on the left is the MAIN MENU screen. From here, you can choose what source to access by tapping the appropriate icon on the touch screen.
- (3) House Mode: This option is only accessible when parking brake is engaged. When active, House Mode sends current source audio and/or video to other areas of the coach.





Newmar only sends current source audio (not video) to the exterior entertainment center.

- After 15 seconds of no input to the touch screen, the LCD displays will enter into sleep. Touch the screen to wake.
- House Mode is cancelled when selected again, park brake disengaged or power cycle is performed.
- Tap once to enter the House Mode.
- Tap once to exit the House Mode.

Settings

Access the Settings by selecting the Setup icon in the Main Menu. There are three settings that can be changed and these are System, Video, and Audio. In addition, there are Settings for Radio, Sirius XM, Bluetooth and DVD, and to access these, you must go to the setup icon while one of these sources is active. To exit the Settings menu at any time, press the Settings icon in the top left of the screen.

System Setup

By touching the SYSTEM button, the settings for the system part of the Infotainment Center can be changed.

Auto dim: The brightness of the LCD display will be adjusted depending on the selected preference: Sensor / Manual / Auto / Auto (GPS).

- Sensor option uses LDR. Manual uses Dim (Day Time) setting and always stays on the selected level (1 through 5).
- Auto uses Dim (Day Time) when no illumination signal is present, and it uses Dim (Night Time) when illumination signal is present.
- Auto (GPS) uses information from GPS to determine Dim (Day Time) vs Dim (Night Time).

Dim (Day Time): Set the brightness level of the LCD display during the day time.

Dim (Night Time): Set the brightness level of the LCD display during the night time.

Beep Tone: Turn ON/OFF audible sound when touching the LCD screen. The Beep tone will also provide warning of LCD display closing and other cues.

Standby Screen: Selecting ON, the Infotainment Center will display logo, date, time and temperature when the unit is powered on by pressing the power button (rotary button) while the vehicle remains on.

Compass Display: Select Direction, Bearing or Direction + Bearing. Compass display can be turned off.

Time Set: Select Auto or Manual. Auto selected will pick up information from the GPS signal and report the correct time depending on the Time Zone. Time can also be set manually.

Favorite Mode: Favorite Mode: Select favorite mode that can be accessed from the FAV button on front of the monitor. Available selections are: SXM, Bluetooth, Camera, HDMI, Media center, iPod, PIP (picture-in-picture) and Radio.

Language: The language of the user interface can be selected from the following options: English, Spanish, or French.

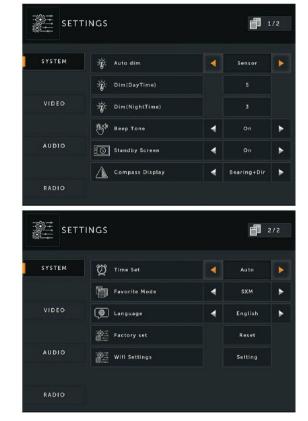
Factory Set: Select Factory set to reset the Infotainment Center to factory settings.

Note: All stored settings, presets, SiriusXM content alerts, etc. will be erased and returned.

WiFi Settings: Press Setting to enter WiFi setup menu. Press the REFRESH button to refresh the list of available WiFi hotspots. Press the WiFi hotspot you want to join. Press the WiFi icon to enter the WiFi password for that network. You may exit this screen by pressing the EXIT or the SETTING icon at the top of the screen. Use the Up and Down buttons to find the desired network if required. Press the Connect button at the bottom of the screen. Enter the WiFi Password. Press the Connect button again, If successful the WiFi network should be highlighted and show Connected. Press the Exit button to return to the Setup Menu.



For more information about CarPlay, Camera, Bluetooth operation, Navigation, and SiriusXM radio, refer to your Xite User Manual in Newgle.



Source(s): XiteSolutions Infotainment User Manual G4 S12.3 SDHD General Information and Setup Guide (240418.01) and XiteSolutions Infotainment User Manual G4 S12.3 HD360 + SD General Information and Setup Guide (240506.01)

Sony 10.1" Mobile ES™ High-Resolution Digital Media Receiver Quick Start (Model: XAV-9500ES)

This article provides basic operation instructions for a Sony 10.1" Mobile ES™ High-Resolution Digital Media Receiver (Model: XAV-9500ES).

Main Unit

- (1) **HOME:** Displays the HOME screen. **STANDBY:** Press and hold to turn off the unit. Press and hold for more than 10 seconds to reset the unit.
- (2) VOL +/- (volume): The VOL (volume) +/ NEXT buttons have a tactile dot.
- (3) PREVIOUS/NEXT: Functions differently depending on the selected source:
 - Radio: Select a preset station.
 - USB/Bluetooth Audio: Move to the previous/next content.
 - Apple CarPlay/Android Auto: Move to the previous/next content.

Press and hold to:

- Radio: Tune into a station automatically (SEEK+/SEEK-).
- USB/Bluetooth Audio: Fast-reverse/Fast-forward.
- (4) VOICE: Activates the voice command function for Apple CarPlay and Android Auto.
- (5) DISPLAY/TOUCHSCREEN
- **(6) CUSTOM KEY 1/2:** Registers functions (Mute, Disp. Off, Source Change, Home, Next, Previous, Vol+, Vol-, None). To register, select [Settings] ->[Customize]->[Custom Key].

RM-X400 Remote Commander

The remote commander can be used to operate the audio controls. For menu operations, use the touch screen.

- (7) DISP OFF (display off): Turns off the display. To turn back on, press again.
- (8) MUTE: Mutes the sound. To cancel, press again.
- (9) PLAY/PAUSE/PREVIOUS/NEXT: Functions differently depending on the selected source:
 - Radio: Select a preset station.
 - USB/Bluetooth Audio: Move to the previous/next content.
 - Apple CarPlay/Android Auto: Move to the previous/next content.

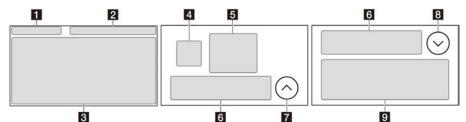
Press and hold to:

- Radio: Tune into a station automatically (SEEK+/SEEK-).
- USB/Bluetooth Audio: Fast-reverse/Fast-forward.

Screen Displays

- (1) Status Indication (left side): See chart.
- (2) Status Indication (right side): See chart.
- (3) Application Specific Area:
 Displays playback controls/indications

or show the unit's status. Displayed items differ depending on the source.



or orient and annual statute. Supplies the statute and supplies and su

(4) Apple CarPlay / Android Auto: Displays when connecting Apple CarPlay / Android Auto.

- (5) Clock: Displays the date and time which were set on the Date/Time setting.
- **(6) Apps Area (Favorite):** Up to 5 Apps can be set. Apps can be changed. You can set your Favorite Apps.
- (7) All Apps: Opens the HOME2 screen.
- (8) Close: Returns to the HOME1 screen.
- (9) Apps Area: Displays all Apps except for Favorite Apps.



-8

9

2

Basic Operations

Switching the FM/AM Tuning Step: Set the FM/AM tuning step of your country or region. Press HOME, touch Settings -> Application -> Radio Tuning Steps, then set the FM/AM tuning step. To exit the setup menu, touch Back three times.

Using Apple CarPlay Wirelessly: When using Apple CarPlay for the first time, device registration is required. Follow the procedure in "Pairing with a Bluetooth Device." Note: Make sure the GPS antenna (aerial) is connected.

Using Android Auto: When using Android Auto for the first time, device registration is required. Follow the procedure in "Pairing with a Bluetooth Device." When using Android Auto with a USB cable, connect the Android Auto compatible Android phone to the unit with the USB cable.

Pairing with a Bluetooth Device: When connecting a Bluetooth device for the first time, mutual registration (called "pairing") is required. Pairing enables this unit and other devices to recognize each other. When turning on the unit, the unit sends the Bluetooth signal.

To pair from the settings of this unit: Press HOME, then touch Settings. If Settings is not set in the Favorite area, touch All Apps to display the HOME2 screen, then select Settings. Touch Device Connection. Touch +Add New Device. Operate the Bluetooth device according to its message on the Add New Device screen. If a passkey input is required on the Bluetooth device, input "0000." The registered device name appears on the Device Connection screen. You can connect or disconnect the registered device on this screen.

Apps icon list

0	Android Auto*	0	Apple CarPlay*	6	Radio
П	Bluetooth	В	USB	0	Phone
۵	Settings	0	RearCam	0	Camera 1
0	Camera 2		Devices		

1 Status indication (left side)

(back)	Returns to the previous display
≡ (list)	Opens the list. The available lists differ depending on the
	SOURCE

2 Status indication (right side)

2 Status marcation (right side)				
Clock	Displays the time which was set on the Date/Time setting.			
※ (mute)	Lights up when the sound is muted.			
••• (option)	Opens the source option menu. The available items differ depending on the source.			
[] (device)	Displays the device's name to connect to the unit.			
(antenna)	Indicates the signal strength			

Indicates the signal strength status of the connected mobile phone.

(battery) Indicates the remaining battery status of the connected mobile phone.

To pair from the Bluetooth device: When setting the Bluetooth setting of the Bluetooth device to ON, select "XAV-9500ES" on the setting screen of your Bluetooth device and then proceed to the pairing steps. Follow the instructions on the screen of the unit.

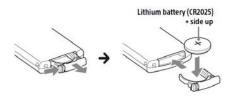
Canceling the Demonstration Mode: Press HOME, then touch Settings. If Settings is not set in the Favorite area, touch All Apps to display the HOME2 screen, then select Settings. Touch System, then touch Demo Mode to set to Off. To exit the setup menu, touch Back twice.

NOTE FROM NEWMAR

Select the Camera app to view the backup camera. The camera screen will automatically display and show the corresponding image when either of the turn signals are activated and/or the coach is put into reverse. When in reverse, static grid lines will also appear on the screen as well. The Camera app can be selected to view the camera of your choice while driving by pressing camera 1 (left), camera 2 (right), or rear camera.

Maintenance

Replacing the lithium battery (CR2025) of the remote commander: When the battery becomes weak, the range of the remote commander becomes shorter.



A CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

WARNING

Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.

Source(s): Sony AV Receiver XAV-9500ES 5-021-903-87(1) Operating Instructions

Apple CarPlay Operation via Xite Infotainment System

This article provides basic operation instructions for Apple CarPlay via the Xite Infotainment System. This applies to 9-inch and 10.4-inch touchscreens for Xite XSG4NA models beginning in 2023.

Apple CarPlay Operation

A WARNING

Use of third party maps within CarPlay does not take into consideration your vehicle dimensions and restrictions. Use of these navigation systems is at your own risk.

Connecting your iPhone to CarPlay will allow you to get turn-by-turn directions, make phone calls, listen to music, check your calendar, and more—all from your vehicle's display. Ensure that Siri is enabled on iPhone.

If Siri is not enabled on your iPhone, go to Settings > Siri & Search, then turn on one of the following:

- Press Side Button for Siri (on an iPhone with Face ID)
- Press Home for Siri (on other iPhone models)



Set up CarPlay by connecting your CarPlay Compatible iPhone to your vehicle using your vehicle's USB port using an Apple-approved Lightning to USB cable. The USB port is labeled with the CarPlay logo on the front of the core device.



The core device is hidden inside the dash on most coaches. Newmar runs a line from the core to the driver's side console (or the center console on Super C coaches), which is where the owner can connect the appropriate USB cable to their phone to enable Apple CarPlay. This input is typically marked "USB/Auxiliary Inputs" on the cover.



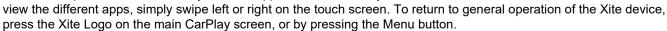


Ask Siri on CarPlay

To activate Siri, do one of the following:

- Press the voice command button on the main display.
- Touch the CarPlay Home Button on the touch screen while displaying CarPlay.

When active the Siri icon will appear, as seen in the lower image. Ask Siri a question or to do something, as you normally would on your iPhone. Contents of the CarPlay menu will depend on which CarPlay enabled apps are installed on your iPhone. To



Source(s): CarPlay Setup & General Use Manual V220105.01



SiriusXM Satellite Radio Operation via Xite Infotainment System

This article provides a brief operational overview of an optional SiriusXM satellite radio subscription via the Xite XSG4 infotainment center. This option may only be available on coaches equipped with SiriusXM capability and the necessary antenna and/or tuner.

A SiriusXM Vehicle Tuner (may be available for purchase through the Newmar Parts Department) and Subscription are required. For more information, visit: www.siriusxm.com.

When a SiriusXM Vehicle Connect Tuner is connected, press the SiriusXM icon in the Main Menu. SiriusXM mode can be left any time by pressing the SiriusXM icon at the top left of the screen.

The included images are for example only; Xite screens may vary based on installed equipment.





Subscribing to SiriusXM Satellite Radio

This section describes the features and functions of the SiriusXM Satellite Radio. Before using the optional SiriusXM Satellite radio, you need to subscribe to the SIRIUSXM service either by phone or via the Internet. To subscribe to the SiriusXM Satellite Radio service, follow these steps:

- 1. After installing your SiriusXM Connect Vehicle Tuner and antenna, power on your radio and select SiriusXM mode. You should be able to hear the SiriusXM preview channel on Channel 1.
- 2. After you can hear the Preview channel, tune to Channel 0 to find the Radio ID of your tuner. You will need this number to activate your subscription. Write the number down for reference. Note that the SiriusXM Radio ID does not include the letters I, O, S or F.

In the USA, you can activate online or by calling SiriusXM Listener care: Visit http://www.siriusxm.com/activatenow or call SiriusXM Listener Care at 1-866-635-2349.

For Canadian Subscriptions, please contact: Visit www.siriusxm.ca/activatexm or call XM customer Care at 1-877-438-9677.

As part of the activation process, the SiriusXM satellites will send an activation message to your tuner. When your radio detects that the tuner has received the activation message, your radio will display: "Subscription Updated". Once subscribed, you can tune to channels in your subscription plan. Note, the activation process usually takes 10 to 15 minutes, but may take up to an hour. Your radio will need to be powered on and receiving the SiriusXM signal to receive the activation message.

Operating SiriusXM Satellite Radio

The display for the SiriusXM mode is laid out to provide you with the required information and icons to allow maximum enjoyment of your SiriusXM subscription.

Lock Code

The Infotainment Center is delivered with a default Lock Code of "0000". Please [refer to your complete Xite user manual] to learn how to edit your lock code. Please remember your lock code. It will be required to access locked channels or change the Mature Channel Lock setting. If you have forgotten your lock code and require a reset please [refer to your complete Xite user manual] for Factory Reset information.

Lock Mode/Unlock Mode

Your Infotainment Center will automatically start up with SiriusXM in Lock Mode. This will prevent accidental tuning to channels that have been automatically locked under the optional Mature Channel Locking feature or user-applied locked channels. To enter Unlock Mode: Press the LOCK button (which may require holding it down). When the keypad is displayed, input your lock code and press Enter.

Artist and Song Alerts

While listening to SiriusXM Satellite Radio, you can be alerted when your favorite songs or artists are playing on other channels. You can store up to 50 of your favorite Artists and 50 favorite songs. The Infotainment Center will display an Alert message when a matching artist or song is found on another channel or you can choose either My Artists or My Songs categories to have access to all channels that have current alerts playing. When a new alert notication occurs you can choose to tune directly to it or ignore and continue listening on your current channel.

Replay

The Replay feature allows you to pause, rewind, and replay up to 60 minutes of live SiriusXM Satellite Radio. The status bar shows you the current buffer capacity. Once full, the oldest track will be removed allowing the newest live track to be added. If you have paused playback and the paused track is about to be erased, the XSG4 will notify you with an

audible beep. Playback will resume from the next track in the buffer.

SiriusXM Settings Menu

There are many features that can be changed to customize your SiriusXM Radio experience. To enter the SiriusXM settings menu you must currently have SiriusXM selected. From there go to the Main Menu, and from there select SETUP icon. In addition to SYSTEM, VIDEO, and AUDIO options, there will be SXM option. Selecting this button will display page 1 of 2 for SiriusXM settings.

Source(s): Xite Solutions XSG4NA Infotainment User Manual (Rev. 210427.01)

CAMERA AND VIDEO MONITORING SYSTEMS

Camera and Video Monitoring System Overview

This article provides an overview of the camera and video monitoring system.

The video system features cameras mounted on the exterior of your coach and is connected to the in-dash video screen. This system comes on automatically when you put the transmission in reverse to allow you to see behind your unit when backing up. Additionally, it can be manually turned on in transit to allow you to monitor your towed vehicle or for additional assistance in passing maneuvers.

Rear View Cameras: Installed as a standard feature, the rear view monitor system assists the driver in the backing and parking of the vehicle. This system consists of a camera mounted on the rear cap and a monitor located on the dash.

Side View Cameras: As an option for the rear vision system, your coach may be equipped with "side view" cameras. These cameras are tied into the rear vision system and are activated by the turn signals. When a turn signal is activated, the monitor will switch to display that side of the coach. Once the turn signal cycle is complete, the display will revert to the previous camera for the Voyager, Sony, Axxera, or Xite system. In some Xite systems, the camera selection may default back to the rear camera.

Camera Selection: If the rear vision monitor is turned on manually, you can toggle through the cameras using one of the following methods (depending on the installed equipment), allowing you to stay on any given camera that you choose (unless a reverse or turn signal is detected):

- Voyager system: Source button
- Axerra radio: Source camera icon, followed by the Camera Select switch
- Sony radio: Apps icon, followed by the camera icons
- Xite infotainment system: Menu button, followed by the Camera Select icon. Select Xite systems may have a "CAM" button that serves as a shortcut to the camera settings. Xite systems with a "360 Camera Select" switch allow the user to toggle through and select multiple camera views.

HD360 Camera System Operation via Xite Infotainment System (2026 and newer)

This article provides basic operation instructions for the HD360 Camera System via Xite Infotainment System. The Xite HD360 cameras work in conjunction with a couple systems, including ATC and the chassis data (Spartan and Freightliner). These cameras are available as optional equipment on Super Star, and New Aire coaches. They are standard equipment on Ventana, Dutch Star, Mountain Aire, London Aire, Essex, and King Aire coaches.

Camera Views of the HD360

	King Aire	Essex	London Aire	Mountain Aire	New Aire	Super Star	Dutch Star	Ventana
Front	Standard	Standard	Standard	Standard	Optional	Optional	Standard	Standard
Left Turn	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard

Right Turn	Standard							
Left Midship	Standard	Standard	Standard	Standard	Optional	Optional	Standard	Standard
Right Midship	Standard	Standard	Standard	Standard	Optional	Optional	Standard	Standard
Rear	Standard							
Dual View	Standard	Standard	Standard	Standard	Optional	Optional	Standard	Standard
Tri View	Standard	Standard	Standard	Standard	Optional	Optional	Standard	Standard
Quad View	Standard	Standard	Standard	Standard	Optional	Optional	Standard	Standard
Rear Hitch **	Standard	Standard	Standard	Standard	Standard	Optional	Standard	Standard
Rear Horizon **	Standard	Standard	Standard	Standard	Standard	Optional	Standard	Standard
Rear Normal **	Standard	Standard	Standard	Standard	Standard	Optional	Standard	Standard
360 View	Standard	Standard	Standard	Standard	Optional	Optional	Standard	Standard
Interior *	Standard	N/A						
Doorbell *	Standard	N/A						
Trailer 1 & 2 *	Optional	Optional	Optional	Optional	N/A	N/A	N/A	N/A

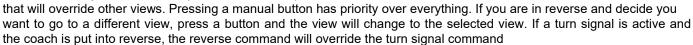
^{* -} Model Specific Option/STD not available on all models.

Function of the Cameras

Using the Cameras: To view the camera screen, touch the "MENU" button or the RADIO icon. Then, touch the "CAMERA CONTROL" icon. SA/SM will only have the camera screen.

Default Camera: If a camera button has been pressed, that view will become "DEFAULT." If a trigger is activated (like a turn signal or reverse), the system will return to the "DEFAULT" camera view when that trigger is deactivated.

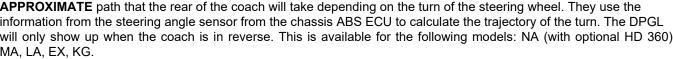
Camera Priority: Camera priority means that the system has certain views



CAMERA CONTROL

Standard-Definition vs. High-Definition Cameras: The left turn, right turn, interior, doorbell, trailer 1, and trailer 2 (if equipped) cameras are standard definition cameras. These are the only standard definition cameras in the system. The rest of the views are from the HD Xite side of the system.

Dynamic Parking Grid Lines (DPGL): Dynamic Parking Grid Lines (DPGL) are moving lines that show you the APPROXIMATE path that the rear of the coach will take depending on the turn of the steering wheel. They use the information from the steering angle sensor from the chassis ABS ECU to calculate the trajectory of the turn. The DPGL will only show up when the coach is in reverse. This is available for the following models: NA (with optional HD 360), MA, LA, EX, KG.



HOLDING TANK MONITORING SYSTEMS

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: **Tanks**

The Home screen on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays water-related switches for controlling the water pump, as well as the settings for top off and auto fill. It also displays

^{** -} Views only available while in rear camera view (6).

settings for tank heat, as well as the tank capacities for the fresh, grey, black, and LP tanks (if equipped). The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

Tank Monitoring

This area shows the different tank levels. The Graph displays from 0%-100% with 5% increments.

- Fresh tank = Blue fill
- LPG tank = Orange fill (Optional)
- Grey tank = Grey fill
- Black2 tank = Black fill (Optional)
- Black tank = Black fill
- Grey2 tank = Grey fill (Optional)





Note: Percent vs Gallons is not guaranteed in the 0%-100% display. There are factors outside of the system that make this imperfect.

Tank Heat

The tank heat icon will only appear on coaches equipped with tank heat pads installed on the coach. This allows the user to enable the tank heat circuit from the KIB screen and power to be activated to the tank heat pads. The tank heat will only turn on if the tank level is at or above five percent (5%) and the sensor in the heat pad detects heat is needed.

Coaches equipped with a KIB system without tank heat on the screen have compartment bay heat provided by a furnace or an Oasis hydronic heating system (if the heat source is enabled).

Water Pump

The home page will display the water pump switch on all the coaches, which will supply power to the water pump.

The water pump may be activated and deactivated via the KIB Monitor Panel, or, if equipped, via a momentary contact switch with LED indicator. The KIB switch panels communicate with a circuit board and touchscreen monitor on a dedicated V-BUS. The V-BUS receives on/off commands from the water pump button on the KIB display monitor or the water pump switch located in the water compartment.

The KIB circuit board is typically located in the cord compartment and sends 12 volt power to complete the water pump circuit. Once the pump pressure switch makes contact, the pump will supply water pressure to the fresh water system. The pump will shut off once the pump pressure switch is satisfied.

Top Off and Auto Fill

The top off and auto fill icons will appear on coaches equipped with an auto fill feature, which, when activated, allows automatic filling of the fresh tank while the coach is hooked up to a pressurized potable water source.

NAVIGATION SYSTEMS

NavNGo Navigation System Operation via Xite Infotainment System

This article provides basic operation instructions for the NavNGo Navigation System via Xite Infotainment System (Model: XSG4NA). The XSG4NA range of infotainment systems come with an on-board Navigation program. This

Navigation program is pre-loaded to the internal memory of the XSG4NA product. In order to provide the best possible user experience, the XSG4NA comes with a range of Connected Services to make the usage of the product as easy as possible. These Connected Services are:

- Online Traffic: This feature will automatically download and analyze real-time traffic information and provide you with Route alternatives if you are already on the road and heading to a traffic event. Or the Online traffic will calculate around traffic when you start your new route.
- Online Weather: The Online weather service information can be used to view weather at your destination or along
 your current route.
- Online POI Search: The Online POI search option is an extension of the pre-loaded database. The online POI's will provide you update to date Points of Interest with the latest available information.
- Over-the-Air Updates: Over-the-Air updates will allow you to update your maps, POI database, and the Navigation program itself via an internet connection. You will be automatically notified when new updates are available and can download them when it is most convenient for you.

NOTE FROM NEWMAR

To use any of the connected services, the user must have the Xite system connected to the internet via an active connection.

A IMPORTANT

Map updates can be large (3GB+ of data), so it is advisable to perform these updates when connected to a Wi-Fi connection and not perform the update via a phone tether.

When you start using the product, you can download updates, at no cost, for the next 3 years. Additionally, the XSG4NA is pre-loaded with the "Truck Attribute Map data". This additional map data contains additional road information in relation to road attributes. Items such as weight restrictions, bridge heights, limitation of the number of axles, tunnel restrictions, etc. This additional map data is of great relevance to RV owners to ensure that the roads suggested by the Navigation program are suitable for the specific RV.

A IMPORTANT

The suggested routes to your destination are only as good as the information provided to the program to calculate with. Make sure to set up the vehicle settings correctly and accurately to ensure that the routes suggested by the Navigation program are suitable for your vehicle. Failure to do so accurately may lead you down roads that are unsuitable for your vehicle resulting in damages to your vehicle, the roads, or violation of traffic laws.

Warnings and Safety Information and Initial Set-Up

The navigation system helps you find your way to your destination based on GPS positioning. The XSG4NA does not transmit your GPS position; others cannot track you. It is important to look at the display only when it is safe to do so. If you are the driver of the vehicle, it is recommended that you plan and review your route before you start your journey. Plan the route before your departure and stop if you need to change the route. Always follow traffic rules at all times. If you deviate from the planned route, the program will recalculate and change the instructions accordingly.

When using the navigation program for the first time, an initial set-up process starts automatically. This Initial setup is also repeated when the "Factory Reset" is done in the Navigation program setup menu. Select your preferred language, then tap SELECT to confirm your selection. Later you can change it in Regional settings. After accepting the End User License Agreement, the Configuration Wizard starts. Tap the NEXT button to continue.

Select the language and speaker used for voice guidance messages. You can also change it later in the "Regional settings". Select your preference and tap NEXT to continue. If needed, modify the time format and unit settings. You can also change it later in the "Regional settings". Tap NEXT to continue.

In this step, you can adjust the routing preferences. Please take care to accurately insert all your vehicle parameters. The Navigation program will take this information into account to provide you with a route that avoids any roads that contain obstacles that should be avoided (low bridges, weight restrictions, etc.) If the information entered is incorrect, the program cannot take these vehicle-specific restrictions into account. You can also change it later in the "Route Preferences". Tap NEXT to continue. The initial set-up is now complete, tap Finish to enter the Navigation view.

Screen Controls

The following sections describe the functionality and use of buttons, sliders, and other screen controls in the program.

Using Buttons and Other Controls

- Button: Opens a new screen where you can set a parameter. Tap it once.
- Button with Value: Displays the current value of a field or setting where the value can be changed. After the change, the new value is shown on the button. Tap it once.
- Icon: Provides additional information, for example, a traffic summary or itinerary. Tap it once to open a screen with additional information or options.
- List: Shows multiple options. Grab the list anywhere and slide your finger up or down. Depending on the speed of sliding, the list scrolls fast or slow, only a bit or till the end. Alternatively, move between items in a list with the arrows and tap the value that you want to select.
- Switch: Shows whether a feature is enabled when there are only two choices. Tap it to turn the switch on or off.
- Slider: When a feature can be set to different values in a range, the program shows an indicator on a gauge that displays and sets the value. Drag the handle to move the slider to its new position. Tap the slider where you want the handle to appear.
- Virtual Keyboard: Used to enter text and numbers. Each key is a touchscreen button.

The Navigation menu contains several menu items on one or more pages. The UP ARROW button is always present in the top left corner of the screen. Pressing this button will bring you back to the Map view immediately regardless of where in the submenu you are.



Navigation View

The navigation view is the main screen that shows the planned route on a map. The program works with digital maps which are not simply the computerized versions of traditional paper maps. Similar to paper road maps, the 2D mode of digital maps show you streets and roads. Elevation is also illustrated in color. The navigation view displays the following screen buttons, data fields, and route information on the map during navigation:

- (1) Current Position Marker: The current position is displayed as a blue arrow by default. When there is no GPS position, the current position marker is transparent and it shows your last known position.
- (2) GPS Position: The dot near the arrow shows the GPS position as perceived by the GPS receiver.
- (3) Planned Route: The planned route is displayed as an orange line.
- (4) Data Fields: Three data fields show the following information: The estimated time of the arrival at the destination, the remaining time of the trip, and the remaining distance to the destination. You can change the default values in Settings or by tapping and holding the area where the data fields appear. If you have not selected a destination, you can see your heading instead of the three data fields.
- (5) Next Turn Preview: It shows the type of the next maneuver and its distance.
- (6) Second Next Turn Preview: It shows the type of the second next maneuver if it is near the first one.
- (7) **Next Street:** It displays the name of the next street. If you have not selected a route destination, you can see nearby house numbers, if they are available.
- (8) Parking Around Destination: It appears near the destination. By tapping it, you can check the available parking facilities around your destination.
- **(9) Destination Menu:** It appears near the destination. By tapping it, you can check the trip summary, find Places around your final destination, save the current location, or suspend the navigation.
- (10) Traffic: It shows traffic-related information.
- (11) Lane Information: On multi-lane roads, it shows the lanes ahead and their directions. The highlighted arrows represent the lanes and directions you need to take.

- (12) Alert Point Warning: It shows the type of alert points when approaching a road safety camera or other Alert Points like school zones or railroad crossings. You must make sure that using this feature is legal in the country where you intend to use it.
- (13) Speed Limit Warning: It shows the current speed and the speed limit when speeding.
- (14) Signpost: It shows the available destinations and the road numbers.
- (15) Freeway Services: By tapping it, you can check the details of the next few service stations (gas stations, restaurants) when traveling on a freeway.
- (16) Navigation Menu: By tapping it, you can open the Navigation menu, where you can reach other parts of the program.
- (17) Street Name: It shows the current street name. By tapping it, you can open the Where Am I screen.

A NOTICE

Some buttons, fields, or icons may not be available in your product version.

Settings Menu

You can configure the navigation settings, and modify the behavior of the program, by tapping the MENU button (3 horizontal lines), followed by the SETTINGS button. The Settings menu provides the following options:

- Route Preferences: Select the type of vehicle you are driving, the road types used in route planning, and the route planning method.
- Sound: Adjust the different sound volumes.
- Warnings: Enable and set up warnings for the speed limit, Alert Points (such as speed cameras).
- Navigation View: Fine-tune the appearance of the Navigation view or adjust how the program helps you navigate with different kinds of route-related information on the Navigation view.
- **Regional:** Change the voice guidance language, set the time zone, the measurement units, the time and date formats, and customize the application for your local language.
- Display: Enable or disable menu animations.
- Traffic: Enable or disable traffic information and modify detour settings.
- Weather: Enable the online weather forecast and the automatic download of weather information.
- Online Services: Enable or disable services that require an Internet connection.

A NOTICE

Changing some of these settings may not have an effect on your current region if the map data do not contain the required information.

Route Preferences Settings

The following settings determine how routes are calculated:

- **Vehicle:** Set the type of vehicle you want to use to navigate the route. Based on this setting, some of the road types can be excluded from the route, or some of the restrictions may not be taken into account in route calculation.
- Route Planning Method: Optimize the route calculation for different situations and vehicle types by changing the planning method.
- Navigation Mode (On-Road): Select on-road or off-road navigation.
- Road Types: Select your preferred road types for the route.

Vehicle Type Selection

Press this option to open the vehicle type selection menu. The following options are available per default:

Add New Vehicle: With this option, you can add your own vehicle profile.

Car: Maneuver restrictions and directional constraints are taken into account when planning a route. Roads are used only if access for cars is allowed. Private roads and resident-only roads are used only if they are inevitable to reach the destination. Walkways are excluded from routes.

Bus: Maneuver restrictions and one-way streets are taken into account when planning a route. Roads are used only if access for buses is allowed. Private roads, resident-only roads, and walkways are excluded from routes.

Class A RV: The Class A RV vehicle profile is set with default values for a generic Class A RV. Maneuver restrictions

and one-way streets are taken into account when planning a route. Private roads, resident-only roads, and walkways are excluded from routes. If the map contains data on the dimension, weight, number of axles they can also be taken into account when planning a route.

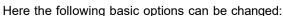
Class B RV: The Class B RV vehicle profile is set with default values for a generic Class B RV. Maneuver restrictions and one-way streets are taken into account when planning a route. Private roads, resident-only roads, and walkways are excluded from routes. If the map contains data on the dimension, weight, and freight restrictions, they can also be taken into account when planning a route.

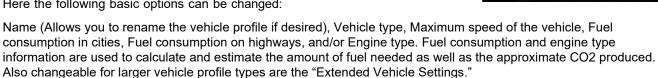
Class C RV: The Class C RV vehicle profile is set with default values for a generic Class C RV. Maneuver restrictions and one-way streets are taken into account. Roads are used only if access for buses is allowed. Private roads, resident-only roads, and walkways are excluded from routes. If the map contains data on the dimension, weight, and freight restrictions, they can also be taken into account when planning a route.

Truck: Maneuver restrictions and one-way streets are taken into account when planning a route. Roads are used only if access for trucks is allowed. Private roads, resident-only roads, and walkways are excluded from routes. U-turns are excluded from routes (turning back on a divided road is not considered a U-turn). If the map contains data on the dimension, weight, and freight restrictions, they can also be taken into account when planning a route.

Modifying Vehicle Profiles

In-vehicle profile selection screen, press the UP ARROW and then the EDIT button to access the vehicle profile settings to adjust for your specific vehicle parameter. In Edit mode, you will see the symbol behind each vehicle type. Tap the symbol to access and select the details of the vehicle profile.

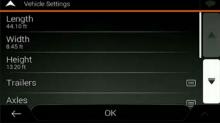




Extended Vehicle Settings

The extended vehicle settings allow drivers to further specify their vehicle parameters to allow the program to offer the best available route for their vehicle type. Please make sure that all the specifics of your vehicle (height, weight, axles, etc.) are correctly entered into the vehicle profile settings. Incorrect settings will result in incorrect routes. By default, the option "Show this page for each route planning" is enabled. This option will prompt you to confirm that the vehicle profile specification is still accurate.







Maximum Speed

Fuel Consumption in Cities

Warnings Settings

Speed Limit

The program is able to warn you if you exceed the current speed limit. This information may not be available in your region, or may not be fully correct for all roads on the map. This setting lets you decide whether you wish to receive visible and/or audible warnings. The following warning types are available:

- Visual warning: the current speed limit is shown on the map when you exceed it.
- Audio and Visual warning: besides the current speed limit being shown on the map, you also receive a verbal warning when you exceed the speed limit with the set percentage.

If you prefer to see the speed limit sign on the map all the time (normally, it is shown only if you exceed the limit), you can set it here. You can also set the relative speed above which the application initiates the warning by adjusting a slider. The value can be different within and outside Cities.

Disabling the Speed Limit Warning

- Issue: The speed limit warning is signaling even when the actual speed limit is kept.
- Cause: The speed limit in the digital map data might differ from the actual speed limit of your current location.
- **Solution:** Disable the speed warning by performing the following steps: (1) Tap the MENU button (3 horizontal lines).(2) Tap the SETTINGS button. (3) Tap the WARNINGS button. (4) Tap the Speed Limit button. (5) Tap the Warn When Speeding (Audio and Visual) button. (6) Tap the Disabled option.

Alert Points

Tap it to receive a warning when approaching a road safety camera or other Alert Points like school zones or railroad crossings. You must make sure that using this feature is legal in the country where you intend to use it. You can set the warning type for the different Alert Point categories (alert types) individually. The following warning types are available:

- Visual warning: the type of the Alert Point, its distance, and the related speed limit appear on the Navigation view while you are approaching one of these locations.
- Audio and Visual warning: besides the visual alert, beeps are played (when using a natural voice) or the type of the alert is announced (in case of a TTS voice) while you are approaching one of these points, and an extra alert warns you if you exceed the given speed limit while approaching.

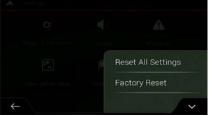
For some of the Alert Points, the enforced or expected speed limit is available. For these points, the audio alert can be different if you are below or above the given speed limit.

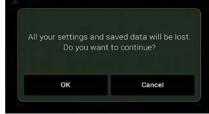
- Only when speeding: The audio warning is only played when you exceed the given speed limit.
- When approaching: The audio warning is always played when approaching one of these Alert Points. In order to draw your attention, the audio alert is different when you exceed the speed limit.

Factory Reset or Reset All Settings

A factory reset can be done to restore all the factory default settings. The factory reset will also erase all user content (Search History, Routes, etc.).

(1) Tap the MENU button. (2) Tap the SETTINGS button. (3) Tap the UP ARROW to open the menu options. (4) Select either "Reset All Settings" or "Factory reset" to restore to the original default state. The application will prompt to confirm your selection. The application will restart to apply the changes.



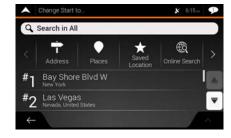


Updates

The XSG4NA is set up to only allow Over the Air updates. This means that the program will allow you to update new maps/POI databases or the program itself via an active internet connection. When the program detects an active internet connection, it will automatically check whether updates are available for you to download.

Updates Availability

There are 2 ways that the program will let you know an update is available: Via the message icon in the top right of the screen, or press the MENU button, followed by the SETTINGS button, and the SHOP button.





Update Installation

If updates are available and you wish to install them, please make sure that you are connected to the correct WiFi Access point before starting up the update.

A IMPORTANT

Updates can be very large and when connected over a cellular network via your phone, data transfer costs can occur. Do not switch off or restart the system during the download and installation of an update.

To start the update, press the DOWNLOAD button in the line of the update you wish to install. The update will start momentarily, and a status update will show the progress. After the download and installation are completed, the program will prompt you to install the update. After the install, the program will prompt to restart and apply the updated portions. Select "OK" and the program will restart and is updated.



Source(s): Xite Solutions North America XSG4NA User Manual Version 032221.01

How to Update Vehicle Profile Settings on an Xite G4 NavNGo Navigation System

This article provides a quick step-by-step guide on how to select the appropriate vehicle profile in the [Xite G4 NavNGo] Navigation software to ensure the correct routing.

• System: XSG4NA generation

System OS: AllNavigation: NNG

The first time the Navigation software is used, it will present a setup wizard to guide you through the basic settings:

Configuration Wizard

- Select the appropriate language for the user interface. When the correct language is highlighted, press the "Select" button at the bottom of the page to continue to the next step.
- · Accept the license agreement by pressing "Accept."
- Proceed to the configuration wizard by pressing the "Next" button at the bottom of the page.



- Select the desired voice profiles. When the selection is made and highlighted, press "Next." Note that during this step, the normal audio from the G4 will be suppressed.
- This page will allow you to change the units and formats used by the Navigation software to show you that information. By pressing the icon at the end of the line, you can change that specific setting.



- In the route preferences, you can change the options for the actual routing. Make sure that the Vehicle profile line shows the RV class that the system is being used in. You can change that by pressing on that line in the page and select the required vehicle profile. When the correct vehicle profile is highlighted, press the "Back" button, and it will show your selection in the overview page of the Route preferences.
- When completed, press the "Next" button to proceed.



• The configuration wizard is completed. Press the "Finish" button to complete the configuration and start the navigation program with your selected settings and options.



Manual Changes

Changes can be made later on as well, if needed, to update the routing preferences or the vehicle specific variables.

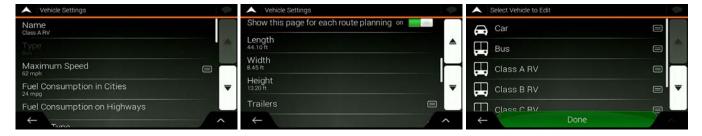
- Open the main menu and select the "Settings" page. When in the settings page, select the "Route Preferences" option.
- In the Route Preferences menu, you can select the Vehicle line to access the vehicle profile selections.



- When in the vehicle selection list, press the Arrow up icon in the bottom right corner to access the "Edit" function.
- Select which vehicle profile you would like to edit by tapping the icon behind the vehicle profile name. and select the "Modify Vehicle" option to access the specifics of the selected vehicle profile.



- Change the vehicle profile variables you want to change here (length, weight, height, etc.). Scroll through the list to see all options.
- When all the changes are completed, press the back arrow to return to the vehicle profile list, and press "Done" to finish the modifications to the vehicle profiles.



Source(s): Xite G4 Navigation Vehicle Profile Settings (April 2021)

How to Secure a WiFi Connection for Map Updates on an Xite G4 NavNGo Navigation System

This article provides steps for ensuring an adequate WiFi connection for over-the-air map updates on an Xite G4 radio core with a built-in NavNGo navigation system.

Make sure the WiFi dongle (USB 1) has the black plastic antenna cover plugged into the USB end. The wiring connections are in the dash and may require removing the dash inlay or access panel.



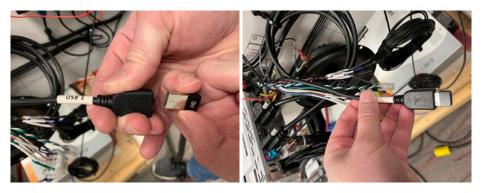
From the Xite G4 display, go to the Main Menu. Press the Settings/Setup button. Press the System button. Press the WiFi Settings button. Press Setting to enter WiFi setup menu. Refresh the screen to view the list of available WiFi hotspots. Select the WiFi hotspot you wish to use, and enter the WiFi password for that network.



Follow the on-screen prompts as if you are connecting to a WiFi network on a smartphone.

A NOTICE

If it does not connect to the WiFi system, check the back of the Xite core to make sure the WiFi dongle (tiny black connector that plugs into the USB) is connected. If the dongle was not installed or has been removed, there will be no black plastic end with the label "F Cc." To correct this issue, a dongle must be ordered and installed in order to receive the WiFi signal. This WiFi dongle is proprietary and cannot be replaced with a different dongle or antenna. Contact Newmar Parts department to purchase the dongle (Newmar part # 026842 / Riverpark part # XS90199).



Once a stable WiFi connection has been established, check for navigation system updates. For more information about this process, refer to the NavNGo Navigation System Operation via Xite Infotainment System article in Newgle.

KEYLESS ENTRY SYSTEMS

Keyless Entry System Overview

This article provides a brief overview of the keyless entry system. This article is NOT specific to any particular system but is intended as a summary of what the system does and how it operates. For more information about the specific Newmar-installed security and keyless entry system in your coach, refer to Newgle.

Many Newmar coaches are equipped with a keyless entry system, which will allow for entry into the coach without the use of a key (via key fob or keypad). It requires the user to have the correct code to unlock the door.

Equipped coaches are shipped from the factory with a standard access code. When the coach is purchased, it is recommended that the customer obtain technical assistance in reprogramming a new access code while taking delivery of the unit from the dealer.

A IMPORTANT

When purchasing a new or pre-owned coach, Newmar recommends resetting all default keyless entry codes and WiFi system network passwords to prevent unauthorized access to the coach and its components.

Trimark Electronic Access Security Keyless-Entry Quick Start (Model: e-FOB / e-PAD)

This article provides basic operation instructions for a Trimark Electronic Access Security Keyless-Entry system (Model: e-FOB / e-PAD).

e-PAD Operation and Features

Lock Doors With Keypad: Press and hold down the (1) button for 1-2 seconds. An access code is not needed to lock the doors.

Door Bell Operation: The doorbell button provides a 0.5 second ground pulse from the 2nd Auxiliary output when pressed. An access code is not necessary for the doorbell.

Using Secure Operations: Entering a valid 5-digit access code provides a double beep and enables a secure operation. After entering an access code, the keypad is enabled for 5 seconds. The next button pressed initiates a secure operation, such as unlocking doors.

Available Secure Operations:

- Button (1): Unlock entry doors.
- Button (2): Unlock doors wired to 2nd unlock output.
- Button (3): NA



• Button (4): Sequentially activate entry unlock and 2nd unlock outputs.

Light Activation: When the alarm is armed, the parking lights and headlights flash. With an unlock instruction from either the fob transmitter or keypad; the dome light stays illuminated for 30 seconds and the parking and headlights flash.

Teaching Keypad New Authority / Access Codes

The Authority Code has only one purpose; it grants the owner the ability to set new Access Codes. The Authority Code must be EXACTLY 5 digits long. There are two ways to set the Authority Code with the TriMark Full Feature System. Changing the Authority Code erases all previous Access Codes and sets a new Access Code in memory bank 1 that is the same as the new Authority Code.

Press and release the push button 3 times. Wait 3 seconds. The keypad will beep for 3 seconds. The keypad is now in "Learn Mode".



For Newmar's location of the switch to reset and reprogram the Trimark Keyless Entry System, refer to the Trimark Keyless Entry Reset/Program Switch Overview article in Newgle.

Enter a new 5-digit Authority Code. (Double chirps after each button press). The keypad chirps 3 times after the 5th digit's entry. Re-enter the new Authority Code for confirmation. The keypad will chirp FOUR times after successful confirmation. A long beep indicates a failure to change the code. Test the new code to confirm it.

- The user is given 2 minutes to complete this procedure. If it isn't completed in time, or an error is made, the system will exit learn mode and a long chirp will sound to indicate the error.
- While in "Learn Mode." each button push provides a double-chirp and the backlight flashes.
- The authority code is to be controlled by individuals (owners of vehicle, fleet manager, etc.) who manage the distribution of access codes to vehicle users.
- The authority code should be changed when the vehicle is sold.
- The authority code does not enable secure functions (lock/unlock doors, etc.) it is only used to assign access codes.
- Doorbell systems only allow codes using buttons 1-4 and provides for 4 unique access codes.
- The keypad automatically leaves "Learn Mode" when the new code is set.

Assigning New Access Codes

The Access Codes are used for secure functions, such as unlocking doors. The Access Codes must be EXACTLY 5 digits long. With a valid Authority Code, an Access Code can be programmed with the following instructions:

Press the number(3) button for 5 seconds until the keypad beeps. The backlighting of the keypad will flash indicating the keypad is in "Learn Mode." Enter the 5-digit Authority Code.

- If you enter an INCORRECT Authority Code, the keypad will beep for 1 second, and leave "Learn Mode."
- If you enter a CORRECT Authority Code, the keypad will provide a constant beep that will only stop after you have defined a memory bank to store the new Access Code.

Press and release the button that corresponds to the memory bank. For example, press number(1) button for Memory #1 and press number (2) button for Memory #2. During this activity you are choosing 1 of 5 (4 on keypads with door bell) memory banks. Enter a new 5-digit Access Code. The keypad chirps 3 times after the 5th digit's entry.

Re-enter the same new Access Code for confirmation. The keypad will chirp 3 times after a successful confirmation. A long beep indicates a failure to change the code. Test the new code to confirm a successful change. Repeat process to assign additional Access Codes.

- Up to 5 (or 4 on doorbell keypads) different Access Codes can be assigned at any time. As additional Access Codes
 are defined, pre-existing Access Codes are overwritten. For example, if a new Access Code is assigned to Memory
 #3, the previous Access Code in Memory #3 is no longer valid.
- If an error is made at any point, or if time runs out, the keypad will exit "Learn Mode," provide a 1-2 second beep, and not change anything.

e-FOB Operation and Features

Cargo Mode

- Entry Lock: Locks entry doors and arms security system
- Entry Unlock: Unlocks entry doors, disarms security system, and activates the porch light
- Cargo Lock: Locks compartment doors and arms security system
- Cargo Unlock: Unlocks compartment doors and disarms security system

While the engine is running, only the entry unlock function of the e-FOB remains activated — other functions are deactivated.

Cargo Lock Cargo Unlock Entry Unlock LED Indicator Light

Teaching Additional FOB Transmitters

Turn ignition off and disarm alarm. Press and release the programming button 3 times. The LED will turn on red after 3 seconds.



For Newmar's location of the switch to reset and reprogram the Trimark Keyless Entry System, refer to the <u>Trimark Keyless Entry Reset/Program Switch Overview</u> article in Newgle.

Press and release the Lock button of each new FOB transmitter once. The LED will flash off and the horn will sound once. Up to 60 transmitters may be programmed at one time. Repeat last step until all fobs are programmed.

Notes:

- If you place the system in learn mode and teach nothing, the system will exit in 10 seconds.
- When new transmitters are taught, all old transmitters are erased.
- The memory for codes will not be erased if power is removed.
- As soon as the LED turns off, the system is fully functional.

Replacing the Key Fob Battery

To replace the key fob battery: Remove screw on back of remote with a Phillips head screwdriver. Pull/pry the housing apart, and separate elastomer. Push the battery out of the battery holder and replace it with a fresh one. Reassemble fob. The fob should not lose its programming after a battery change.

Source(s): TriMark e-ASK e-FOB e-PAD Consumer Manual

COACH MANAGEMENT AND MULTIPLEX SYSTEMS

KIB Backlit Multiplex Switch Panel Operation

This article provides brief operating instructions for KIB backlit multiplex switches. Some 2026 and newer coaches may be equipped with a backlit switch in the bathroom, garage, or bunk area on select floorplans.

Press the switch labeled with the circuit you wish to operate. The green LED indicator will illuminate on the KIB switch panel when the circuit is activated. Pressing the switch again will turn the circuit off and the indicator will change to blue when it is turned off.



2026 KIB Capacitive Touch Panels with Standard User Interface Guide

This guide provides information about the features and settings within the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface installed in select 2026 coach models: Bay Star, Bay Star Sport, Canyon Star, Northern Star, Ventana, Super Star, and Dutch Star. Refer to the associated article in Newgle to view graphics and an explanation for each screen.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

The KIB PANEL is a centralized "V-BUS" LCD interface to the following (if the coach is equipped):

- KIB Tank Monitoring System Control (TMSC-100)
- Dometic Roof Top Units through the KIB (HVAC-GEN1)
- KIB Auto Generator Start "AGS" system
- Tank Heat
- Ventilation Fan Control
- Floor Heat Control
- Lithium Power Display
- Solar Power





<u>Splash Screen</u>: The Splash screen displays the Newmar logo, as well as the user icons to access the Home, Power, AGS, Floor Heat, Fans, HVAC, BT Pair, and Lights screens.

<u>Home Screen</u>: The Home screen displays Tank and Voltage Monitoring, Main Lighting Controls, and water-related switches, as well as buttons for main functions, including: Power, AGS, Floor Heat, Fans, HVAC, BT Pair, and Lights.

<u>Tanks</u>: The Home screen displays settings for tank heat, as well as the tank capacities for the fresh, grey, black, and LP tanks (if equipped). IT also displays water-related switches for controlling the water pump, top off, and auto fill functions.

TV Lift: The Home screen displays the televator (television lift) controls.

<u>Power</u>: The Power icon displays the Battery Management System page to provide the user with access to the Gen Start and Stop buttons to start or stop the generator. This feature is only available on coaches equipped with a factory-installed lithium package.

<u>Energy Management</u>: The Power icon displays the Battery Management System page to provide access to the Energy Management System page via the EMS button. This feature is only available on coaches equipped with a factory-installed lithium package.

AGS: The AGS icon displays the Automatic Generator Start pages to view and/or control the system statuses, quiet time feature, and generator run time for charging the house and chassis batteries.

Floor Heat: The Floor Heat icon displays the floor heat controls and settings for floor heat in the front, mid, and rear zones of the coach.

<u>Fans</u>: The Fans icon displays the Exhaust Fan Control page to turn the fans and rain sensor override on or off and control the fan speed.

HVAC: The HVAC icon displays the controls for the rooftop air conditioners, furnace, or Oasis hydronic heating system, and provides access to the HVAC settings for the entire coach.

<u>BT Pair</u>: The BT Pair (Bluetooth) screen displays steps for pairing your smartphone or tablet to the touch panel using the Connected Solutions app.

<u>Lights</u>: The Lights icon displays the controls for the lighting settings for each area, such as outdoor, living room, kitchen, bedroom, and bathroom(s).

Solar: The Solar icon displays the Solar Management System information broadcasted from the Victron controller.

Shades: The Shades icon displays the interior Shade and exterior Awning controls.

**Note: Portions of this guide were sourced from L-Panel 2A-4.3" User Guide RevD02 (6/27/2019) and ATC/KIB LCD Overview 2023.

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: Home

The Home screen on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the Tank and Voltage Monitoring, Main Lighting Controls, and water-related switches, as well as the main icons at the bottom of the screen: Power, AGS, Floor Heat, Fans, HVAC, BT Pair, and Lights. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

Home

User Icons

- POWER: Page jump to the LITHIUM POWER control page (must have factory-installed lithium battery option for this icon to appear).
- AGS: Page jump to the AGS control page.
- FLOOR HEAT: Page jump to the FLOOR HEAT
 control page (must have factory-installed floor heat option for this icon to appear).
- FAN: Page jump to the FAN control page (must have factory-installed fan option for this icon to appear).
- HVAC: Page jump to HVAC control page.
- BT PAIR: Page jump to BLUETOOTH control page.
- LIGHTS: Page jump to the LIGHTS control page.
- TANKS: Page jump to the TANK STATUS page.
- TV LIFT: Page jump to the TV LIFT page (must have factory-installed television lift option for this icon to appear).
- SOLAR: Page jump to SOLAR STATUS page (must have factory-installed solar option for this icon to appear).

Note: Information displayed on the screen above between the house and chassis battery and the tank levels will not appear on coaches not equipped with a factory-installed lithium battery package.

Switch Buttons

- MASTER LIGHT CONTROLS: The All Lights On buttons allow the user to turn on all ceiling lights (wired on the multi-plex system) for the selected room. The All Lights Off buttons allow the user to turn off all lights (wired on the multi-plex system) for the selected room.
- TV LIFT: The TV Lift up and down buttons allow the user to control the TV lift from the Home screen.
- WATER PUMP: The home page will display the water pump switch on all the coaches, which will supply power to the water pump.
- TOP OFF & AUTO FILL: The top off and auto fill icons will appear on coaches equipped with an auto fill feature, which, when activated, allows automatic filling of the fresh tank while the coach is hooked up to a pressurized potable water source.
- BLOCK HEATER: The Block Heater button allows the user to turn power on or off to the block heater circuit on select coach models, which aids in warming the engine prior to starting, making it easier to start the coach in colder weather.

Status Display

- TANK LEVEL STATUS: This area shows the different tank levels (0%-100% with 5% increments).
- BATTERY VOLTAGE/PERCENTAGE: This area provides battery and AC Power details (time remaining, state of charge, AC amperage).

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: Splash Screen

The Splash screen on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the Newmar logo, as well as the user icons to access the Home, Power, AGS, Floor Heat, Fans, HVAC, and Lights screens.

Sleep

While on the home page the LCD will go to sleep after two minutes of inactivity.



LIGHTS

2026 KIB Capacitive Touch Panels with Standard User Interface Guide:

BT Pair

The BT Pair (Bluetooth) screen on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays steps for pairing your smartphone or tablet to the touch panel using the Newmar app.

Newmar App

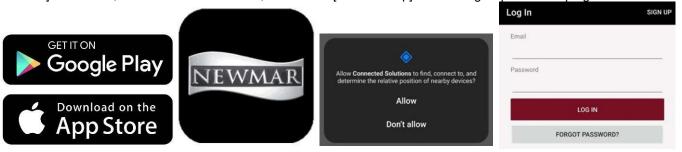
Follow the onscreen instructions to connect your smart device using the Newmar App (powered by Connected Solutions), which will need to be downloaded from the App store, and Bluetooth will need to be enabled.



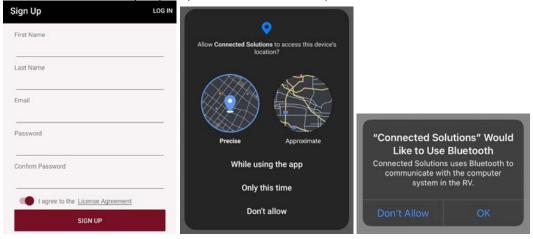
ATC/KIB Newmar App Powered by Connected Solutions for Standard User Interface Quick Start (2025 and newer)

This article provides a quick start guide for the Connected Solutions or Newmar App developed by American Technology Components, Inc. (ATC). These apps are available on select coaches (2025 and newer) equipped with a KIB 10.1" touch panel with Bluetooth capability. Relevant coaches include Bay Star, Bay Star Sport, Canyon Star, Northern Star, Ventana, Dutch Star, Grand Star, and Super Star.

Download the Newmar app from the iOS App Store or Android Play Store, then launch the app. If prompted with [a Nearby Devices] notification, select "Allow." Otherwise, continue to [the next step]. Select "Sign Up" on the top right of the screen.



Enter your information in the fields shown, then read and agree to the License Agreement. Select "SIGN UP" to finish setting up your account. If prompted for location access, select "Precise," then select "While using the app." Otherwise, continue to the next step. If prompted with a Bluetooth request, select "OK."



If your coach does not have an LCD or a Bluetooth Icon in the Navigation area of your LCD, continue to [Enable Pairing Mode]. If your LCD has the Bluetooth Icon in the navigation area, you can enable pairing from the LCD by pressing the "PRESS TO PAIR" button on the Bluetooth page. If this process is used to enable pairing, continue to step "Pairing Mode."

NOTE: "PAIRING" will be shown, and the Bluetooth icon will flash when in pairing mode.

NOTE: If your LCD says to install the Connected Solutions app, the Newmar app can be used instead.

Enable pairing mode by pressing the "PRESS TO PAIR" button on the ATCNET module (# 162818) with a paper clip or a pin or press the "PRESS TO PAIR" button on the ATCNET (# 158285) module. This enables pairing for 60 seconds.

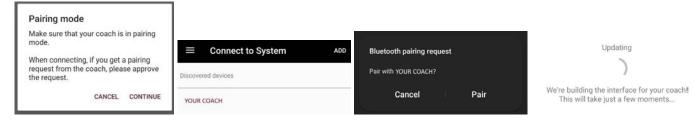
NOTE: BLUETOOTH PAIRING LED will be lit on the ATCNET-BTOM when in pairing mode.



If prompted with the Paring mode notification, select "CONTINUE." Otherwise, select add at the top right of the screen. If your coach shows up, select it. Otherwise, ensure the ATCNET-BTOM is in pairing mode and select add at the top left of the screen. Repeat [the previous step].

NOTE: Your coach will be unique and will be formatted like the following YEAR-MODEL-ID.

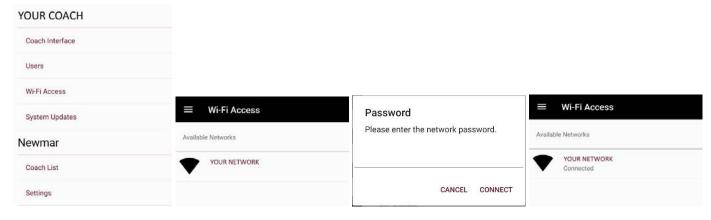
If prompted with a Bluetooth pairing request make sure YOUR COACH matches the name listed in in the previous step. Then select "Pair." Once connected to the coach you will be greeted with an updating notification. This will build an interface that is unique to your coach.



If your coach is equipped with the ATCNET (#158285) module, then you will need to set up the Wi-Fi connection. Begin by pressing the menu icon on the top left of the screen and select the "Wi-Fi Access" button. Select your Wi-Fi network from the list of available networks.

NOTE: YOUR NETWORK will be the WI-FI Access point you want to connect to.

When prompted enter the password for the network you selected by tapping on the blank line. Once you are done entering your password, select "CONNECT" to finish the process. When successfully connected it will show "Connected" under the WIFI name. There will also be a Remembered Networks section and the bottom of the list showing all WIFI connections that were successfully connected to.



Source(s): American Technology Components, Incorporated Connected Solutions Standard Quick Start Guide (Updated 4/2025)

WIFI SYSTEMS

WiFi Ranger Converge LTE Indoor/Outdoor Router Quick Start

This article provides an operational overview of the WiFi Ranger Converge LTE Indoor/Outdoor Router (Model: Teton/Poplar Combo, Denali/Spruce Combo, and Aspen/Everest Combo). This information only applies to coaches equipped with an optional WiFi Ranger Converge Router.

Components

Get the most out of a WiFi Ranger system with an indoor & outdoor pack [...] for more network versatility and functionality when compared to a standalone unit. All of the long-range WiFi, LAN ports, USB tethering, and upgradability features unite in these Packs. Furthermore, you will enjoy maximum wireless coverage, performance, and reliability when using a Pack.

Indoor Routers

Poplar: WiFiRanger Poplar is an entry-level mobile router with 2.4GHz WiFi, a USB port for LTE tethering, 100Mbps LAN ports, and an integrated LTE modem (optional).

Spruce: WiFiRanger Spruce is a mid-performance mobile router with 2.4GHz / 5.8GHz WiFi, a USB port for LTE tethering, and 1000Mbps LAN ports.

Aspen: WiFiRanger Aspen is a high-performance indoor mobile router with Gigabit LAN, 2.4GHz / 5.8GHz WiFi, USB 3.0 LTE Tethering, and LTE Modem (optional).



Outdoor Routers

Teton: WiFiRanger Teton is an entry-level outdoor router with 2.4GHz WiFi, 1mi range, a 100Mbps LAN port, and an integrated LTE modem (optional).

Denali: WiFiRanger Denali is a mid-performance outdoor router with 2.4GHz WiFi, 1.5mi range, a 100Mbps LAN port, and an integrated LTE modem (optional).

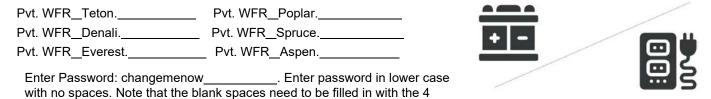
Everest: WiFiRanger Everest is a high-performance outdoor mobile router with Gigabit LAN, 2mi Max Range, 2.4GHz / 5.8GHz WiFi, and LTE Modem(s) (optional).

Quick Start Guide

unique digits of your WiFiRanger(s).

Power up your WiFi Ranger(s). Follow steps from Rooftop Installation and Interior Installation in order to power up unit(s), then wait 5 minutes.

Wirelessly connect your device to your WiFi Ranger. Network names vary depending on which WiFi Ranger model(s) you have. Note that the blank space need to be filled in with the 4 unique digits of your WiFi Ranger(s).



Visit mywifiranger.com. This brings up the WiFiRanger Control Panel which can be bookmarked for future access.



Click Connect on WiFi network or Cellular device. For filtered WiFi networks, proceed to the captive portal or login page and enter the necessary credentials or terms of service.

LTE Activation

WiFiRanger is pleased to provide LTE solutions that are not locked into a specific cellular carrier. This approach gives the customer increased flexibility over other competing offerings which are tied to singular carriers or data plans. The WiFiRanger LTE solution gives you the freedom to find the perfect plan for you. The cellular landscape is always evolving and advancing, so our goal is to assist you in making the most of the myriad of data options available. The following advice is to help you navigate the data plan and activation topics that are applicable to our LTE solutions. The LTE solutions offered by WiFiRanger are subject to change based on the evolving cellular landscape.

Important Considerations

Data Plan Availability Varies by Region: Some cellular carriers offer certain data plans by region. As such, you may find that the data plan that you desire is available through a cellular reseller or representative in another area while your local representative has more limited options. Check around or call a representative in another region if you can't find what you want locally.

SIM Card Type May Affect Data Plan Options: WiFiRanger provides standard consumer SIM cards with their LTE modems. These SIM cards may not work on business data plans, but should support most consumer data plans. It is important to ask your cellular carrier if the SIM card you provide them is the right kind to meet your data needs.

Ease of Modem Activation Varies by Reseller / Carrier: In some cases, it can be difficult to activate the WiFiRanger LTE modem and SIM card depending on the representative you speak with. Some representatives work for a cellular reseller that does not have the offerings you desire, or you may need a more knowledgeable representative to handle your request. Ask different cellular stores, resellers, or a direct Carrier representative until you find the right person to activate your modem and SIM card on the desired plan.

Data Plan Pricing Depends on Your Cellular Account: In large part, the price of data plans for the WiFiRanger LTE modem are affected by your cellular account type and other data plan(s) on your account. In some cases, the WiFiRanger LTE modem will require having a data-only plan that is separate from the data plan attached to your smartphones or other devices. Checking with your carrier on costs will help you to understand how the carrier will handle the WiFiRanger LTE modem pricing and data amounts available.

Upgrading from Non-LTE WiFiRanger to LTE Modem May Require Additional Steps: If you are upgrading a from a non-LTE WiFiRanger router to an embedded LTE modem, please be sure to click Check for Updates on the WiFiRanger Control Panel after installing the modem or upgrade kit. If you are experiencing problems or have questions about the new LTE modem, contact WiFiRanger to assist in getting your WiFiRanger configured to support the new modem. Our contact info is listed on the bottom of this guide.

Changing Cellular Carriers Should Only be Done After Verifying Supported Bands: If you plan on changing cellular carriers, ensure that your modem supports the necessary bands. Supported bands listed below:

- Category 4 Modem: Quectel EC25-AF 2 / 4 / 5 / 12 / 13 / 14 / 66 / 71
- Category 6 Modem: Quectel EP06-A 2 / 4 / 5 / 7 / 12 / 13 / 25 / 26 / 29 / 30 / 66

Activation Contact Information

Carrier: AT&T Carrier: VERIZON Carrier: MILLENICOM

Consumer: 888.333.6651Business: 888.444.4410att.wifiranger.com

 Not Officially Supported (Cannot guarantee Verizon data plans at this time.) Consumer: 800.996.1285
Business: 800.996.1285
millenicom.wifiranger.com

^{*}Identify modem model on Setup tab of Control Panel under Cellular settings.*

LTE Setup

Accessing Cellular Settings

- 1. Power up the WiFiRanger system with embedded LTE modem(s).
- 2. Connect over ethernet or wirelessly to the WiFiRanger's network.
- 3. Access Control Panel of the WiFiRanger and select the "Setup" tab.
- 4. Expand modem settings by clicking the appropriate gear icon:
 - 1. Standalone WiFiRanger (indoor or outdoor unit): Click "Cellular" gear icon.
 - 2. Pack WiFiRangers (indoor and outdoor units): Click "Cellular" gear icon to access indoor unit modem. Click "WFRControl" gear icon to access outdoor unit modem.

Viewing SIM & IMEI Numbers

If you need the SIM or IMEI numbers for Cellular plan activation or support, then follow the steps below:

Follow steps for "Accessing Cellular Settings." View SIM & IMEI numbers after expanding the modem settings. Converge Routers & Modems Only Support Standard SIM Size.

Be sure that SIM card is Standard size as Nano and Micro sizes will not fit properly within Converge routers or LTE modems. A SIM card size adapter kit may be used to resize the SIM.



Refreshing SIM Number

If you've changed the SIM card in your WiFiRanger modem and need to refresh the SIM number, follow the steps below:

Follow steps for "Accessing Cellular Settings." Click on "Clear SIM Details" then wait 30 seconds. Click on "Reboot Cellular" then wait 60 seconds. Reload the Control Panel and verify the new SIM number appears.

Manually Setting an APN

(This is usually unnecessary on latest firmware since APN is automatically detected.) If you are unable to connect to the internet using the WiFiRanger modem even though your data plan is active, then there may be an issue with the modem's APN. An APN is a password used by the modem for authenticating with your cellular Carrier. To change the APN, follow the steps below:

Follow steps for "Accessing Cellular Settings." Enter correct APN into the APN field: Default APN shown (most common)

Carrier: Verizon

Default APN: vzwinternet

Carrier: AT&T

Default APN: broadband
 Carrier: T-Mobile / Millenicom

• Default APN: fast.t-mobile.com



Unique APN on your Cellular account (only if applicable). Click "Save Changes."

Source(s): WiFi Ranger Converge Indoor/Outdoor Routers Owners Manual (2020)

Activating the WiFi Ranger Converge LTE Indoor/Outdoor Router

This article provides activation instructions for the WiFi Ranger Converge LTE Indoor/Outdoor Router.

Connect via WiFi to "WiFi Ranger Core" using an electronic device (computer, laptop, tablet, smartphone, etc.) using the Network code located on your router (typically located in an overhead cabinet in the cockpit area or living room).



The electronic device can connect to either a standard or 5G core signal.

When prompted, enter the password listed on the router (this is the factory default setting).



Using the device's web browser (Internet Explorer, Chrome, Safari, etc.), type in the digits listed as "Control Panel" on the router in the address bar.



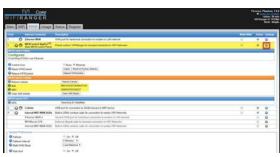
This will open the WiFi Ranger control panel. Select the [Setup] Tab.



Locate the "WFRControl SkyProLTE" row, and click the blue gear Settings icon on the far right of same row.

SIM and IMEI numbers needed for activation are displayed in the expanded WFRControl Cellular by accessing the Setup tab and clicking on the Setting icon (blue cog wheel).

Use your cellular data provider's website link or call to activate service to the LTE (i.e. Verizon, AT&T, T-Mobile). Provide the SIM and IMEI numbers when prompted.



NOTE FROM NEWMAR

Coach-specific information from WiFi Ranger can be found in the information package (black bag) provided by Newmar. This documentation must not be removed from the vehicle if the coach is sold. These items should remain with the coach for the next owner.

WiFi Ranger 2.0 Indoor/Outdoor Router Quick Start

This article provides an operational overview of the WiFi Ranger 2.0 Indoor/Outdoor Router (Model: Denali/Spruce Combo and Aspen/Everest Combo). This information only applies to coaches equipped with an optional WiFi Ranger system.

Components

Indoor Routers

Spruce: WiFiRanger Spruce is a mid-performance mobile router with 2.4GHz / 5.8GHz WiFi, a USB port for LTE tethering, and 1000Mbps LAN ports.

Aspen: WiFiRanger Aspen is a high-performance indoor mobile router with Gigabit LAN, 2.4GHz / 5.8GHz WiFi, USB 3.0 LTE Tethering, and LTE Modem (optional).

Outdoor Routers

Denali: WiFiRanger Denali is a mid-performance outdoor router with 2.4GHz WiFi, 1.5mi range, a 100Mbps LAN port, and an integrated LTE modem (optional).

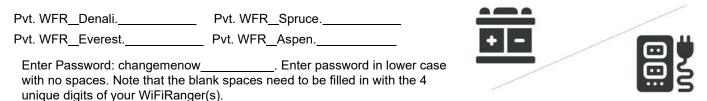
Spruce Aspen OUTDOOR ROUTER UNIT (ODU) Denali Everest 2.2

Everest: WiFiRanger Everest is a high-performance outdoor mobile router with Gigabit LAN, 2mi Max Range, 2.4GHz / 5.8GHz WiFi, and LTE Modem(s) (optional).

Quick Start Guide

Power up your WiFi Ranger(s). Follow steps from Rooftop Installation and Interior Installation in order to power up unit(s), then wait 5 minutes.

Wirelessly connect your device to your WiFi Ranger. Network names vary depending on which WiFi Ranger model(s) you have. Note that the blank spaces need to be filled in with the 6 unique characters of your WiFi Ranger(s).



Visit mywifiranger.com. This brings up the WiFiRanger Control Panel which can be bookmarked for future access.



Click Connect on WiFi network or Cellular device. For filtered WiFi networks, proceed to the captive portal or login page and enter the necessary credentials or terms of service.

Enable Cellular to use the built in cellular functionality, select the setup tab, and check the Enabled box on the "Cellular 1 - Built In" line.

LTE Activation

WiFiRanger provides cellular solutions that are not locked into a specic cellular carrier. This gives our customers increased flexibility compared to competing offerings which are tied to specific carriers or data plans. These solutions give you the freedom to nd the right plan for you. The cellular landscape is continuously evolving and advancing, so our goal is to assist you in making the best choices from the many options that are available. The following information is intended to help you navigate the data plan and activation topics that are applicable to our 5G/LTE solutions. The 5G/LTE solutions offered by WiFiRanger may change due to changes in the 5G/LTE marketplace.

Important Considerations

WFR Products are shipped with Freedom Go SIMS: Modems integrated into WiFiRanger devices are shipped with SIMs compatible with Winegard AT&T or T-Mobile Freedom Go data plans. Although Ranger owners are not required to use these plans, it is important that they understand that these SIMs cannot be used for any other carrier plans. Purchasing data plans for Freedom Go SIMs is discussed in the WiFiRanger user manual.

Ease of modem activation varies by Reseller/Carrier: In some cases, it can be difficult to activate the WiFiRanger LTE modem and SIM card depending on the representative you speak with. Some representatives work for a cellular reseller that does not have the offerings you desire, or you may need a more knowledgeable representative to handle your request. Ask different cellular stores, resellers, or a direct Carrier representative until you nd the right person to activate your modem and SIM card on the desired plan. Always have your LTE modem's ICCID/ SIM and IMEI card numbers available when discussing data plans with representatives.LTE Setup

Accessing Cellular Settings

- 1. Power up the WiFiRanger system with embedded LTE modem(s).
- 2. Connect over ethernet or wirelessly to the WiFiRanger's network.
- 3. Access Control Panel of the WiFiRanger and select the "Setup" tab.
- 4. Expand modem settings by clicking the appropriate gear icon:
 - 1. Standalone WiFiRanger (indoor or outdoor unit): Click "Cellular" gear icon.
 - 2. Dual Router WiFiRanger Systems (indoor and outdoor units): Click "Cellular" gear icon to access indoor unit modem. Click "WFRControl" gear icon to access outdoor unit modem.

Viewing SIM & IMEI Numbers

If you need the ICCID/SIM or IMEI numbers for Cellular plan activation or support, then follow the steps below:

Follow steps for "Accessing Cellular Settings." View ICCID/SIM & IMEI numbers after expanding the modem settings.

Refreshing ICCID/SIM Number

If you've changed the SIM card in your WiFiRanger modem or the ICCID/SIM number appears to be incorrect, refresh the ICCID/SIM number, follow the steps below.

Follow steps for "Accessing Cellular Settings." Click on "Clear ICCID/SIM Details" then wait 30 seconds. Click on "Reboot Cellular" then wait 60 seconds. Reload the Control Panel and verify the new ICCID/SIM number appears.

A NOTICE

Routers and Modems only support standard SIM size. Be sure that SIM care is Standard size as Nano and Micro sizes will not fit properly in the routers. A SIM card size adapter kit may be used to resize the SIM.



Manually Setting an APN

(This is usually unnecessary on latest firmware since APN is automatically detected.) If you are unable to connect to the internet using the WiFiRanger modem even though your data plan is active, then there may be an issue with the modem's APN. An APN is a password used by the modem for authenticating with your cellular Carrier. To change the APN, follow the steps below:

Follow steps for "Accessing Cellular Settings." Enter correct APN into the APN field: Default APN shown (most common)

• Carrier: Verizon

• Default APN: vzwinternet

Carrier: AT&T

• Default APN: broadband

Carrier: T-Mobile

Default APN: fast.t-mobile.com

FreedomGO

• Default APN: auto configured



Unique APN on your Cellular account (only if applicable). Click "Save Changes."

Source(s): WiFi Ranger 2.0 Indoor/Outdoor Routers Owners Manual (2024)

Starlink Satellite Internet System Quick Start (Model: Flat High Performance)

This article provides a quick start guide for a Starlink satellite internet system, which is an option for select 2025 and newer coaches.

Starlink delivers high-speed Internet almost anywhere on Earth. The Starlink app helps you find the best location for Starlink, check for obstructions, customize settings, receive updates, and access Support. The app has access to important troubleshooting data which helps resolve your issue faster, so we recommend contacting Support through the app.

The Starlink app is here to help you:

- Identify the install location that will ensure the best quality of service
- Set up your Starlink hardware
- Check for obstructions that can interfere with service
- Verify your WiFi connection
- Receive alerts for service issues
- View connectivity statistics
- · Identify devices connected to your network
- Troubleshoot connectivity issues
- Contact support

Operation Instructions

Download the Starlink app on your phone.

Before installation, use the "Check for Obstructions" tool in the app to identify the best location for uninterrupted service. Setup your Starlink. After connecting, confirm your setup location is obstruction-free by reviewing the data coming from your Starlink.

Source(s): Starlink Wedge Mount Guide_Mobile HP 2022 and https://support.starlink.com/





Coach WiFi Security Alert - Changing Your Newmar Network Password(s) - WiFi Ranger Systems Only (2026 and newer)

Newmar Corporation has determined that the potential exists for unauthorized persons to gain unauthorized access to certain WiFi-connected components on some Newmar products via factory-installed WiFi routers which utilize factory password settings. The factory password setting is unique to each coach and there are no known instances of any such unauthorized access having ever occurred on any Newmar product. However, if an unauthorized person were to gain access to the factory-installed WiFi system there is a potential on some products for the unauthorized person to gain access to the WiFi-connected systems in the coach including certain televisions, sound equipment, cameras, and some coach management systems.

In order to protect against the potential for such unauthorized access to occur on Newmar products, Newmar Corporation highly recommends that customers owning the subject coaches change the factory password settings on the WiFi router to new passwords that have been chosen by the customer by following the directions provided below. Changing the factory passwords on the WiFi router will eliminate the potential for unauthorized persons to gain access to Newmar products via the factory password settings.

Note that changing the factory passwords to new passwords selected by the customer will cause a loss of pairing or connectivity between existing WiFi devices in the coach and the WiFi router. It will then be necessary to update the passwords on each of the individual WiFi-connected devices in the coach to have the same new password as the router in order to re-establish the pairing and connectivity between each of those WiFi devices and the router.

Please refer to the manufacturer's operation manual for pairing instructions for each WiFi-enabled component.

If the passwords are not updated on the WiFi devices in the coach after the WiFi router password has been changed, the devices will still function on their individual remote controls and on their individual in-coach control panels but those devices will no longer have any internet functionality or remote connectivity functionality until their passwords are updated to match the new WiFi router password.

If a customer is not able to make the recommended password changes to the factory-installed WiFi router immediately, the potential for unauthorized users to gain access to the coach WiFi systems can be easily blocked by simply turning off or unplugging the WiFi router until such time as the passwords can be reset.

Overview

Your Newmar coach's WiFi router has been preset to a unique factory password in order to ensure that all coach WiFi-enabled components were properly tested during the production process.

To better secure this network once you become the owner of the coach, it is highly recommended that you read and perform the following instructions for "Changing the Coach WiFi Router Password."

A CAUTION

Failure to change these passwords poses a potential security risk to you and your coach.

Passwords should be at least 12 characters long. The longer the password is, the harder and longer it takes to crack.

- Include upper case letters, lower case letters, and special characters (i.e., #, !, &).
- Never use the exact same password for all your systems.
- Recommend a passphrase that contains a series of unrelated words.
 - Passphrases greatly increase the difficulty of this type of software. To create a passphrase think up a short, silly story: "The buffalo drove the truck to the store." To create a passphrase from this, you simply select words and string them together, and make a few substitutions: BuffaloTruckSt0re! While it may seem silly, it is incredibly easy to remember, so long as you remember the story. Your stories can be anything you want, just make sure it's something easy to visualize and sticks in your head."

Changing the WiFi Router Password

Connect to the Coach Network

▲ NOTICE



These instructions are intended for WiFi Ranger (WFR) GO2 and CONVERGE (Teton/Poplar, Denali/Spruce, and Everest/Aspen) Products. To change the Guest WiFi password, please refer to the user guide by typing "WiFi Ranger User Guide" (including the quotation marks) in the Newgle search bar.

- 1. Search for the 'Newmar Network' in the coach when scanning for network connections.
 - a. It is identified by "NewmarXXYY." Pick the network that has the identifier that matches the sticker on the indoor router.
 - b. Each coach model has an identifier for the password, as seen below.
- 2. Enter the password according to the coach identifier.

Example Coach Info:

- WFR ID #: 778XXX
- Model: King Aire Diesel Bus
- Serial #: 530XXX

Customer WiFi Signal			
Example ID	778XXX		
SSID Broadcast	NewmarXXYY		
WPA Key (Password)	KGDB530XXX		

- After connecting to the coach network, open an internet browser and type in 'MYWIFIRANGER.COM' in the address bar to connect to the WiFi Ranger control panel.
- In the address bar of the internet browser, remove any text following ":8080" and then type in '/admin' after the ':8080'.
 - a. Example: 10.189.90.1:8080/admin
 - b. This will go to a username and password screen for the admin credentials.
- 3. Enter USERNAME: admin



4. Enter PASSWORD: wfradmin



- In the WPA KEY setting, change the password to one decided by the customer. After the password is changed click 'SAVE CHANGES'.
- 2. A banner will show up when the changes are being made. When the password is changed, the banner should show.



- 1. Once the settings have been changed, reconnect to the network using the new password.
- 2. Set up is complete!

Changing the WiFi Ranger Control Panel Password

For more security in the WiFi Ranger (WFR), it is suggested to make a change in the Control Panel that will require a USERNAME and PASSWORD when trying to get access to the WFR Control Panel. Complete the following procedure to further enhance the security.

- 1. Enter the control panel by first connecting to the Newmar Network in the coach as explained previously in the "Connect to the Coach Network" section.
- 2. When connected, go to the SETUP tab and make sure the HIDE ADVANCED FEATURES selection is turned off. If it is ON, select OFF, and click SAVE CHANGES.
- 3. From there, click the ADVANCED tab.
- 4. In the last box labeled ADMIN ACCESS, choose "ON."
- 5. Change the USERNAME and PASSWORD to something different. To make this as safe and secure as possible, do not share this password.



- 1. Click SAVE CHANGES.
 - a. The next time you try and enter the Control Panel, you will need this username and password to gain access.
- 2. Passwords to WiFi-enabled devices like televisions, cameras, and sound bars (i.e.: Bose 700 sound bar used on select Mountain Aire, London Aire, Supreme Aire, Essex, and King Aire coaches) will also need to be updated to have the same new password as the router in order to re-establish the pairing and connectivity between each of those WiFi devices and the router. Please refer to the manufacturer's operation manual for pairing instructions for each WiFi-enabled component.
- 3. Setup is complete!

For coaches equipped with the KIB/ATC Global Connected Solutions/Newmar App: The next time you log in to the app, you will be prompted to change the password to connect to the coach WiFi.

ENTERTAINMENT SYSTEMS

This chapter provides information on entertainment components, including televisions, dash-mounted audio equipment, multi-disc players, home theater systems, and satellite antennas. Such components may be located within your coach's living room, bedroom, cargo area, or even outside the coach in an optional exterior entertainment center.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

ANTENNAS, CABLE, AND SATELLITE SYSTEMS

Antenna and Cable Overview

This article provides an overview of the antenna and cable system in the coach. Your coach may be equipped with an exterior antenna jack and interior antenna jacks or wiring at each television location.

Antenna Power Booster

An antenna with a power booster may be installed in your coach and is designed for reception of all local color and black-and-white channels. The antenna may be automatic, stationary, or manual lift. The power booster supplies voltage to the antenna when using over-the-air signal. However, it transfers the connection from the antenna to park cable when it is available and connected.

To operate the power booster for the television signal, press the switch on the booster plate to illuminate the green LED light. This will supply power to the antenna and boost the television signal.

When using park cable, the booster must be turned off to allow the signal to bypass the antenna and connect to the television or selector switch through the same coax cable. The green LED light should not be illuminated. A 12 volt outlet is also provided for 12 volt accessories. Do not use this outlet for a cigarette lighter.



Over-the-Air Signal

If the reception is poor, make sure the power switch for the power booster is in the "ON" position and all of the coax connections are tight. This switch is usually located beside the passenger chair or on the video selector box (select units only).

On coaches with a Rayzar automatic TV antenna, this switch is integrated into the power on/off switch typically located in the overhead control center. After traveling, it may be necessary to auto-program your televisions to pick up local stations.

Cable Connection

An exterior cable jack and receptacle may be available on your coach. If installed, they may be located in an outside storage compartment, usually near the power cord.

When using park cable, it is necessary to turn the antenna booster off in order to allow the signal to travel to the television or selector switch (if equipped). This switch is usually located beside the passenger chair; it can also be the power button on the video selector box (select units only).



On coaches with a Rayzar automatic TV antenna, this switch is integrated into the power on/off switch typically located in the overhead control center.

A IMPORTANT

Failure to turn off the power booster switch to the antenna while using the park cable system may cause poor picture quality.

Basic Troubleshooting

If you have poor reception, try these simple solutions:

- 1. Make sure the power booster or Rayzar antenna system is turned off.
- 2. Make sure the coax cable from the park cable hookup to the basement of the coach is in good, working condition and does not have a shorted shield wire.
- 3. Each TV will need to be set for cable and auto programmed at each new campsite location.
- 4. Any further troubleshooting and diagnosis should be performed by an authorized service technician.

Winegard Manual Antenna Quick Start (Model: Sensar Series)

This article provides instructions for raising, lowering, and rotating the Winegard Sensar Manual Antenna, as well as information about the booster switch and cable mode.

Operation

Raising Antenna to Operating Position

Check parking location for obstructions before raising antenna. Carefully raise, lower, and rotate. If this is difficult, check for cause.

Turn elevating crank (clockwise) in "UP" direction about 13 turns or until some resistance to turning is noted.





ON/OFF LED

ON/OFF BUTTON
__ (ANTENNA & BOOSTER)

SEARCH BUTTON

ROTATE BUTTONS

WINEGARD RAYZAR ANTENNA

AMPLIFIED MODELS ONLY: Turn power supply ON to use either front or rear TV outlet. Neither outlet will work unless power supply switch is ON.

Do NOT connect high current devices such as hair dryers to this receptacle. Maximum current rating of this receptacle is 8 amps at +12 VDC.

Rotating the Antenna for Best Picture

Rotate slowly when selecting station and check fine tuning on TV set to make sure it is properly adjusted. Make sure antenna is in "UP" position. Pull down with both hands to disengage ceiling plate. Rotate for best picture.



Lowering the Antenna

Lower antenna before moving vehicle.

Rotate antenna until pointer on directional handle aligns with pointer on ceiling plate. Turn elevating crank (counter clockwise) in "DOWN" direction about 13 turns or until resistance is noted. Antenna is now locked in travel position.

A CAUTION

Under no conditions should the antenna be raised while traveling.

Booster Switch and Cable Mode

For more information about the booster switch and cable mode, refer to the Antenna and Cable Overview article in Newgle.

Source(s): Sensar (All Models) Winegard Installation Operation Manual MAY 2013

Product(s): Winegard RV-6005 Sensar III Amplifier w/Lift Antenna (Model: RV-6005, Newmar Part Number: 119818)

Winegard Rayzar Automatic Antenna Quick Start (Models: RZ-7500, RZ-7535, RZ-8500, RZ-8535)

This article provides information about the control panel, cable, and antenna mode, as well as the automatic search function of a Winegard Rayzar Automatic Antenna (Models: RZ-7500, RZ-7535, RZ-8500, RZ-8535).

Control Panel

Coaches equipped with a Rayzar Automatic Antenna will also be equipped with a control panel in the overhead cabinet.

Cable Mode

When the control panel is powered off, park cable signals will be passed to the TV. In this mode, all LEDs are turned off.

▲ IMPORTANT

Failure to turn off the power booster switch to the antenna while using the park cable system may cause poor picture quality.

Antenna Mode

When the Control panel is powered on by pressing the On/Off button, the LEDs will flash and begin their power-on process. At this time the antenna amplifier is powered on and TV antenna signals will be passed. Initially, GREEN "Positional LED(s)" will be lit to indicate the direction the antenna is positioned.

Automatic Search Function

The system does not move until the Search button is pressed. Channels will be received whenever the system is powered on.

To begin a new search, press the Search button. The antenna will go through its initialization process and begin searching for TV frequencies. A typical search will take 2-3 minutes. A RED LED will quickly cycle through the positional LED position to indicate the antenna is moving and [the] direction it is moving. After the search is complete, the antenna will automatically go to the position which results in the most watchable TV channels. The 2-digit display will show the number of frequencies seen at that position, and both the GREEN and RED LED(s) will be lit to indicate the successful search location.

Additional RED LEDs will also light to show any other channels found at alternate positions. Pressing the Search button again will move the antenna to the next best location. Continuing to press Search again will cycle through other positions that provided additional channels, until returning to the main search location. To clear search results and initiate a new search, press and hold the Search button for 2 seconds. The system will also clear all search results each time it is powered off.

Source(s): Winegard Rayzar Automatic Antenna User Guide

Winegard RoadTrip T4 Automatic In-Motion Satellite Quick Start (Model: RTT-20B/RT2000T)

This article provides basic operation instructions for a Winegard RoadTrip T4 Automatic In-Motion Satellite (Model: RTT-20B/RT2000T).

Operating the RoadTrip® T4 Antenna

Turn on receiver and television set. The RoadTrip® T4 antenna must be connected to a receiver plugged into 120VAC.

Verify that you are getting the receiver's menu screens on the television. These screens are available with or without the dish finding the signal. Ensure receiver is properly configured for your provider.



Turn the power switch on for the antenna. Within 10–15 seconds, the dish will begin moving and should make one or two revolutions during startup. During this process, it is normal to hear a slight grinding sound as the unit checks its rotational limits. This does not harm the unit. The system will pause to acquire GPS.

Once the dish begins its search, it pauses on signals long enough to determine which satellite it has found. The antenna may move off the signal in an effort to verify the signal and should return shortly.

TIP: Because the T4 antenna uses information from the last location where it was on signal, satellite acquisition may take longer if the dish is inactive over long distance traveling.

After the T4 has verified the correct satellite, it will continue to track the signal. The unit will go into "Sleep Mode" if the vehicle is stationary for 6 minutes. This involves a quick verification process where signal may be lost, then return to the signal and be silent. If the vehicle begins moving greater than 10 MPH, the in-motion T4 will resume tracking mode. For smoother operation, use your on-screen guide to locate your channel rather than "channel surfing.

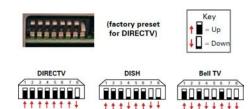
NOTE There are certain areas within the U.S. where the T4 antenna may experience limited or no coverage of the 129° satellite for HD programming. DISH home coverage has the same limitations. Problem areas include Washington, Oregon and California, but limited coverage may extend past these areas. Contact DISH for additional coverage questions (1-888-825-2557).

ALSO when the T4 dome is blocked (example: while going through a tunnel, under a bridge, by a building, etc.) programming will not be available. Once the block is removed, the programming will return.

DIRECTV®

The RoadTrip® T4 antenna switch settings are preset for DIRECTV. If you have a DISH or Bell TV receiver, you *must* change the numbered switches found on the electronics box under the dome.

Receiver Setup: Connect the receiver to a power source, and complete receiver setup. Check out online receiver setup guides for your antenna at www.winegard.com/support.



Receiver Recommendations: The RoadTrip® T4 antenna will operate with most DIRECTV receivers. Winegard does not recommend using receivers with hard drives, as they are not intended for mobile applications. Winegard does not recommend using an HD receiver since HD programming will not be available. SWM only receivers require a SWM-840 kit

Satellite Coverage: The antenna will locate and toggle between satellites 101° and 119°. The RoadTrip® T4 antenna will not operate in all areas where satellites 101° and 119° are available. The T4 antenna is not compatible with 110° or KA-band satellites 99° and 103°. Satellite coverage maps are based on level, stationary operation. Reception interruption may also occur during adverse weather conditions.

Maintenance

The RoadTrip® T4 antenna is designed to be maintenance free. However, it is a good idea to clean the dome from time to time with a soft cloth, water, and dish soap.

Source(s): Winegard RoadTrip T4 Automatic In-Motion Roof-Mounted Satellite TV Antenna User Guide Product(s): Winegard T4 RoadTrip In-Motion Satellite (Model: RTT-20B, Newmar Part Number: 135606P)

Winegard RoadTrip P4 Automatic Stationary Satellite Quick Start (Model: RTS-20B)

This article provides basic operation instructions for a Winegard RoadTrip P4 Automatic Stationary Satellite (Model: RTS-20B).

Operating the RoadTrip® P4 Antenna

Turn on receiver and television set. The RoadTrip® P4 antenna must be connected to a receiver plugged into 120VAC. Verify that you are getting the receiver's menu screens on the television.

These screens are available with or without the dish finding the signal. Ensure receiver is properly configured for your provider.

Turn the power switch on for the antenna. Within 10–15 seconds, the dish will begin moving and should make one or two revolutions during startup. During this process, it is normal to hear a slight grinding sound as the unit checks its rotational limits. This does not harm the unit. The system will pause to acquire GPS.

Once the dish begins its search, it pauses on signals long enough to determine which satellite it has found. The antenna may move off the signal in an effort to verify the signal and should return shortly.

TIP: Because the P4 antenna uses information from the last location where it was on signal, satellite acquisition may take longer if the dish is inactive over long distance traveling.

NOTE There are certain areas within the U.S. where the P4 antenna may experience limited or no coverage of the 129° satellite for HD programming. DISH home coverage has the same limitations. Problem areas include Washington, Oregon and California, but limited coverage may extend past these areas. Contact DISH for additional coverage questions (1-888-825-2557).

ALSO when the P4 dome is blocked (example: while going through a tunnel, under a bridge, by a building, etc.) programming will not be available. Once the block is removed, the programming will return.

DIRECTV®

The RoadTrip® P4 antenna switch settings are preset for DIRECTV. If you have a DISH or Bell TV receiver, you *must* change the numbered switches found on the electronics box under the dome.

Receiver Setup: Connect the receiver to a power source, and complete receiver setup. Check out online receiver setup guides for your antenna at www.winegard.com/support.

Receiver Recommendations: The RoadTrip® P4 antenna will operate with most DIRECTV receivers. Winegard does not recommend using receivers with hard drives, as they are not intended for mobile applications. Winegard does not recommend using an HD receiver since HD programming will not be available. SWM only receivers require a SWM-840 kit.

Satellite Coverage: The antenna will locate and toggle between satellites 101° and 119°. The RoadTrip® P4 antenna will not operate in all areas where satellites 101° and 119° are available. The P4 antenna is not compatible with 110° or KA-band satellites 99° and 103°. Satellite coverage maps are based on level, stationary operation. Reception interruption may also occur during adverse weather conditions.

Maintenance

The RoadTrip® P4 antenna is designed to be maintenance free. However, it is a good idea to clean the dome from time to time with a soft cloth, water, and dish soap.

Source(s): Winegard RoadTrip P4 Automatic Stationary Roof-Mounted Satellite TV Antenna
Product(s): Winegard RoadTrip Automatic Stationary Roof-Mounted Satellite TV Antenna (Model: RTS-20B, Newmar Part Number: 135607)

Winegard Trav'ler Pro Automatic Multi-Satellite TV Antenna Quick Start (Models: SK2-100/SK2DISH and SK2-300/SK2SWM3)

This article provides basic operation instructions for a Winegard Trav'ler Pro Automatic Multi-Satellite TV Antenna (Models: SK2-100/SK2DISH and SK2-300/SK2SWM3).

IDU Operation

The already simple Winegard® Trav'ler® operation is even easier and can now be done from your smartphone with the Winegard-Connected app. To take advantage of advanced features and over-the-air updates, please download the Winegard-Connected app from the Google Play or the App Store. Simply plug in the 48 VDC power cable to power on the interface box (IDU) and start enjoying the Winegard Trav'ler Pro.



The IDU will power on as soon as the 48 VDC power cord is plugged into the IDU. This will not raise the antenna.

Upon power up, the IDU will display current hardware and software versions. If connected to an internet source (WiFi configuration requires the Winegard-Connected app), the IDU will check to see if any updates are available to download. NOTE: When downloading a software update, make sure you have a good, reliable internet source and connection.

Once the IDU has loaded and is in the ready state, press and hold the Search button to perform a search. To stow the antenna press and hold the Stow button until the satellite antenna starts the stow process.

The IDU includes advanced features as well as system information within the Settings Menu. To access the Settings Menu press and hold the Power button for five seconds until the Settings Menu options appear. Press Search to scroll up and Stow scroll down. An asterisk icon shows which menu item is currently selected. Press the Power button to confirm your selection. To exit a selected Power Mode, press and hold the Power button for five seconds and select the desired mode.

Smart Phone Operation and Features

To pair your smartphone with the IDU, open the Winegard-Connected app and log in to your account.

NOTE: Account creation is required to proceed. If you need to create an account press "Don't have an account? Create one" under "SIGN IN" and complete the prompted elds. Once submitted, you will receive a confirmation link sent via email. If the email is not in your [email inbox] be sure to check your spam/junk folder. Once the link has been confirmed, you can now sign in to your account.

App Functions

The Main Menu shows all the additional features of the Winegard-Connected app. Available functions include: Power Modes, Search Mode, Stow Mode, Setting up WiFi, Disconnect and Reconnect to IDU, and Settings. For more information about available functions and settings (antenna type, search mode, raise antenna, adjust antenna, WiFi network, EL calibration), refer to the complete operation manual.

Support

Download the product manual through the Winegard-Connected App. The app will prompt you to select a product. Once selected, press "GET MANUAL" to start the download process.

System Information

The System Information option provides specic details about your Trav'ler Pro antenna, including its hardware version, software version, WiFi MAC address, SSID, and Bluetooth® MAC address. To exit, scroll through the information screens until Exit Info is shown, then press and hold "Power". The same information is available in the Winegard-Connected app and can be accessed through the System Info tab in the Trav'ler Pro Main Menu.

Update Software

Software updates require a reliable internet source and connection. Having a weak connection may create issues with the software download. When a software update is available, there will be an exclamation mark within the cloud icon on the IDU display. In the Winegard-Connected app there will also be a red circle with an exclamation mark within the messaging portion of the Trav'ler Pro Main Menu indicating a software update is available.

A WARNING

It is highly recommended that the unit is stowed before performing any updates.

NOTE: When first setting up the Winegard Trav'ler Pro, it is recommended to connect to an internet source and check for software updates. For more information about software updates, refer to the complete operation manual.

Miscellaneous

Emergency Power Off

The antenna comes with an emergency power off feature. If you need to stop the Trav'ler Pro antenna at any time during a Search or Stow sequence, press "Search", or "Stow" again (i.e. repeat the same command) to stop the antenna. The antenna will stop in its current position and power will be disconnected from the ODU. Once the antenna has stopped, the ODU will automatically reboot and wait for the next command. If the emergency power off feature is used, the antenna may not be in a safe position for travel. Do not move the vehicle until the unit is stowed.

In addition to the Emergency Power Off, you can also perform an Emergency Reset. To do this you need to press all three buttons (Power, Search, and Stow) at the same time. This will immediately cycle power to the IDU and force a restart. Once the IDU restarts, it will come to the ready state and wait for a request.

Emergency Manual Stow

If unable to stow the Trav'ler Pro antenna, it may be necessary to manually stow the antenna in order to travel. Emergency Manual Stow is meant to be used as a last resort and is not meant for common usage.

- 1. To perform the Emergency Manual Stow, make sure the power to the IDU is disconnected.
- 2. Once disconnected, proceed to the roof and remove the six Phillips screws and housing from the turret.
- 3. Disconnect the motor assembly cable from the motor and three 9/64" Allen screws to remove the motor from the turret.
- 4. To lower the antenna, use a 12mm 6-point socket on the elevation motor's square shaft and turn the shaft clockwise to lower the antenna.
- 5. Once lowered to the stow position, reconnect the motor assembly cable prior reinstalling the motor.
- 6. Once the assembly cable is connected, be sure the motor coupler is aligned with the shaft.
- 7. After aligning the motor, install the three 9/64" Allen screws (Torque 25 in-lbs).
- 8. Verify the seal of the gasket prior to aligning the plastic housing over the screw holes, and seat the housing on the gasket.
- 9. Reinstall the six Phillips screws. Do not use a drill, as you can strip the base.

A NOTICE

Before lowering the antenna be sure to antenna will stow towards the back of the vehicle. On the mount base, the transition plate is marked "FRONT" and "BACK." If the antenna is not in a position to stow towards the back of the vehicle, remove the AZ motor assembly cable from the top of the motor and rotate the antenna by hand until the antenna is aligned with "BACK" on the transition plate. Once aligned, reconnected the AZ motor assembly cable and lower the antenna.

Manage Devices

Managing devices can be done from the Device Selection/Add New Device page by pressing the Menu button (3 bars top left) and selecting Manage Devices under My Tools. The Manage Devices screen gives you the ability to register a new device, remove a device, and manage authorized users for devices.

To register a new device, press the green plus sign next to Register New Device at the bottom of the page. To remove a device, press the trash icon.

Add an authorized user by pressing the green plus sign next to the device. Then select "Add New User". At this point, you will be asked to enter the person's name, email address, and select if they are the owner or a guest. Owner access will not expire whereas if you want to give someone temporary access, set the owner field to "false" and set "expires on" to the desired date. The guest access is intended to be set up for anyone needing temporary access such as a dealer or mobile technician. The IDU has the ability to pair five devices to it.

Source(s): Winegard Trav'ler Pro Automatic Multi-Satellite TV Antenna Operation Manual Rev5-21 (Models: SK2DISH, SK2SWM3) Product(s): Winegard Trav'ler Pro Automatic Multi-Satellite TV Antenna (Models: SK2-100/SK2DISH, Newmar Part Number: 161392) Winegard Trav'ler Pro Automatic Multi-Satellite TV Antenna (Models: SK2-300/SK2SWM3, Newmar Part Number: 161393)

Winegard Trav'ler Pro Satellite TV Antenna AutoStow Operation

This article provides important information about the Winegard Trav'ler Pro Satellite TV Antenna AutoStow feature available in select coaches (beginning with the 2024 model year).

NOTE FROM NEWMAR -

Be aware! Since the Trav'ler Pro controller is 120-volt-operated, Winegard's AutoStow feature will only operate properly when the control box is powered by 120-volt power. In Newmar coaches, this means the coach must be plugged into shore power, the generator running, or the inverter on and supplying 120 volts to provide the necessary voltage. It is possible that if the antenna is raised while the coach is plugged into shore power, and then unplugged from shore power without the inverter or generator on, the dash antenna up warning indicator may not activate, and the antenna may NOT AutoStow when the coach's park brake is released.

Theory of AutoStow Operation for Newmar Coaches

Terminology and Modes

- Gnd The brake is being pressed and ground is being applied to J7 Pin 4 on rear panel of the IDU.
- Buzzer The internal IDU buzzer.
- Dash Indicator J7 Pin 1 is pulled low, which will illuminate the RV dash indicator.

Normal Mode

- Stowed Position: When Gnd is applied, nothing happens. (No dash indicator, no buzzer, and the unit stays stowed.) If Search or Stow is pressed on the IDU and Gnd is present: The IDU displays "Back-Panel LOCKED", the buzzer turns on and dash indicator turns on for ~2 seconds. Same thing happens when Stow, Search, Install Antenna, or Adjust Antenna is activated from the App.
- Search in Progress: When Gnd is applied, the search stops, buzzer turns on, dash indicator turns on, and the unit stows. Once stow is complete, the buzzer and dash indicator turn off.
- **Search Completed:** When Gnd is applied, the buzzer turns on, dash indicator turns on, and the unit stows. Once stow is complete, the buzzer and dash indicator turn off.

Service Mode

In Service Mode, the antenna is raised to 70 degrees elevation. When Gnd is applied, the buzzer turns on and the dash indicator turns on until the Gnd is removed. The unit doesn't stow as a safety precaution. If the unit is in Service Mode, there are situations where someone could be on the RV roof working on the unit and someone else turns on the ignition key or taps the brake; in this condition, it wouldn't be safe to move the antenna.

Travel Mode

In Travel Mode, the unit is automatically stowed, so when Gnd is applied, the unit remains stowed with no buzzer or dash indicator.

Low-Power Mode

- **Not stowed:** When Gnd is applied, the buzzer turns on, dash indicator turns on, and the unit stows. Once stow is complete, the buzzer and dash indicator turn off.
- Stowed: When Gnd is applied, nothing happens. (No dash indicator, no buzzer, and unit stays stowed.)

Additional Conditions

If a Stow is started from the IDU front panel or App, then Gnd is applied, the buzzer turns on and dash indicator turns on. The stow that was already started continues without interruption. When stow is complete, the buzzer and dash indicator turn off.

Not Stowed: If Gnd is applied, the buzzer turns on, dash indicator turns on, and the unit starts to stow. If Stow is pressed on the IDU front panel or App before the stow is complete, the stow is interrupted and re-started. Once the stow is complete, the buzzer and dash indicator turn off.

Source(s): Trav'ler Pro AutoStow Customer Interface Theory of Operation (Provided by Winegard; Version 8/29/2022)

AUDIO SYSTEMS

Bose TV Speaker Quick Start (Model: 838309-1100)

This article provides basic operation instructions for a Bose TV Speaker (Model: 838309-1100).

Remote Control

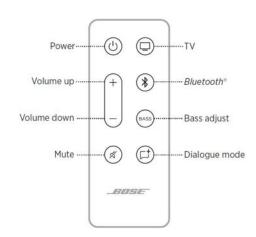
Power

On the remote, press the Power button to power the speaker on/off. When powered on, the speaker defaults to the last active source.

- When you plug the speaker into an AC (mains) outlet, the speaker automatically powers on.
- The first time the speaker is powered on, the speaker defaults to the TV source.
- If the speaker is connected to the TV using an HDMI cable, the speaker changes to the TV source whenever the TV is powered on.

Auto-Wake

You can set the speaker to power on whenever a sound signal is received from an optical or analog cable. On the remote press and hold the Power button I until you hear a tone and the TV and Bluetooth lights on the speaker blink amber 3 times to switch between auto-wake and default power settings.



Volume

Volume Up: Press +. NOTE: To quickly increase the volume, press and hold +.

Volume Down: Press -. NOTE: To quickly decrease the volume, press and hold -.

Mute/Unmute: Press the Mute button. When audio is muted, the light on the speaker of the current source (TV or Bluetooth) pulses white until audio resumes. TIP: You can also press + to resume audio.

Sources

You can control your TV and Bluetooth connections using your remote. To control a source, press the TV button or Bluetooth button) on the remote for the source you want to control.

Dialogue Mode

Dialogue mode improves the clarity of dialogue and vocals in movies, TV programs, and podcasts by adjusting the audio balance of the system. On the remote, press the Dialogue mode button to switch between Dialogue mode and your default audio settings. When Dialogue mode is enabled, the light for the current source glows green.

Note: When you enable Dialogue mode, it stays enabled for your current source even if you switch to another source or turn off the speaker. To disable Dialogue mode for a source, press the Dialogue mode button again.

Adjust the Bass

On the remote, press BASS. On the speaker, the TV and Bluetooth lights blink white 3 times. Adjust the bass by doing one of the following:

- Press Volume up (+) to increase the bass.
- Press Volume down (-) to decrease the bass.

The TV and Bluetooth lights on the speaker glow to show the current bass setting. Press BASS. The speaker saves the current bass setting.

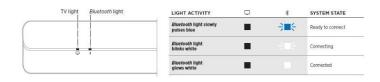
Reset the Bass

On the remote, press and hold BASS until the TV and Bluetooth lights on the speaker blink 3 times. The bass settings reset to original factory settings.

Bluetooth

On the remote, press the Bluetooth button. The Bluetooth light slowly pulses blue.

On your mobile device, enable the Bluetooth feature. TIP: The Bluetooth menu is usually found in the Settings menu.



Select Bose TV Speaker from the device list. Once connected, you hear a tone. The Bluetooth light glows solid white. Bose TV Speaker appears in the mobile device list.

Speaker Status

The LED lights located on the front of speaker show the speaker status. The lights display the current sources highest priority status.

Media Playback and Volume Status

- TV light is solid white: Power on TV
- Bluetooth light is solid white: Connected to a Bluetooth device
- TV light is solid green: Dialogue mode enabled for TV
- Bluetooth light is solid green: Dialogue mode enabled for Bluetooth-connected device
- TV light blinks white: Changing volume for TV
- Bluetooth light blinks white: Changing volume for Bluetooth-connected device
- TV light blinks green: Changing volume in Dialogue mode for TV
- Bluetooth light blinks green: Changing volume in Dialogue mode for Bluetooth-connected device
- TV light slowly pulses white: Mute enabled for TV
- Bluetooth light slowly pulses white: Mute enabled for Bluetooth-connected device
- TV light slowly pulses green: Mute enabled in Dialogue mode for TV
- Bluetooth light slowly pulses green: Mute enabled in Dialogue mode for Bluetooth-connected device
- TV light blinks red: Speaker error disconnect from power then reconnect.

If error persists, contact Bose customer service.

Source(s): Bose TV Speaker Start Guide

Product(s): Bose TV Speaker (Model: 838309-1100, Newmar Part Number: 155172)

REMOTES

SofaBaton Universal Smart Remote Control Quick Start (Model: U1)

This article provides basic operation instructions for a SofaBaton Universal Smart Remote Control (Model: U1). This system is available on 2023 and newer coaches equipped with option J030.



Newmar programs the remote during production to control the factory-installed devices. If additional components are installed after-market, it is up to the user to program the remote by following SofaBaton's instructions for "adding a device."

Getting Started

Load battery.

Download "SofaBaton" App.

Connect remote.



Add Device

(Determine if your devices support IR or Bluetooth.)

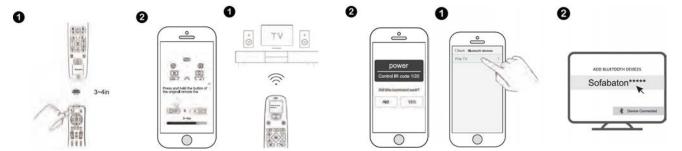
Via IR Learning Mode: Keep U1 Line-of-Sight with your original remote, select the icon of the function key that needs to be copied. Meanwhile, long press the corresponding function key of the original remote. If the App notifies you it's successful, it means it's completed. If not, please try again. [1st set of graphics]



Via IR Matching Mode: Keep U1 Line-of-Sight with your device, click Power first, then choose Yes or No to see if it works. During the process, the U1 remote control will emit infrared signals to the device. And U1 will be able to find the

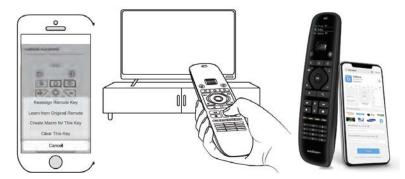
proper code set after searching database. [2nd set of graphics]

Via Bluetooth Mode: If you add a new Bluetooth device, the App would be disconnected from your U1 first. Meanwhile, you can connect your U1 with your phone to complete the remaining steps of adding a new device. [3rd set of graphics]



Start Using

Upon Adding New Devices, Reassign Remote Keys and Configure Macro Keys. Scroll to the desired device and start using it.



Source(s): SOFABATON-U1KT02 U1 Universal Remote Manual and SOFABATON-U1KT02 Universal Remote User Manual

TELEVISIONS

Television Overview

This article provides an overview of the televisions and related equipment installed in the coach. Your coach may be cable ready, and (depending on your floorplan) may have multiple flat screen televisions installed throughout the unit. The televisions are powered by 120 volt electricity, and the coach must be plugged into shore power, using the inverter (if equipped) or have the generator running in order for the televisions to function. The television operation is similar to most televisions used in the home.

The LED television(s) in your coach may be HD (High Definition) compatible, meaning they are capable of displaying the resolution and clarity of High Definition broadcasts and video sources.

A IMPORTANT

The television in the front overhead cabinet will not operate while in transit. Federal regulations require this television to be inoperative while the vehicle is in use, so the power supply is switched off automatically when the ignition is turned on.

Exterior Entertainment Center with Samsung Television

This article provides a basic overview of the exterior entertainment center. For your convenience and pleasure, an Exterior Entertainment Center may be an option on selected floorplans. It may be located in either a basement compartment or in the sidewall of the passenger side of the coach and features a flat screen television

Television

The television is mounted on a swivel bracket that allows you to swing the television out and away from the coach to provide better viewing angles. To release the television from its retainers, grasp the sides of the television firmly and pull it directly toward you. It will release and swing freely to the desired viewing position. To store the television for travel, swing it back into the opening, making sure that it is fully latched.

A IMPORTANT

It is important to make sure the TV is securely locked into position prior to closing the compartment door. Failure to do so can result in damage to the television case and screen.

A IMPORTANT

The electronics used in the Exterior Entertainment Center are not designed for use in wet weather.

The TV should be stored securely in the "travel" position and the basement door closed during rain or other adverse weather conditions. Caution should also be exercised when washing the exterior of your coach to make sure high pressure water does not enter the compartment. Spraying high pressure water at the seal between the doors can cause leaks, and potentially damage the electronics housed in this compartment.



Accessing Samsung's E-Manual Using Your Television

This article provides instructions on accessing Samsung's e-Manual from your television.

Your instruction manual is an informative document designed to give you all the information needed to operate your TV. With information on how to navigate the TV, tips on care, and information on all its functions, the instruction manual offers comprehensive solutions and answers to many of your TV questions. You can access your user manual directly through your TV.

- 1. Navigate to Menu.
- 2. Select Settings.
- 3. Select All Settings.







- 4. Select Support.
- 5. Select Open e-Manual.





- NOTE FROM NEWMAR -

The Samsung e-Manual may contain features not applicable to your television.

Source(s): "How to find instruction manual & user guide for your Samsung TV"

(https://www.samsung.com/uk/support/tv-audio-video/how-do-i-find-the-instruction-manual-or-user-manual-for-my-samsung-tv/)

Samsung Television Care and Maintenance

This article provides basic care and maintenance instructions for a Samsung television.

Clean your Samsung TV

There's nothing worse than straining to watch a show or movie because the screen is smudged or covered in dust. If you don't clean your TV [...] occasionally, dust and fingerprint smudges can build up. Periodically clean your TV [...] so it keeps looking brand new and you can keep seeing the picture clearly.

A IMPORTANT

Never use any type of window cleaner, soap, scouring powder, wax, or any cleanser with solvents such as alcohol, benzene, ammonia, or acetone. Never use abrasive pads or paper towels. If you do, you can scratch the screen or strip the anti-glare coating off the screen and cause permanent damage. Never spray water directly onto the TV. Make sure to wipe the TV as gently as possible. TV screens are fragile and can be damaged when pressed too hard.

How to Clean Your Samsung TV

- 1. Turn the TV off and let it cool down for a few minutes before unplugging it.
- 2. To clean the frame and screen, gently wipe it with a microfiber cleaning cloth. Make sure to wipe the TV frame and screen as gently as possible. TV screens are fragile and can be damaged when pressed too hard.
- 3. If you don't see results, spray distilled water onto your microfiber cleaning cloth, and gently wipe the frame and screen.
- 4. Let the TV dry completely before you plug the TV back in.

Source(s): https://www.samsung.com/us/support/ (2023.03.16)

Samsung Television Channel Programming Overview

This article provides the basic channel programming instructions for a Samsung TV.

A NOTICE

The following steps will need to be completed each time the coach is moved to a new location.

[...]Your TV has a tuner that can scan for and automatically program local channels that will appear on your channel list. Plus, an antenna will help your TV find even more channels and improve the quality of the signal.

Connect a cable or antenna and scan for channels

Channels and broadcasts just don't magically appear on your TV. You have to connect an antenna or cable and then scan for local stations. Once you do this, available channels nearby will be yours to watch!

First, make sure you have an antenna or a cable box already installed and set up to go. Change the source on your TV to "TV." There are a few ways to do this.

- You can press the Source button on your remote and then select the source labeled TV.
 - The Broadcasting menu will be greyed out if you do not first change the source to TV.
- You can press **Home**, navigate to **Menu**, and then select **Connected Devices**. From here you can select which source your TV is connected to.

Once you are on the TV source, use the directional pad or arrow buttons on your remote to select Settings (All Settings).



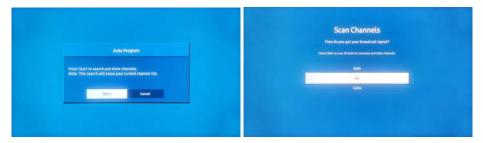




Select Broadcasting, and then select Auto Program.



Select Start to begin auto-programming, and then select either Air or Cable.



Both



From the "Scan Channels" screen, do not select the BOTH option, as you can only receive signal from over-the-air OR cable, based on the ON/OFF position of the antenna power booster or Rayzar antenna power switch.

Air

To receive local over-the-air channels:

- 1. Turn the antenna power booster or Rayzar antenna power switch ON. The green LED light should be illuminated.
- 2. Select Air from the TV programming menu if you are using an antenna.

Cable

To use park cable:

- 1. Connect the coach to the park cable connection via coax cable.
- 2. Turn off the antenna power booster or Rayzar antenna power switch to allow the signal to bypass the antenna and connect to the television or selector switch through the same coax cable. The green LED light should not be illuminated.
- 3. Select **Cable** from the TV programming menu if you are using park cable.

Your TV will begin to scan for channels. After it's done, select Close to finish.

For more information, refer to the Antenna and Cable Overview article in Newgle or the television's built-in e-Manual.

Source(s): Portions of this content are derived from a Samsung support article "Scan for Channels from an Antenna or Cable Box on Your Samsung TV" (on 7/18/2023)

Connexx 22" TV Quick Start (Model: CX22A24DCS)

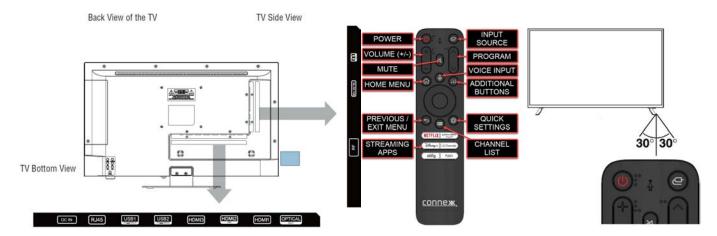
This article provides basic operation instructions for a Connexx 22" TV (Model: CX22A24DCS). This TV is used on select 2025 and newer coaches equipped with fixed bunk beds.

Connect the TV

1. Insert the female end of the Power Cord into the back of the TV. Then carefully plug the standard AC plug end into a

12V AC outlet.

2. If you are connecting other devices to the TV, utilize the appropriate optional cables and connect to the appropriate ports on the back or side of the TV.



Remote Control

Point the remote towards the remote control sensor of the TV and use it within 8 meters.

To replace the batteries: Open the battery compartment cover on the back side. Insert two 1.5V (AAA) size batteries in correct polarity. Close the cover.

Notes:

- Batteries should last approximately one year under normal use (actual use will vary).
- If the TV will remain inactive for an extended period of time, remove the batteries from the remote control to avoid possible damage due to leakage.
- Do not mix old and new batteries or different types of batteries.
- Do not throw batteries into fire or water.
- The batteries (battery pack or batteries installed) should not be exposed to excessive heat such as sunshine, fire or the like.

User Guide

It provides guides related to TV manipulation, broadcasting, content utilization, device connection, smart functions, settings and problem solving so that user can refer to it when using TV. You can watch the manual at the same time while watching TV or running the app. You can easily view the user's manual using the Description menu or Magic Explorer function.



Source(s): Connexx Quick Start Guide CX22A24DCS

Product(s): Connexx 22" Smart TV (Model: CX22A24DCS, Newmar Part Number: 173226)

TELEVISION LIFTS

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: TV Lift

This article provides an operational overview for coaches equipped with a 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface and a TV lift. The Home screen on the KIB 10.1" Central Monitor Capacitive Touch Panel displays the televator (television lift) controls. The same screens will also appear on the KIB Connected Solutions apponce installed on a mobile device.

A IMPORTANT

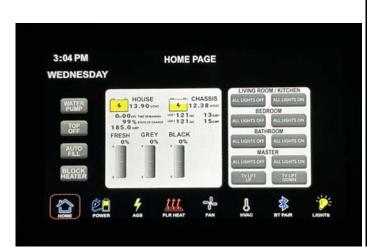
The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

From the Home screen on the 10.1" touch panel or on the 5" touch panel (or from the Motors icon on the app), control the TV lift using the up and down buttons.

- 1. Press and release the TV Lift Up button to raise the TV.
- 2. Press and release the TV Lift Down button to lower the TV.
- 3. The lift will continue in the selected direction until it reaches the end of travel. If you need to stop it at any time during the travel process, press the switch again in either direction.
- 4. Under normal operation, the user will raise the televator to watch the TV, then lower it before traveling. However, when raising the televator and then immediately lowering it, the switch may need to be pressed a second time, as the control circuit timer may still be active.

A IMPORTANT

Stow the television in the lowered position before travel.





EXTERIOR

This chapter provides information regarding the coach's exterior components, such as awnings, compartments, doors, steps, and the overall exterior construction of the coach. If applicable to the model, this chapter also contains information for components installed in handicap-accessible coaches and toy haulers.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

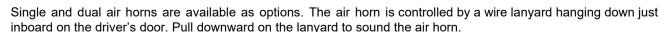
AIR HORNS

Super C Air Horn Operation

This article provides basic operation instructions for an Air Horn installed on Super C coaches.

A NOTICE

It is possible to have both the electric and the air horn installed on one vehicle.



Source(s): M2 Freightliner Chassis Driver's Manual



AWNINGS

Awning and Slideout Topper Overview

This article provides a brief operational and maintenance overview of the awnings and slideout toppers.

Slideout Toppers

Slideout toppers operate as the slideouts are extended and retracted. Check the slideout topper for debris (leaves, branches, ice, snow, etc.) before retracting the slideout. If pooling has occurred after rain, one way to remove water on the slideout roof or topper is to tilt the coach using the leveling system to aid in water runoff.

A CAUTION

Slideout toppers should be retracted when snow, heavy rain, wind, and severe weather conditions are expected. Never leave slideout toppers open or unattended during severe weather and/or accumulating rain.

Awnings

Awnings are a standard feature on your coach. Newmar offers a variety of brands and types of awnings, depending on the year and model of your coach, as well as the available options that were selected when your coach was built.



Select models may feature entrance door, window awnings, and/or patio awnings. The patio awning is the larger-sized awning on the coach and is the main awning. These awnings connect at or near the roof, providing shade and light rain protection on the passenger side of the coach. Awnings with LED strips may also provide lighting when desired.

The powered patio, window, and door awnings (if equipped) on your coach can be operated with ease using the appropriate switch(es) to extend or retract the awnings as desired. The switch is typically located in the overhead control panel. If they are not at this location, check above the passenger window, as it may be hidden by the window shade. Some coach awnings may also operate via remote control, KIB touch panel, or SilverLeaf touchscreen (depending on coach year and model). For more information about your specific awnings, refer to the manufacturer's information in Newgle.

A IMPORTANT

Before extending any of your coach awnings, check for any obstructions that may prevent the awnings from deploying properly. Inspect the area around your coach where the awning will extend to ensure proper clearance. Check the awning for debris (leaves, branches, ice, snow, etc.) before retracting.

A CAUTION

Awnings should be retracted during accumulating rains. Pooling water on the awning can result in damage to the awning hardware and/or fabric.

A CAUTION

Awnings should be retracted when snow, heavy rain, wind, and severe weather conditions are expected. Never leave awnings open or unattended during severe weather and/or accumulating rain.

A NOTICE

Damage to your awnings as a result of weather is not covered by warranty.

Girard Awning Operation via Wall Switch and Remote (Model: G and Nova Series)

This article provides basic operation instructions for a Girard Awning via Wall Switch and Remote (Model: G and Nova Series).

NOTE FROM NEWMAR

These brief operation instructions are for quick reference only and should not take the place of the complete Operation Manual provided by this item's manufacturer.

Before using your awning make sure that all of your electrical circuits are operating correctly. Recreational Vehicles can generate AC power from three separate sources. The electrical system transfer switch in your vehicle will select power for the awning as follows:

- 1. Shore Power if connected;
- 2. Generator Power if the generator is running;
- 3. Inverter Power batteries must be charged for inverter operation.

A CAUTION

Never leave awning(s) extended without AC power available to retract awning(s) via the motion/wind sensor.

How to Operate the Awnings

A CAUTION

Never leave the awning open and unattended. All awnings must be closed prior to moving the vehicle for any reason. As an extra safety precaution, check to make sure every awning is fully closed. Before using your awning, ensure that the surrounding area is free of obstructions (trees, walls, pillars, posts, other vehicles, etc.). Damage caused by failure to comply with these instructions is not covered by warranty.

A IMPORTANT

Girard awnings may be operated in light wind and rain conditions. When periods of heavy rain and/or high wind are expected, the awning must be closed. Damage caused by wind and rain is not covered by warranty.

The main patio awnings are operated by a handheld remote switch or a switch mounted in the overhead cabinets or on the wall in the passenger cockpit area. The exact location may vary by coach model and year. Most switches are remote-battery operated. Girard recommends replacing the batteries every year.

Channel + / - Buttons

To operate the awnings, change the channel until the visual indicator displays next to the channel you wish to select:

- Channel "1" selects the front main awning
- Channel "2" selects the rear main awning
- Channel "0" OR "All" selects all active channels for Girard awnings at the same time.



Use the "In/Out" or "Stop" buttons to operate the awning after the desired channel(s) are selected.

- Press and release the "Out" button to extend the awning(s).
- Press and release the "In" button to retract the awning(s).
- Press the "Stop" button during extension or retraction to stop the awning(s) in the desired position between full
 extension and full retraction.

Lock/Unlock Buttons

- Pressing and holding the lock button for 10 seconds will lock the switch panel or the handheld remote control individually. While in lock mode, the display will show the letter "L," and the other buttons will be inoperative. This will prevent accidental operation while locked.
- To unlock, press and hold the the unlock button for 10 seconds.

Note: If the awnings are in the extended position and the remote is locked, the awning will still operate via the motion/wind sensor as long as AC power is present to operate the awning(s).

Light Bulb Button

To turn on or off the awning lights, press the "Light Bulb" button. The button alternates the lights between on and off.

A NOTICE

The awnings will not extend when the park brake is released. However, the main awnings will retract when the park brake is released if they are still being supplied with 120 volt power. All other Girard door and window awnings (if equipped) will lose power and will not operate when the park brake is released.

Source(s): Girard Multi-Channel Wall Switch (98GC782) Overview

Product(s): Girard Nova Series Awning (Model: NOVA, Newmar Part Number: NovaAwning)

Source(s): G-2000 Patio Awning G-1500 Door Awning Installation, Operation, Adjustment, and Repair (REV. 01272016)

Product(s): Girard G Series Awning (Model: G2000, Newmar Part Number: G2000)

Manually Retracting a Girard Patio Awning

This article provides manual retraction instructions for a Girard patio awning.

In the event of an emergency, the Girard patio awning can be manually retracted using the Allen wrench provided by Girard (or a standard 7mm Allen wrench).

To retract the awning:

- 1. Gain access to the roof using a ladder. Locate the manual override port (there is one on each awning). Both ports are located next to one another in the middle of the coach.
- 2. Remove the rubber cap to reveal the adjustment slot.





3. Insert the 7mm wrench fully, and turn counterclockwise to retract the awning. Another option is to connect the wrench to a battery-powered drill and operate it at a low speed.

A WARNING

Use caution if working on top of your vehicle. The wet roof surface is extremely slippery.

COMPARTMENTS

Compartment Overview

This article provides an overview of the exterior compartments of a coach.

Storage compartments are located on the exterior sides of your unit. These compartments provide additional space for your belongings while you are traveling. Select coach models feature optional manual slide trays and standard lighting, while others may feature compartments complete with power slide trays, dual side access, and automatic LED lighting throughout the storage area.



A IMPORTANT

Before traveling, perform a pre-trip inspection that includes checking each baggage door to ensure each one is latched and locked securely.

A CAUTION

Use caution when packing the storage areas. Do not pack items around water heaters, refrigerators, furnaces, hydronic heating units, or any other heat-producing appliances.



Electric Compartment Locks Overview

This article provides an operational overview for locking and unlocking electric compartment door locks.

A NOTICE

This information is generic in nature and may not be specific to your exact coach model and/or year.

The Cargo **Lock/Unlock Switch** operates the cargo door locks on all compartments with electric locks from one convenient location. This switch is located on the passenger console.

To unlock the doors, press the switch to the unlock position (shown as an unlocked padlock icon). To lock the doors, press the switch to the locked position (shown as a locked padlock icon).





DOORS, HANDLES, AND CHIMES

Doors, Handles, and Chimes Overview

This article provides basic information about the doors, handles, and chimes installed in a Newmar coach. The front entrance door is equipped with a dead bolt lock for added security, and select coach models may have a power flush step well cover.

For your safety and convenience, all current models feature a grab handle at the entrance door to assist you in entering and exiting the coach. Select models may incorporate the keyless entry system, and many have a doorbell button integrated into the grab handle as well.

When the door is opened fully, the door has a "door check" feature that will automatically hold the door open. To close the door, simply pull to release the detent, then close and latch the door. Center entry doors may incorporate a gas strut to hold the door open.

PTL Entry and Screen Door Overview

This article provides an operational overview of the PTL entry and screen door.

Deadbolt Operation

From the inside of the coach, operate the dead bolt by first making sure the door is closed securely in the second stage latch. Rotate the dead bolt lever clockwise. From the outside of the coach, use the key and rotate it counter-clockwise to engage the dead bolt.

A NOTICE

Do not extend the deadbolt before closing the door, as damage may occur.

To lock the door without using the deadbolt, press and hold the number one key on the keyless entry touchpad (if equipped). Flip the red lever before shutting the door, or use the key fob (if equipped).



Entry Screen Door Operation

Store the entry screen door's top screen for travel (if equipped) by pulling down in the center and unlatching the two hooks at the bottom or the single snap. Allow the screen to retract gently while continuing to hold the bottom of the screen. When not traveling, pull the screen down in the center, and latch the screen using the hooks or snap at the bottom.

Entry Door Lock Switch Overview

This article provides an overview about the Entry Door Lock Switch, which may be labeled "ENTR LOCK" or "ENT DOOR."

The entry door lock switch is located on the dash and will lock or unlock the entry door. This switch also allows you to control the cargo locks from inside the coach without arming the security alarm. The entrance door can also be manually unlocked and opened from the inside without the alarm sounding.

- 1. Flip the switch down to lock the doors.
- 2. Flip the switch up to unlock the doors.

Select coaches may be equipped to automatically lock the front entry door when the park brake is released for travel or unlock the front entry door when the park brake is engaged.





ENTRANCE STEPS

Electric Exterior Entrance Steps Overview

This article provides an operational overview of the electric exterior entrance steps installed on select coach models.

With the Entrance Step switch in the overhead cabinet flipped in the operational position, the entrance step will operate each time the entrance door is opened or closed.

If the door is closed when the Entrance Step switch is flipped opposite of the operational position, the step will extend one time. If the door is open when the Entrance Step switch is flipped opposite of the operational position, the step will stay extended. The step will remain in the extended position unless the ignition signal is activated, which overrides the Entrance Step switch. In this case, the step will extend or retract when the door is opened or closed.





Kwikee Electric Entrance Step Quick Start (Model: 22-40 Series)

This article provides basic operation instructions for a Kwikee Electric Entrance Step (Model: 22-40 Series).

Operation

Close the door. The step should retract and lock in the UP position. Open the door. The step should extend and lock in the DOWN position with the under step light illuminated. The under step light operation is as follows:

- The light is on when the step is extended.
- The light is off when the step is retracted.
- In the event the coach door/screen door is left open, the light will turn off after five minutes.
- The under step light is not available on all step models.



▲ CAUTION

Step safely supports up to 300 lbs. DO NOT OVERLOAD THE STEP ASSEMBLY.

WARNING

RISK OF FALL OR SERIOUS INJURY - This vehicle is equipped with a Lippert automatic electric step. Turning the ignition switch to the "ON" position while the entry door is closed will cause the step to retract. Visually confirm that the step is fully extended prior to exiting the vehicle.

WARNING

If the vehicle is driven with the step in the extended position, there is the possibility of causing major damage to both the step and the coach. Always be sure that the step is fully retracted before traveling. If the step is left extended and strikes an obstruction while the vehicle is moving, major damage to both the step and the vehicle could result.



Lock/Stationary Extended Mode

1. If your step is equipped with a step switch, and you would like the step to remain in the extended position while the door is opened and closed, place the step switch in the position for the step to extend when the door is opened and retracted when the door is closed (step assembly follows the door). The step should remain in the extended position with the under step light off when the door is closed.

- 2. With the step switch in the appropriate step lock position, the step extended, and the entrance door closed, turn the vehicle ignition on. The ignition override system will go into effect and the step will automatically retract.
- 3. Turn the vehicle ignition off and open the door. The step will extend and lock in the DOWN position. This is the "Auto Extend" feature. When the vehicle ignition is turned on, the step will always activate with the door movement, regardless of the step switch position.

Maintenance

Step Assembly Lubrication

Clean all mud, salt, and road grime from the step before lubricating. Lubricate all moving parts (bearings, pivot points, slides, clevis pin, and drive linkage ball) every 30 days with a good quality moisture and heat resistant penetrating grease. KwikLube Spray Grease is specially formulated to lubricate Kwikee® Electric Steps and is recommended for lubricating all moving parts. Refer to the complete Kwikee manual for more information.

NOTE: Silicone lubricants and WD-40® are not recommended for use. They have a tendency to evaporate and dry the mating surfaces which leave them vulnerable to the elements.

Source(s): Kwikee by Lippert Components Electric Steps #888 Owner's Manual (2017 and 2021)

MIRRORS AND ACCESSORIES

Hitches and Towing Overview

This article provides an overview of the hitch and towing components. Your motorhome is equipped with a hitch and tow plug, as it is designed for towing light loads. Your hitch may provide you with the capability of towing your car or trailer while traveling. A wiring harness or pigtail is needed to connect the tail lights, brake lights, turn lights, etc. of the towed vehicle with that of the coach. Some coach models feature rear docking lights to assist with tow vehicle hookup at night.

Before Towing

Before towing, inspect all towing connections, including the hitch mounting bolts for unusual wear or corrosion. Check the mounting flanges for any deformation, as well as the hitch welds for any cracks, signs of movement, or fatigue in the hitch assembly. Safe and satisfactory performance of the towing system depends on the type of towing equipment connected to the hitch receiver. The assembled length of the drawbar/towing system used should be kept to a minimum. Do not exceed the rated capacities of the hitch or the components used to attach the towed vehicle or trailer.

A IMPORTANT

Newmar is not responsible for damage or failure of the hitch receiver caused by the use of excessively long drawbars or other styles of drawbars that create leverage loads on the hitch receiver beyond its designed capabilities.

A WARNING

Do NOT cut, drill, weld, or modify hitch.

Towing Capacity

The total weight of the motorhome and any vehicle towed must not exceed the GCWR (Gross Combined Weight Rating). When planning to tow, approaching the GVWR (Gross Vehicle Weight Rating) may reduce the motorhome's towing capacity. When weighing the motorhome, be sure to take passenger locations into consideration. The towed vehicles must have adequate active brakes. Contact your state Department of Transportation or your local Newmar dealer for your state requirements.

A IMPORTANT

The hitch is typically supplied and installed by the chassis manufacturer, and it may be necessary to contact them directly for weight ratings and towing recommendations. Some information may also be available on a data label adhered near the hitch.



Flagpole Assembly Overview

This provides information about the flagpole option available on some coach models (Option # R045).

Assembly Components

The flagpole assembly (Newmar part # 143894 or 138708) should handle any standard 1-inch flagpole that may mount on the side of a house. If the coach is equipped with the optional flagpole mount (Newmar option # R045, Newmar part # 138682 and 138683), it is typically located on the front of the coach just in front of the entrance door. The flag assembly may be shipped from the factory in a kitchen drawer.



Assembly Installation and Removal

The mount's slot allows the angled flag assembly to easily be installed while displaying a flag and easily removed for travel. To display a flag, simply slide the assembly down into the mounting bracket, then install the flagpole (not provided by Newmar). To remove the flag and assembly, reverse the order of installation. For coach owners who wish to have a flagpole assembly installed on their coach, contact the Newmar Parts Department to order the proper assembly components. Newmar recommends having the mount installed by an Authorized Service Center.



Flagpole Safety

A CAUTION

The flagpole assembly is not intended to be used in high wind conditions.

A WARNING

When installing a flagpole assembly, ensure you have proper clearance away from overhead electrical lines or other obstructions.

A DANGER

Do not leave flagpole assembly in mounting bracket while vehicle is in motion.

PAINT, ROOF, AND SIDING

Roof and Sidewalls Overview and Maintenance

This article provides a basic overview and maintenance of the roof and sidewalls.

Sidewalls

Newmar RV sidewalls are designed with structure to make them more rigid and dependable. By building aluminum frames with studs 16 inches on center, your sidewalls and roof will form a strong, lightweight, integrated structure so you can enjoy superior insulation. The sidewalls and end caps of your coach are constructed of smooth fiberglass, which is features an automotive style "Clear-Coat / Color Coat" painted finish.

Exterior Paint Maintenance: For cleaning and waxing instructions and recommended products, refer to the Miscellaneous Care and Maintenance section in Newgle. Paint codes are typically posted on the back side of one of the upper kitchen cabinet doors.

Roof

This unit is manufactured with a 7mm decking material covered with fiberglass or rubber membrane. Proper care and routine maintenance of your roof is necessary for trouble-free performance. Frequent inspection (at least annually) of roof drains, seams, and joints should be performed by an Newmar Authorized Service Center.

- NOTE FROM NEWMAR -

For information about cleaning your roof drains and gutters, refer to the Roof Drains article in Newgle.

Roof Maintenance: Regular cleaning and maintenance is essential to insuring a long, trouble-free life. Before cleaning, it is important that you inspect the sealants and gaskets used to seal components to the roof structure to be certain there is no leakage during the cleaning process. Any cracks or voids in the sealants and seals MUST be repaired prior to spraying the roof with water. Extreme caution should be used when inspecting or cleaning the roof.

A WARNING

It is recommended that access, cleaning, and maintenance be conducted by a qualified professional at your local dealership. Use caution if working on top of your vehicle. The wet roof surface is extremely slippery.

If inspection and/or maintenance becomes necessary, stay on the main roof area. Do not walk or stand on the raised portions of the roof or the gutter rail area (if applicable). Do not exceed 300 pounds on the roof.

A NOTICE

Do not place items on the roof for transportation. The roof was not designed to support the transportation of luggage or other items.

Super C Roof Drains and Gutter Maintenance

This article provides cleaning recommendations and instructions for roof drains and gutters on select Super C coaches,

including Super Star, Supreme Aire, Summit Aire, and Freedom Aire models.

For some Super C coaches, the rear drain pipes are located on the passenger side under the rear cap, and the front drain pipes are located on the driver and passenger sides under the coach near the junction of the cab and coach body.

It is important to make sure the roof drain catch basin strainers are cleaned and kept free of debris. There are four (4) of them, and they are located at the front and rear ends of the roof gutters, on both the left and right sides. They may be covered by the roof-mounted awnings.

The drains can be blown out using compressed air (approximately 60 PSI) from the drain pipes found under the front and rear caps of the main cabin area. There are typically two drain pipes on the passenger side of the rear cap and one on each side of the front cap.

Diamond Shield Advanced Paint Protection Use and Care Guidelines



This article provides basic care and maintenance guidelines for the Diamond Shield paint protection. Follow the use and care guidelines as outlined by Diamond Shield.

A IMPORTANT

Once applied, refrain from washing for 48 hours, washing after that time presents no problems. Do NOT use harsh or abrasive cleaners or detergents.

Step 1: Wipe Regularly

Wiping bugs and road grime off your vehicle, with a wet soft cloth, as soon as you get a chance is essential to keeping your film looking great. This will also reduce the risk of staining and discoloration from bug acids, runoff stains, and road grime left on for an extended period. When done, apply 303 Aerospace Protectant!

Step 2: Wash Monthly

Washing monthly will give your film the deep clean it deserves and will ensure the film remains crystal clear. We recommend using Advanced RV & Auto Wash and a soft cotton or lambswool mitt to apply. Do not use any abrasive brushes, rags, cloths, or compounds. When you're done, apply 303 Aerospace Protectant!

M IMPORTANT

Do not use Rain-Ex products or bug and tar removers.

Step 3: Wax Quarterly

Waxing your film on a quarterly basis, or more, will add that extra layer of protection to your film. Keeping it waxed will prevent damage from bug acids and road grime, and allow the film to effortlessly be wiped clean. We recommend using Advanced RV & Auto Wax, a synthetic polymer cream wax designed specifically for Diamond Shield.

General Care Precautions

Several cleaning techniques and cleaning products should NEVER be used on the areas protected by Diamond Shield on your vehicle.

- Do not pressure wash.
- Do not use Rain-X products.

Do not use any abrasive brushes, rags, cloths or compounds.

This general care list is not comprehensive. Please call Diamond Shield at 1-888-806-5862 before using any products not specifically listed on <u>Diamond Shield's website</u>. Using unapproved sprays, cloths, or waxes may cause damage to the film, which may not be covered under warranty.

WINDOWS AND WINDSHIELDS

Hehr/LCI Emergency Exit and Vent Window Operation

This article provides instructions for opening and closing Hehr/LCI emergency exit and vent windows.

Hehr/LCI Egress Emergency Exit Window

Select Hehr windows have an opening window pane in the egress window for ventilation. This style of window can also be opened in the event of an emergency.

To open the vent: Unclip and lower the arm. Swing the arm 90 degrees, and push out on the arm until the red handle latches.

To close the vent: Unclip the red handle from the latch by lifting slightly while pushing outward. Once the latch releases, pull the arm in until the window is closed. Rotate the arm 90 degrees until it latches into the closed position.

In the event of an emergency, open the window: Remove the screen by pulling out on the red handle. Push and release the lever from the locking hook. Rotate the lever 90 degrees, and push it through the slot in the window frame. Escape through the opening.



To open the emergency exit double-latched window: Flip both latches up to the open position. Push out on the window.

To close the emergency exit double-latched window: Pull the window shut while holding the window track with one hand. With the other hand, rotate the latch up until it connects with the track on the window. Press the front side down until it latches. Repeat the steps for the second latch.



Freightliner Super C Driver and Passenger Power Window Overview (2024 and Newer)

This article provides instructions for operating the driver and passenger power window on a Freightliner Super C coach (2024 and newer).

Power windows are standard on M2 Plus, S2 Plus, and Cascadia vehicles. With power windows, the driver's door has switches mounted in the top of the door that separately control the driver and passenger windows. Additionally, the passenger door has a switch mounted in the top of the door that controls the passenger-side power window.

A CAUTION

There is no anti-pinch protection when the window is almost closed. Be sure to clear all objects from the window before closing.

The window switches have three positions: lower window, neutral, and raise window. Press forward on the switch to lower the window.



Hold the switch down in the forward position for approximately one second to activate the express function; the window will continue to roll down after the switch is released. Press the switch in the rearward position to raise the window.

Source(s): Freightliner Business Class M2 PLUS Driver's Manual (2/10/2023) Section 5.7

How to Prevent Window Condensation

This article provides a preventative overview of condensation on the inside of the windows and within the coach. Accumulation of condensation on surfaces within your unit occurs when warm, moist air contacts a cool surface. It is most evident on the inside of windows.

A IMPORTANT

Since surface condensation within the coach cannot be controlled by the manufacturer, damage caused by condensation is not covered by your Newmar Limited Warranty.

Damage may occur to your unit if excessive condensation exists. This problem can be controlled by:

- 1. Slightly opening a window or roof vent to allow the moisture to escape from the unit.
- 2. A small dehumidifier is also very effective in removing moisture from the air.

Condensation levels are highest during times when a person is cooking or taking a shower in the unit, but these are not the only times condensation is present. Condensation can migrate through ceiling panels and saturate the fiberglass insulation in your ceiling cavity. This condition often causes the occupants to believe the recreational vehicle has a roof leak. Walls and ceiling panels may also become wet when the moisture accumulates on these surfaces.

A IMPORTANT

Newmar Corporation does not recommend the use of any catalytic heaters.

Windshield Maintenance and Replacement

Care and Maintenance

Keeping your windshield clean will provide optimum visibility to view the road ahead. Should you encounter rock chips or cracks, have them fixed by an automotive glass professional immediately to avoid costly windshield replacement. If the crack spreads, replacement may be necessary.

A CAUTION

Do not operate the windshield wipers with damaged blades, as they may cause damage to the glass. Damage to glass by rocks, damaged wipers, or other foreign objects are not warrantable repairs.

Check the windshield washer fluid level prior to each trip, and top off the fluid reservoir as needed.

Windshield Replacement

When replacing a windshield, Newmar highly recommends purchasing the new windshield through the Newmar Parts department to ensure proper windshield fit. Customers and dealers have experienced many size and installation issues when attempting to use aftermarket windshields. If your windshield needs replaced, make sure that your dealer or glass replacement company purchases the replacement windshield directly from Newmar. The wiper arms should also be replaced if or when they are removed from the coach. Wiper arms are also available for purchase through the Newmar Parts department.

NOTE FROM NEWMAR -

Information regarding windshield and wiper arm replacement may not be relevant to Freightliner Super C coaches. Refer to your chassis manufacturer's operator manuals for more details.

Skylights Overview

This article provides basic information about the skylight installed in the coach.

For improved lighting and headroom, a skylight may also be installed in the bathroom over the shower. The opening provides additional light during daylight hours, and the skylight is tinted to provide privacy and reduce glare.

The skylight should be inspected with the roof and components, and the sealant should be maintained. Some sealants are not compatible with the skylight material. Newmar recommends using Surebond SB-140 butyl sealant around the skylight. Periodic cleaning using a mild detergent or cleaner specifically designed for plastics (such as Novus No. 1) is necessary; cleaning frequency may depend on the surrounding conditions while driving, parking, or storing the coach.



WARNING

It is recommended that access, cleaning, and maintenance be conducted by a qualified professional at your local dealership. Use caution if working on top of your vehicle. The wet roof surface is extremely slippery.

WIPER SYSTEMS

Wiper System Care and Maintenance

This article provides basic care and maintenance about the coach's wiper system, as well as information about wiper blade replacement.

Maintaining the Wiper Blades

Proper care and maintenance of your wiper blades is critical to maintaining good visibility and safe operation of the coach. Clean the rubber element every time you fill your gas tank, and remove loose dirt and road grime from the windshield. When washing your coach, use a small amount of non-abrasive glass cleaner on a wet sponge to clean both the windshield and the rubber wiping elements. In colder climates, use an ice scraper to remove snow and ice. Using your wipers to de-ice your windshield can damage the blades, as well as the arm and wiper motor.

Streaking, chattering, and worn blades may be caused by dry rubber that has hardened and cracked. Streaking can also be caused by oil, tree sap, road tar, or other foreign substances on the blade rubber or windshield. Chattering sounds as the blade passes across the windshield are caused by the "deformity" or "curve" in the rubber that some wiper blades develop over time.

Worn, damaged, or split rubber around the wiping edge is generally caused by age and use, but may be due to the effects of the sun's ultraviolet rays on the rubber. Damage may also be caused by ice scrapers, automatic car washes, or vandalism. Damage to glass by rocks, damaged wipers, or other foreign objects is not warrantable repairs.

Replacing the Wiper Blades

A WARNING

Replace your windshield wiper blades when they become worn or damaged. Worn or damaged wiper blades may cause damage to the windshield, as well as interfere with the driver's ability, possibly resulting in a crash leading to injury or death.

To inquire about replacement wiper blades or other components, refer to the NewPar (formerly ComNet) <u>parts catalog</u> or contact the parts department at **1-800-731-8300** (select the appropriate menu option). This will help ensure the proper wiper fit. The wiper arms should also be replaced if or when they are removed from the coach. Wiper arms are also available for purchase through the Newmar Parts department.

NOTE FROM NEWMAR

Information regarding windshield and wiper arm replacement may not be relevant to Freightliner Super C coaches. Refer to your chassis manufacturer's operator manuals for more details.

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HVAC

This chapter provides operational instructions for components related to dash and roof air conditioning, fans and ventilation, heating systems, and climate control.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

A WARNING

Newmar has installed heat sources designed to adequately heat the coach under normal circumstances and temperatures. Newmar does NOT recommend the use of other space heating devices. The use of space heaters or other similar devices may increase the risk of fire and may result in tripped breakers within the coach's electrical system and/or the electrical supply to the coach.

AIR CONDITIONING AND HEAT, ROOF

Roof Air Conditioning and Heat Overview

This article provides a brief overview of the roof air conditioning and heat pump, as well as filter maintenance. Keep your coach comfortable year-round!

Your coach's air conditioners can be operated using the Comfort Control thermostat, KIB V-Bus LCD touchscreen, or the appropriate SilverLeaf screen. For more detailed information about climate control, refer to the appropriate product page(s) and associated content in Newgle.

Some roof top air conditioners can work as a heat pump when desired to produce heat instead of cooling. These models are effective at producing heat at ambient temperatures (above approximately 40 degrees). If the temperature drops below the threshold, most controls will revert to the furnace or hydronic heating system to produce the necessary heat.

Most air conditioning systems have a two-minute built-in time delay, so there may be a slight delay in the operation of the air conditioner after the thermostat is set.



Filter Maintenance

On some coach models, grills with filters may be located behind decorative covers on the ceiling.

- 1. Remove the vent cover grill from the return air duct or the grill from the air conditioner ceiling assembly.
- 2. Remove the filter.
- 3. Wash, rinse, and dry the filter. If the filter does not come clean, or is damaged, replace it with a new filter. Do not substitute other types of filters, as this may restrict air flow and cause other issues. Do not operate the air conditioners without filters.
- 4. Reinstall the filter on the cover, and place it back into the vent.
- 5. Repeat the process for each return air vent.

For more information about accessing filters underneath decorative covers, refer to other Newgle articles (How to Access and Clean Air Conditioner Filters with... louvered wood covers, friction, mechanical, or magnetic latch covers, etc.).

FANS AND VENTILATION

Urea-formaldehyde Safety Guidelines

This article provides information about proper ventilation to prevent issues such as condensation and the release of urea-formaldehyde from coach products. Depending on your vent setup, they may be controlled by a switch directly on the vent assembly or the switches located on the wall. Dash fans may also be installed on or in the front overhead cabinet and aid in windshield defrosting and air circulation in the cockpit area of the coach.

Urea-formaldehyde is used in the production of particle board, hardwood plywood, and most paneling. Urea-formaldehyde resin may release formaldehyde vapors into the air, which may cause headaches, and in some people, eye, nose and throat irritation. Formaldehyde may intensify some allergies or upper respiratory problems like asthma.

Providing proper ventilation as needed by operating the power roof vents and opening windows should reduce the risk of such problems.

This vehicle is TSCA TITLE VI COMPLIANT and contains composite wood products that comply with the applicable California Code of Regulations Section 93120.2(a) Phase 2 (P2) formaldehyde emission standards specified on the above date of manufacture.

This vehicle is TSCA TITLE VI COMPLIANT (conforme au titre VI de la TSCA) and contains composite wood products that comply with the applicable California Code of Regulations Section 93120.2(a) Phase 2 (P2) formaldehyde emission standards specified on the above date of manufacture.

This vehicle is designed as a Recreational Vehicle.

When used for an extended period of time, while furnace heating is required, sweating and condensation conditions may occur.

The following precautions should be taken to minimize these conditions:

- (1) Use range hood when cooking.
- (2) Use the bathroom power vent when bathing or showering.
- (3) Open windows slightly for ventilation whenever possible.
- (4) Use dehumidifier to keep humidity as low as possible.

NI-13

IMPORTANT NOTICE Certain of our forest product suppliers have advised that urea-formaldehyde is used in the production particle board, hardwood plywood or paneling which they supply us and which we utilize in our finish dutc. These suppliers have requested that we communicate this to our customers. For your information, we are reproducing samples of statements which have been provided to us by our suppliers. WARNING: THIS PRODUCT CONTAINS A UREA-FORMALDEHYDE RESIN AND MAY RELEASE FORMALDEH/DE VAPORS IN LOW CONCENTRATIONS. FORMALDEH/DE CAN BE IRRITATING TO THE EYES AND UPPER RESPIRATORY SYSTEM OF ESPECIALLY SUSCEPTIBLE PERSONS SUCH AS THOSE WITH ALLERGIES OR RESPIRATORY AILMENTS. PROPER VENTILATION SHOULD REDUCE THE RISK OF SUCH PROBLEMS. IF SYMPTOMS DEVELOP, CONSULT YOUR PHYSICIAN. NING: IRRITANT: THIS PRODUCT CONTAINS A UREA-FORMALDEHYDE RESIN AND MAY RELEASE FORMALDEHYDE VAPORS IN LOW CONCENTRATIONS, FORMALDEHYDE CAN BE IRRITATING TO THE EYES AND UPPER RESPIRATORY SYSTEM OF ESPECIALLY SUSCEPTIBLE PERSONS SUCH AS THOSE WITH ALLERGIES OR RESPIRATORY AILMENTS. PROPER VENTILATION SHOULD REDUCE THE RISK OF SUCH PROBLEMS. IF SYMPTOMS DEVELOP, CONSULT YOUR PHYSICIAN. RNING: THIS PRODUCT CONTAINS A UREA-FORMALDEHYDE RESIN AND MAY RELEASE FORMALDEHYDE VAPORS IN LOW CONCENTRATIONS. FORMALDEHYDE VAPOR MAY, IN SOME PEOPLE, CAUSE HEADACHES, EYE, NOSE, AND THROAT IRRITATION AND AGGRAVATION OF ALLERGIES AND RESPIRATORY PROBLEMS, SUCH AS ASTHMA. PROPER VENTILATION SHOULD REDUCE THE RISK OF SUCH PROBLEMS. Robert Weed Plywood Corp. Ventilation is important in maintaining a comfortable envi cussion of ventilation contained in your Owner's Manual.

Dometic Fan-Tastic Vent Fan and Wall-Mounted Controls Quick Start (Models: 5300 and 5350)

This article provides basic operating instructions for a Dometic Fan-Tastic Vent and associated wall-mounted controller (Model: 5300 and 5350).

Vent Fan Operation

The Dometic Fan-Tastic Vent Fan ("vent fan") is a roof ventilation system designed for use in RVs to allow maximum airflow and additional protection from the elements while using a vented opening. In addition to speed settings and manual or automatic lid operation, options may include a rain sensor to stop the vent fan and close the lid when it senses moisture.



CAUTION

WATER DAMAGE/LEAK HAZARD. Failure to obey the following instructions could result in minor or moderate

injury or property damage:

- Do not leave the vent lid open and unattended for extended periods of time, or under unusual weather conditions that may result in leakage and serious damage.
- Do not use this product in inclement weather.

Using Wall-Mounted Controls (Models 5300 and 5350)

When the fan is running: Closing the lid by pressing the UP/DOWN button shuts OFF the fan blade. Re-opening the lid using the UP/DOWN button will revert the fan blade movement to its previous set speed. Using the ON/OFF button will not do this; the ON/OFF button resets the fan to normal operation.

Fan Power ON/OFF - Model 5300 and 5350:

- Press to turn ON the fan. This will start the fan on HIGH.
- Press to turn OFF the fan. This will stop the fan and close the lid.

Rain Sensor LED - Model 5300 and 5350:

- This LED will illuminate when the rain sensor has been turned OFF at the wall control.
- The rain sensor can be turned ON or OFF by pressing the DOWN button for three seconds.

Fan Speed - Model 5300 and 5350:

- Press UP to increase the fan speed.
- Press DOWN to decrease the fan speed.
- The fan has 13 speeds, not including OFF.

Vent Lid OPEN/CLOSE - Model 5300:

- When the vent lid is closed, press the UP button once to open the vent lid.
- When the vent lid is open, press the DOWN button once to close the vent lid.
- The rain sensor can be turned ON or OFF by pressing this button for three seconds.

Vent Lid OPEN/CLOSE - Model 5350:

- When the vent lid is closed, press this button once to open the vent lid.
- When the vent lid is open, press this button once to close the lid.
- The rain sensor can be turned ON or OFF by pressing this button for three seconds.

Air OUT/IN - Model 5350:

- When the vent lid is open, press this button once to reverse the fan blade direction; press it again for the opposite direction. Once pressed, the motor will slow and then reverse direction.
- If the button is pressed again during the reversing cycle, a double-beep will indicate the cycle is in progress.
- The function can only be changed after the reversing cycle is complete.

Cleaning the Fan

- 1. Remove and inspect the fuse, and replace if necessary. For fuse removal instructions, refer to the Installation and Operation Manual.
- 2. Remove the Pop N' Lock™ screen ring by grasping the finger tab with one hand and pulling straight down. Use your free hand to brace against the screen assembly (control panel) to prevent breaking the Pop N' Lock™ screen. Removing the Pop N' Lock may be difficult at first, but will get easier with repeated removal.
- 3. Use one hand to hold the fan blade to prevent it from turning and remove the Phillips-head screw from the center hub face of the fan blade. With the fan-blade screw removed, grasp the fan blade with two hands on opposite sides (for example, the 3:00 and 9:00 positions) and pull down firmly. It may be necessary to wiggle the fan blade up-and-down and side-to-side until it slides off the motor shaft.

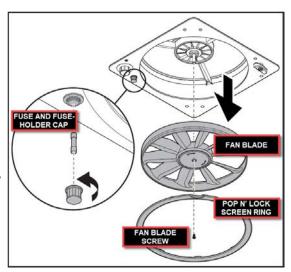




- 4. Clean the Pop N' Lock™ screen insert and fan blade with window cleaner or non-abrasive dish soap and warm water. You may also place the screen insert and fan blade in the top rack of an automatic dishwasher. (Optional: Once the screen and blade are clean and dry, wipe or spray a water-based (not petroleum-based) protectant on the screen and blade, and buff to a high gloss. This minimizes dust and dirt build-up and eases future cleaning.)
- 5. Re-assemble the fan by reversing the steps above.

Source(s): Dometic Fan-Tastic Vent Fans and Controls Installation and Operation Manual, Revision D 10/2020

Product(s): <u>Dometic 9071-09 5350 Vent Controller (Model: 5350, Newmar Part Number: 156306); Dometic 90709-09 5300 Vent Controller (Model: 5300, Newmar Part Number: 160474)</u>



HYDRONIC HEATING

Oasis Hydronic Heating System Overview

This article provides basic operating instructions for the Oasis Hydronic Heating system.

For your comfort, your coach may be equipped with the Oasis heating system. This system uses a boiler and a pump to heat and recirculate hot fluid through a series of convectors placed strategically throughout your coach. Fans located on the convectors provide circulation of the warmed air for even, efficient heating.

How Hydronic Heating Works

Hydronic central heating is the use of a heat generator commonly called a boiler (or furnace) to raise the temperature of a heating medium, generally water or water and glycol mixture. The heated fluid is then circulated from the boiler through pipes to heat emitters such as passive radiators, convectors, and under-floor heating coils, through the interior of the motorhome, and domestic hot water heat exchanger. The fluid loses its heat through this circulation and the cooler fluid then returns to the boiler for reheating.

A WARNING

Never attempt to modify this furnace. Fire, explosion, asphyxiation, or carbon monoxide poisoning may occur. If the furnace malfunctions, consult a trained service technician.

The Oasis system uses two different sources for heat. The primary heat source for the Oasis system, and most efficient, is the diesel burner, which uses diesel fuel from the fuel tank to burn and create heat. The output of the diesel burner is 50,000 BTU's. Select double shower floorplans may be equipped with the 85,000 BTU model.

The second heat source is an electric heating element. It is important to note the difference between the two systems. The electric heating elements have two 5,000 BTU heating elements and should be used only to help maintain the temperature once the diesel burner has brought the system up to proper operating heat levels. From a cold start, the 5,000 watt electrical heating elements will not operate the system alone.

Operation

Pressing the Elec 1 (AC 1 Element) and/or Elec 2 (AC 2 Element) ON/OFF button from the appropriate control panel (Oasis control panel, KIB touch panel, or SilverLeaf touchscreen display) will turn them on or off. Pressing the Burner ON/OFF button will turn the diesel burner on or off. For the most heat and hot water capability, Newmar recommends turning on both electric elements and the diesel burner.

A NOTICE

For more information relating to Oasis hydronic heating operation, please refer to the appropriate product pages and/or knowledge articles in Newgle. Systems may include (but are not limited to) the Oasis Control Panel, Dometic thermostats, KIB touch panels, and/or SilverLeaf touchscreens.

Note: On coaches without SilverLeaf, the Oasis controls are only available via the KIB touch panel on 2024 and newer coaches. Previous model years may be equipped with an Oasis switch in an overhead cabinet.

Oasis Zones

For heating, your coach is divided into three "zones" on your thermostat or your climate screen, if your coach is equipped with the SilverLeaf or KIB system. The "Furnace" mode will appear in all four zones, but only three are active.

Zone 1 - Dash, Living Room, and Kitchen Convectors: These convectors are located under the dash and kitchen cabinets, and control heat in the cockpit, living room, and kitchen areas. The dash-mounted convector is the only one in your coach that has a two-speed fan. The switch controlling the fan speed is located in the front overhead cabinet adjacent to the diesel boiler switch.

Zone 2 - Middle AC and Heat Pump

Zone 3 - Bathroom Convectors: These convectors are located in the bathroom cabinetry and stool room. The fan switch for the stool room (marked "HEAT") must be in the "ON" position to provide heat in the stool room. In order to receive heat in the Stool Room, a "rear" zone (bathroom or bedroom areas) must be chosen on your thermostat or your climate screen, if your coach is equipped with the SilverLeaf or KIB system.

Zone 4 - Bedroom Convectors: These convectors are located throughout the cabinetry and walls of the rear bedroom area. To activate the Oasis heating system, select your heat source, either diesel or electric, using the switches in the front overhead cabinet or through the SilverLeaf or KIB system. Once you have selected a heat source (diesel or electric), and the boiler is operational, set the thermostat for the desired zones.

A IMPORTANT

The Oasis 'diesel burner' heat source provides approximately 50,000 BTU's of heat, and is designed to start and operate the system at full capacity. The electrical heating element provides approximately 5,000 BTU's of heat.

The system will turn convector fans off and on according to the temperature settings.

Basement Heat Convector(s)

Coaches with Oasis Hydronic Heating will have a heat exchanger, dual fans, and a designated thermostat. The basement heat is activated by a separate fixed thermostat in the basement area when the compartment temperature falls below approximately 40 degrees Fahrenheit. If this happens, the hot antifreeze solution in the Oasis system will circulate, and the blower will turn on to supply heat in the basement/water compartment area. The Oasis system must be turned on and the fluid must be above the low temperature cutout for heat output.







Set the thermostat zones on "Furnace" mode, and adjust each interior zone temperature setting as desired. The separate Oasis System must be turned on via the Oasis control panel, SilverLeaf touchscreen, or KIB touch panel (2024 and newer coaches), and the water temperature in the Oasis System must be up to temperature for the basement heat to work.

Note: The basement heat only works when the furnace (Oasis System) is activated. It will NOT function if the Oasis System is off and the coach is being heated via the roof air conditioner heat pumps.

Domestic Hot Water

For information regarding domestic hot water via Oasis hydronic heating, refer to Newgle.

Resetting the Oasis System

A IMPORTANT

In the event of a fault in the Oasis system, the system will need to be reset.

To reset the Oasis system, press the exterior reset button on the face of the Oasis, or turn the burner switch off, then back on inside the coach. The reset will clear faults such as Low Voltage, Flame Out, or a Low Fluid Level switch fault, which typically clears on its own when the fluid level becomes sufficient. The Oasis will try to start twice when there is a Flame Out fault. When it fails to start the second time, it will then display a fault on the face of the Oasis and on the System Diagnostics screen within the SilverLeaf system (if equipped).

A IMPORTANT

The exterior reset or the cycling of the ON/OFF button inside the coach will not reset the system if there is a component fault, like a pump or other internal issues.

A CAUTION

Any faults not resettable by cycling the switch or by the Oasis reset button should be diagnosed and repaired by a qualified technician.

Source: Oasis FAQ

Oasis Hydronic Heating System Quick Start (Model: Chinook)

This article provides an operational overview of an Oasis Hydronic Heating System (Model: Chinook).

Overview

The Oasis® Chinook Heating System uses a 50,000 BTU (true output) diesel burner (12 VDC) controlled by a multi-functional electronic controller as the primary source of heating coolant fluid (anti-freeze and water). Two 1500 Watt, 120 VAC immersion elements are used as secondary heat sources to provide an additional 10,000 BTU of heat.

The Oasis® Chinook Heating System heats the coolant fluid to provide a source of heat for all hydronic space heating needs. Through the use of its integral distribution pumps, the Oasis® Chinook Heating System has the ability to circulate the coolant fluid to all space heating areas. It can also provide a supply of potable hot water using the integral heat exchanger. The Oasis® also incorporates engine heat and preheat (optional) functions.

Operating Instructions

Turning the Power to the Oasis Chinook Heating System ON

The Oasis® Chinook Heating System's main Control Panel, located on the front of the heater, contains three push buttons: ON/OFF power, Bypass, and Reset. The power switch must be pushed ON (power LED will turn ON) to turn the DC electrical power to the main control board ON and is required to be left ON whenever heat is required.

The Zone Control board will be powered whenever the master disconnect switch is ON. The master disconnect switch must be left ON whenever heat is required.

When the Oasis® Chinook Heating System is shut down for any extended period or the season, it is recommended that the power switch and the battery master disconnect switch be turned OFF.

A NOTICE

Do not operate the Oasis® Chinook Heating System until a suitable water/anti-freeze solution is in the heater and all trapped air has been bled or removed.

A DANGER

Use only a non-toxic propylene glycol based coolant with additives generally recognized as safe "GRAS" by the FDA in the Oasis® Chinook Heating System.

Activating the Burner (Primary Heat Source)

The burner switch on the Remote Operating Panel controls the ON/OFF of the diesel burner (primary heat source). When the burner switch is turned ON, the diesel portion of the Oasis® Chinook will turn ON after ten seconds. The Burner LED will turn ON when the diesel burner has been activated. The burner will continue to operate until the coolant in the Oasis® Chinook reaches cycling temperature. At this point, the diesel burner will turn OFF.

If the Oasis® Chinook Heating System coolant should cool down below this temperature range, the burner will again

commence firing and will continue until either the burner switch on the remote panel is turned OFF or cycling temperature is again achieved. If the burner switch on the remote panel is turned OFF, or cycling temperature is achieved, the burner stops and the Oasis® Chinook enters a two minute cool down stage prior to completely shutting down.

Activating the AC Heat (Supplemental)

Place the AC power switch on the Remote Operating Panel to either the one element or two element position. The AC Heat (green) LED will turn ON indicating the AC element(s) are energized and the coolant is being electrically heated. The elements will continue to operate until the coolant in the Oasis® Chinook reaches cycling temperature. At this point, the elements and the AC heat LED will turn OFF.

If the Oasis® Chinook Heating System coolant should cool down below this temperature range, the AC element(s) will again be energized and will continue until either the AC switch on the remote panel is placed in the OFF position or cycling temperature is again achieved. If the AC element switch on the remote panel is turned OFF, or cycling temperature is achieved, the AC elements are de-energized and the AC Heat (green) LED turns OFF.

Activating the Burner and AC Immersion Element(s) Jointly

Turn the burner switch ON and place the AC power switch on the Remote Operating Panel to either the one element or two element position. The Burner and AC Heat (green) LED's will turn ON indicating the diesel burner and AC element(s) have been selected.

Functions of the Remote Operating Panel



This remote panel may be shipped loose (uninstalled) from the Newmar factory as a back-up control in the event of multiplex system failure (SilverLeaf or KIB). To operate the system using the Remote Operating Panel, unplug the white Molex connector on the far left of the Zone Control Board (located in the Oasis basement compartment) and plug it into the back of the Remote Operating Panel to allow the system to temporarily be operated independent of the multiplex system.

The Oasis Heating System's Remote Operating Panel contains one ON/OFF burner switch, one triple position AC element switch, one ON/OFF engine heat switch to control the optional engine preheat pump, and four LED's indicating Burner activation, AC element activation, heater fault, and zone fault.



Burner Switch (Primary Heat Source): The burner switch on the remote panel controls the ON/OFF of the diesel burner. The Burner LED will turn on when the diesel burner has been activated, and will remain ON while the burner cycles on and off.

AC Element Switch (Supplemental Heat Source): The triple position AC element switch controls the activation of a single 120 VAC immersion element only, dual 120 VAC immersion elements jointly, or both elements off. The AC heat LED will turn ON to indicate when the element(s) are operating.

Engine Pre-Heat Switch (optional): The engine pre-heat switch (optional) controls the ON/OFF of the engine pre-heat pump (optional). However, the engine pre-heat pump (not included) will not function unless the coolant in the Oasis® Chinook Heating System has achieved a preset temperature.

Burner LED (Green): When ON, indicates the diesel burner has been activated.

AC Heat LED (Green): When ON, indicates one or both of the 120 VAC immersion elements(s) are operating.

Heating Module Fault LED (Red): When ON, indicates the Oasis® Chinook has faulted. The specific fault can be identified by examining the Control Panel located on the front of the Oasis® Chinook. There are indicator LED's on the panel that are used for diagnostics.

Zone Fault LED (Red): When ON, indicates a space heating zone(s) has faulted. The specific fault can be identified by examining the Zone Control Board located beside the Oasis® Chinook. There are indicator LED's on the panel that indicate the problem.

Functions of the Oasis Chinook Control Panel

The Oasis® Chinook Control Panel contains three push buttons: Power ON/OFF, Bypass, and Reset. In addition, it contains nine LED's indicating Power, AC Heat, Compressor, Fuel Pump, Combustion Fan, Igniter, Flame Out, Voltage Fault and Low Water.

Power Button: The power button turns ON/OFF the power to the control board. The Power LED (green) turns ON when the power to the control board is ON.

Bypass Button: The bypass button is for authorized service personnel only.

Reset Button: The reset button when pressed resets the control board.

Power LED (Green): The power LED (green) turns ON when the power to the control board is ON. The LED flashes when the Oasis® Chinook is in Bypass mode (authorized service personnel only).

AC Heat LED (Green): The AC Heat LED (Green) turns ON when 120VAC is connected to the unit and the system has not yet reached the set point operating temperature.

Compressor, Fuel Pump, Combustion Fan, Igniter (Green): The compressor, fuel pump, combustion fan, and igniter LED's (Green) turn ON when the component is ON, and will flash if the component is electrically open or shorted.

Flame Out (Red): The Flame Out LED (Red) turns ON when a flame fault has been detected.

Voltage Fault (Red): The voltage fault LED (Red) turns ON when a voltage fault has been detected.

Low Water (Red): The Low Water LED (red) turns ON when a low coolant level in the Oasis® Chinook has been detected.

Functions of the Zone Control Board

The Zone Control Board contains seven green LED's for Power, Zone 1, 2, 3, 4 and 5 Thermostats, and Potable Water. It also contains nine matched pairings of red/green LED's for Zone 1, 2, 3, 4 and 5 Fans, Summer Loop, Heat Loop 1, Heat Loop 2, and Engine Pre-heat Pump.

For the Zone Control Board to respond to a call for heat, the coolant temperature inside the Oasis® Chinook must be above 120F.

The Oasis® Chinook has a single space heating loop. The "series" jumper on the zone board (below the bypass jumper, to the left of the largest relay on the board) must be put in place. If the "series" jumper is not put in place, then the thermostats calling for heat in zones 3, 4, and 5 will not activate the Heat Loop 1 pump, which is the only space heating pump in this system. This will result in cold air blowing from the fans when only zones 3, 4, or 5 are calling for heat.



When the "series" jumper is not in place, the zone control board uses Heating Loop 1 to supply coolant to Zones 1 and 2, and uses Heating Loop 2 to supply coolant to Zones 3, 4, and 5. Zones 1 and 2 are calling for heat, the zone control board will activate the Heat Loop 1 pump. When Zones 3, 4, and 5 are calling for heat, the zone control board will activate the Heat Loop 2 pump.

When the Engine Pre-Heat switch is turned ON, the Zone Control Board will turn on the Summer Pump and circulate hot coolant through the engine heat exchanger. At the same time, the engine pre-heat pump will turn ON and circulate the engine coolant through the engine heat exchanger.

When the potable hot water is turned ON, the Zone Control Board will turn on the Summer Pump and circulate hot coolant through the internal potable water heat exchanger.

When the Burner is turned ON, the Zone Control Board will turn on the Summer Pump and circulate hot coolant through the internal circuit, to provide even heating in the coolant tank.



The Summer Loop is an automatic action of the Oasis system and requires no action from the user. It works like a stir pump and causes water to flow through the heat exchanger when hot water is desired and the heat zones are not actively circulating.

Power LED (Green): The power LED turns ON when the power to the Zone Control Board is ON.

Zone 1, 2, 3, 4, 5 Thermostat LED's (Green): The Zone # LED turns ON when the thermostat in the zone is calling for heat

Potable Water LED (Green): The potable water LED turns ON when there is a call for potable hot water.

Zone 1, 2, 3, 4, 5 Fans, Summer Loop, Heat Loop 1, Heat Loop 2, Engine Pre-heat Pump Paired LED's (Red/Green): The nine paired LED's indicate the functionality of the corresponding devices. The green LED will turn ON when the device is operating normally. The red LED turns ON if a fuse has been blown.

Source(s): ITR Oasis Chinook Heating System Installation and Operating Manual: Diesel and AC Heating System for Recreational Vehicles and Mobile Homes

Product(s): ITR Oasis Chinook Heating Base Unit (Model: 59000, Newmar Part Number: 144634)

Oasis Hydronic Heater Fan Switch Overview

This article provides an operational overview of the hydronic heater fan switch located in the bathroom.

The Heater Fan switch turns the heat fan in the bathroom on and off. This function may also appear on the KIB 5" vertical touch panel (2026 and newer coaches).

If the Oasis hydronic heating system is turned on and is up to temperature, and the zone heat is set high enough for the convector to blow out heat, then the Heater Fan switch will allow you to control the fan.

Turn off the fan if the bathroom gets too hot or turn on the fan if more heat is desired.





Domestic Hot Water via Oasis Hydronic Heating

This article provides a basic overview of domestic hot water via the Oasis hydronic heating system.

Oasis Controls

The hot water in your coach is heated by the Oasis hydronic heating system. To operate an appliance that uses hot water, or to assure plenty of hot water for showering, turn on the boiler or heating elements using the appropriate control panel (depending on coach year and model):

- the KIB 5" and 10.1" Monitor Panel(s) (2026 and newer)

For more information about the control panel installed in a coach, refer to the product pages and knowledge articles in Newmar's owner's guide or in Newgle.

Both heat sources (diesel burner and heating elements) can be used at the same time for the maximum water heating capability. Turning only the 120 volt heating element(s) on will usually provide sufficient hot water for most household chores, but may not be sufficient for showering.

The diesel burner is the primary heat source with at least 50,000 BTU (more on select Oasis models), and the electric elements are secondary. Depending on your hot water usage, using only the electric elements may be sufficient; however, if not, use the diesel burner when not plugged into shore power or in conjunction with the electric elements.

Potable Hot Water Capacity

	Zephyr	CH50	CHINOOK	NE-S
вти	33,000	50,000	50,000	85,000
Maximum Water Temperature (at incoming water temperature of 60°F)	120°F	120°F	120°F	120°F
Gallons Per Minute (GPM)	1.0	1.5	1.5	3.0

RADIANT HEATING

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: Floor Heat

The Floor Heat icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the floor heat controls and settings for floor heat in the front, mid, and rear zones of the coach. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

Press the Front, Mid, or Back floor heat power button once to activate the floor heat. Then press the Power button, followed by the preferred heat setting button to activate the floor heat in that zone:

- High (30 Minutes ON, 15 Minutes OFF)
- Medium (15 Minutes ON, 15 Minutes OFF)
- Low (7.5 Minutes ON, 7.5 Minutes OFF)





The different settings have specific on and off time intervals for heating. The heating indicator icon will illuminate when voltage is being sent to the heating element. For floor heat operation, 120 volts must be present from shore power or the generator.

A CAUTION

Per the Aries Engineering (Gold Heat) Radiant Floor Heat Installation Instructions and Owner's Manual, "Don't place rubber backed area or throw rugs over the heated area to avoid excessive heat from building in these areas."

THERMOSTATS

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: HVAC

The HVAC icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the controls for the rooftop air conditioners, furnace or Oasis heating system, and provides access to the HVAC settings for the entire coach. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

Overview

HVAC is a control system interface to the RV's heating and cooling system, and:

- Controls the Dometic rooftop air conditioners
- Controls the furnace or Oasis heating system, which also serves as the water heater
- Allows Heat/Cool temperature setting within 55 to 90-degree range
- Contains the Oasis hydronic system burner, A/C electric element 1 and A/C electric element 1 and 2 ON/OFF switch buttons (only on coaches equipped with an Oasis hydronic heating system).
- Contains a Stool Room fan switch in the Oasis section (if coach is equipped with a stool room and Oasis)



The main screens of the HVAC are:

Now/Status Page: The main page where adjustments and room temperatures are displayed.

Room Selection: Controls one of the three roof AC units (some RVs only have two roof units).

Setup Page: Opens the page to set up heating and cooling schedules.

Scheduling: Used to set up temperature programs that can change two times a day with up to three different programs that can run on different days of the week.

Time Clock: The HVAC controller is where the time of day is set and stored, there is a battery backup so even without power turned on the time of day is kept.

Burner Button (Primary Heat Source): The burner button on the remote panel controls ON/OFF activation of the diesel burner. The Burner button will change color when the diesel burner has been activated.





AC 1 or AC 1 & 2 Element Buttons (Secondary Heat Source): The AC 1 Element and AC 1 & 2 Element buttons control activation of a single 120 VAC immersion element or both 120 VAC immersion elements jointly. The AC Element buttons will change color to indicate when the element(s) have been activated.

Now/Status Page

User Buttons and Icons

POWER: Turns the HVAC system ON/OFF.

SETUP: Page jump to the HVAC setup pages.

HOLD: Forces the system to hold the current temperature setting, regardless of schedules.

ECO: Allows the user to select up to a 10-degree offset to allow more or less temperature variance from setpoint to reduce the energy used by the HVAC system while away from the RV.









Room Selection

There are 1-3 rooms to choose from depending on the floor plan, including:

LVRM — Selecting this will display the current "LIVING ROOM" settings.

KITCHEN — Selecting this will display the current "KITCHEN" settings.

BDRM — Selecting this will display the current "BEDROOM" settings.







Individual Room Settings

MODE — Selects OFF, AUTO, COOL, HEAT PUMP, FURNACE, or FAN. Not all rooms have the FURNACE button.

FAN — Selects AUTO, LOW, MED, OR HIGH.

TEMPERATURE — Use UP/DOWN triangles to adjust room temperature set point.

Status Display

SET TEMPERATURE — The target temperature for the room.

HOUR GLASS — The system is waiting on the room's roof top compressor to run.

PROG O-RIDE — The "DAY/NIGHT" settings are being overridden by "HOLD."

FIRE FLAME — Indicates the furnace is turned on.

SNOWFLAKE — Indicates the air conditioner compressor is turned on.

RED WAVES — Indicates the heat pump compressor is turned on.

Setup Page

User Buttons

BACK ARROW — Page jump back to the Now/Status page.

SET TIME — Page jump to the time-of-day settings.

SET PROG — Page jump to the scheduling program setup.

SET WEEK — Page jump to set a weekly program if desired. Set which program to run on that specific day. Different

days can run different programs.

Settings Buttons

RUN PROG — Enables/disables the program settings to be observed or ignored.

WEEK PROG — Enables/disables the week program settings to be observed or ignored.

AGS HVAC — Enables/disables auto gen

start to operate based on HVAC demand. Generator is only started when the RV has no shore power and only when the HVAC has a demand present.

°F/°C — Allows choice of displaying temperatures in degrees Fahrenheit or Celsius.

Setup: Set Time Page

Use "HR" & "MIN" buttons to set the time of day. Use "MM," "DD," and "YY" buttons to set the month, day, and year.











Setup: Set PROG Page (DAY/NIGHT)

ARROW — Page jump back to the Setup page.

DAY — Displays the DAY setup for the room selected.

NIGHT — Displays the NIGHT setup for the room selected. On a per-room-basis, the DAY, NIGHT, TIME, TEMP, MODE, & FAN can be setup for a "RUN PROG" schedule. The individual room settings are changed to "DAY/NIGHT" setting the time of day is the same as the time set in the DAY/NIGHT program.



Example: DAY/LVRM program settings are 8:00 AM, MODE = COOL, FAN = AUTO, TEMP = 70°F. When the time of day is 8:00 AM on the LVRM "NOW/STATUS" page all settings will change to the for mentioned.

PROG Button – Assuming "Week Prog" is enabled from the "Setup Page," this button will cycle though one of three different program settings.

Important: This is done on per DAY/NIGHT & per room. This is not to simply set up one DAY/NIGHT.

Example: Prog 1 requires all three rooms and their DAY/NIGHT to be set (6 different pages of settings). Prog 2 will be completely different setup pages.

Setup: Set ECO Page

Purpose: To save energy when leaving the RV by simply pushing a button when you leave and return.

Room Selection: Each room can be set for a different "SET ECO OFFSET".

Example: The bedroom door is closed -- set the bedroom offset to "ECO O-RIDE" while setting the LVRM&KIT to 10°. In this situation, the bedroom will try to maintain the temperature while the LVRM&KIT changes by 10° to save energy.

Set ECO Offset: Value to offset temperature when ECO button is activated on main HVAC page. Example: If cooling and the ECO button is active, the room's temperature will increase by the offset value.

ECO O-RIDE: When activated, this zone will not use the ECO settings when the ECO button is activated on the main HVAC page.







Setup: Set Week Program Page

Purpose: To set which one of three different programs which will run on a specific day.

Example: The RV is only used on Saturday and Sunday and is empty throughout the week.

Program 1 - Setup to turn on all three air conditioners at 70°F at 7:00 AM and 68°F at 9:00 PM (set on Saturday and Sunday)

Program 2 – Setup to run a single air conditioner at 85°F all the time (set on Monday - Friday)

Each day of the week is set by pressing the program button below the day.



Mode Button Description

Note: Information was copied from the "Dometic Comfort Control 2" thermostat manual and specifications.

OFF — Off Mode

• Displays "OFF" mode in a zone.

COOL — Cool Mode

In COOL mode, the system will cycle the compressor ON and OFF based on the room air temperature and the room's temperature set-point on the LCD. When the system calls for cooling the first time, there will be a delay of approximately two minutes. During this delay, the hour glass icon will be displayed on the LCD. In auto fan, the fan will turn ON first followed by the compressor in approximately 15 seconds. After the first ON/OFF cycle the compressor/ fan will cycle ON without delay.

In COOL mode, there are four fan selections: LOW / MED / HIGH / AUTO.

- LOW / MED / HIGH: The fan operates continuously at the selected speed. The compressor only cycles ON and OFF.
- AUTO: When auto fan is selected, the fan speed will vary depending on the difference between the room's temperature set-point and the room temperature. In auto fan, the compressor and the fan will both cycle ON and OFF. The compressor shuts OFF first followed by the fan in approximately 15 seconds.

HEAT PUMP — Heat Pump Mode

In HP mode, the system will cycle the compressor ON and OFF based on the room air temperature and the temperature set-point on the LCD. When the system calls for heating the first time, there will be a delay of approximately two minutes. During this delay, the hour glass icon will be displayed on the LCD. In auto fan, the compressor will turn ON first followed by the fan in approximately 15 seconds. After the first ON/OFF cycle the compressor/ fan will cycle ON without delay.

In HP mode, there are four fan selections: LOW / MED / HIGH / AUTO.

- LOW / MED / HIGH: The fan operates continuously at the selected speed. The compressor only cycles ON and OFF.
- AUTO: When auto fan is selected, the fan speed will vary depending on the difference between the temperature set-point and the room temperature. In auto fan mode, the compressor and the fan will both cycle ON and OFF. The compressor shuts OFF first followed by the fan in approximately 15 seconds.

FAN — Fan Only Mode

In FAN mode, there are (4) fan speed selections:

- LOW / MED / HIGH: The fan operates continuously at LOW / MED / HIGH speed.
- AUTO: The fan will be OFF.



The HIGH / MED/ LOW / AUTO fan settings on the 10.1" Central Monitor Capacitive Touch Panel only control the fan on the air conditioner/heat pump unit(s). Each Oasis heating convector has its own fan and is only ON or

OFF; there is no speed adjustment on convector fans. Convector fans are automatically controlled through the Oasis zone control board. However, there may be additional switches in the bathroom and/or front dash area, enabling the user to manually turn off the fan when not desired.

FURNACE — Furnace or Aqua (Hydronic) Heating Mode

In the FURN / AQUA mode, the system will cycle the RV's furnace/aqua ON and OFF based on the room air temperature and the temperature set-point on the LCD.

In FURNACE mode, there are (4) fan speed selections:

- LOW / MED / HIGH. The fan operates continuously at LOW / MED / HIGH speed.
- AUTO: The fan is OFF.

AUTO — Auto Change Over Mode

In the AUTO mode, the system will automatically change the mode of operation from cool to heat or from heat to cool. In order for this mode to operate, the zone being programmed must contain either a heat pump, heat strip, or furnace heating source. When in the AUTO mode, all preprogrammed operations for the heat pump, heat strip, and furnace will apply.

Auto Change Over Cooling: If the room temperature rises above the temperature set-point by 2 °F / °C, the air conditioner will turn ON until the room temperature reaches the temperature set-point at which time the air conditioner will cycle OFF.

Auto Change Over Heating: If the room temperature goes below the temperature set-point by 2 °F / °C, the available heat source will be cycled ON until the room temperature reaches the temperature set point at which time it will cycle OFF

If more than one heat source is available on this zone, the priority for selecting the heat source will be heat pump (first), and furnace (second).

AUTO FAN — All Modes

When "AUTO" fan is selected, the fan speed will vary depending on the difference between the temperature set-point and the room temperature. In "AUTO" fan, the compressor and fan will both cycle ON and OFF.

When the difference is:

- 8 °F / °C or more, the fan operates on HIGH.
- 5 to 7 °F / °C, the fan operates on MED.
- 4 °F / °C or less, the fan operates on LOW.

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INTERIOR

This chapter provides information about the furniture, cabinetry, flooring, fabrics, window coverings, interior accessories, and finishing touches that turn your coach into a home.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

BEDS AND MATTRESSES

InnoMax Comfort Craft 2.0 Digital Air Mattress Quick Start (Model: Vista)

This article provides basic operation instructions for an InnoMax Comfort Craft 2.0 Digital Air Mattress (Model: Vista).

Wireless Digital Comfort Controls

Remote controls feature four functions - inflate (firm), deflate (soft), select side (left/right) & memory.

NOTE FROM NEWMAR

The remote allows the user to select the left or right side of bed and adjust the firmness setting using the up and down arrows: the higher the number, the firmer the support. The user is also able to program their favorite firmness setting number into memory.

A IMPORTANT

Only one control operates at a time.

Source(s): Digital Air Sleep System Assembly Instructions

Product(s): Innomax Vista 8" Digital Air Bed Mattress (Model: Vista, Newmar Part Numbers: 166269, 166268, 166273, 166274)





Personal Comfort Advanced Series Air Mattress Quick Start (Model: A5)

This article provides basic operation instructions for a Personal Comfort Advanced Series Air Mattress (Model: A5).

Operation

A IMPORTANT

Before you plug in your air control unit, we highly recommend using a 60Hz, 120VAC 50 W surge protector (not included). A surge protector will protect your air control unit and electronics from damage caused by a power surge or a lightning strike, neither of which is covered by the 25-year limited warranty.

Remotes

- Air control unit can have one or two remotes connected at the same time.
- Remote will function for the selected side until the user makes a change.
- You can also set up the air control unit to be operated by a smartphone via the Personal Comfort App.

First press turns on the remote / LCD. Select Firm or Soft:

- Firm = pump inflates chamber.
- Soft = pump deflates chamber.

Press or "press and hold," display will show changing value. Once stopped, the adjustment will be made after two seconds. While adjusting, the arrow will flash. Cancel any operation by pressing any key.



Simultaneous Use

If adjustment is being made on one side, the other side will wait until completion.

Memory

- Set favorite setting or recall (1 or 2)
- Press and hold 5 seconds to record current (1 or 2)
- Press once to recall stored setting (1 or 2)
- Two memory settings for each side

Connection

- Remotes will work out of the box
- Pump will accept connection for one minute after power up
- Press the 1 and 2 buttons at the same time for 3 seconds to enter pairing mode
- Pair will display, then counts down from 30 to 0
- If power is lost, remotes will connect automatically when power is restored

Low Battery Indicator

Uses two AAA alkaline batteries

Pairing

- If the remote does not connect, unplug and re-plug the pump into the correct power outlet to restart the connection signal for three minutes.
- Press and hold memory 1 and 2 buttons at the same time for three seconds.
- If the beacon graphic is present, the remote is searching for a connection.
- Pairing process may take up to a minute per remote.

Recommended Sleep Settings

To help you find your perfect sleep setting, start at the maximum setting of 50 and decrease the bed to slightly softer than you would prefer, and go back up until you reach your ideal comfort level.

Give Your Body Time to Adjust

It can take anywhere from several nights to a few weeks for your body to adjust to your new sleeping surface, especially if you're trying different sleep settings to determine your ideal comfort.

When you've found your preferred sleep setting, program this sleep setting into the memory feature of the remote. Try

sleeping at this setting for a minimum of five nights. After five nights, evaluate your sleep experience and if necessary, repeat the process until you have found your perfect number setting. We recommend starting at a higher number and working your way down. The common sleep settings most people use are between 15-25.

Mattress Cover Care

The bottom, center and top panel of your Personal Comfort mattress can easily unzip to be professionally dry cleaned. Do not attempt to wash the cover pieces yourself, as some of the materials and/or stitching may shrink. Do not apply over the counter stain remover as it may yellow the fabric.

Source(s): Personal Advanced Series Bed Owner's Manual and Wireless Remote Instructions

Personal Comfort App

Control the Personal Comfort[™] bed from your phone or tablet. Personal Comfort[™] is a number bed manufacturer with their own downloadable app which makes it easy to adjust your mattress wirelessly.

Install the Personal Comfort App

- 1. Search for the Personal Comfort™ bed App within iTunes or Google Play.
- 2. Select "install" to begin downloading and installing the App.

Connecting the App

- 1. Select "connect" to begin the connection process. (Note: You must have a Personal Comfort™ Advance, Elegance or Memory Foam Series bed in order for this App to connect.)
- 2. Before hitting "Start", please make sure you're near your bed and that your bed is plugged into an electrical outlet.
- 3. Please select the size and the style of your number bed. Once selected, select continue.
- 4. Please select your power-base model. If you do not have a power base then select none. Once selected, hit search for bases.
- 5. Select your base to connect. You can also test your base to make sure it is the correct base. (Note: This step may not be applicable.)
- 6. Select "scan for units" to connect to your Personal Comfort number bed.
- 7. Once your air control unit comes up, select it and hit continue.
- 8. Everything is connected and ready to go. You can re-connect or disconnect from the mattress and power bases in the menu.

Sleep Settings

- 1. Start adjusting your mattress to your level of personal comfort. Up for firm. Down for soft.
- 2. When you find your sleep setting, you can save it. You have 2 favorite positions to use. They are located on the sleep settings page.
- 3. Select bed position on the bottom menu. This page will allow you to control anything and everything your power base is capable of. Including changing your sync settings; dual, feet only and sync head and feet.

Source(s): Personal Comfort Number Bed Advanced Series Owner's Manual and App-Instructions (Website) Product(s): Personal Comfort Bed (Model: A5, Newmar Part Number: 165925, 165926, 165927, 165928)

Fixed Bunk Beds Overview

This article provides a basic overview of a fixed bunk bed that is installed on select coaches.

Features

Depending on the coach year, model, and floorplan, bunk features may vary. Most bunk beds have removable ladders, storage drawers or compartments, windows with manual or power shades, and necessary electrical components. Some bunk areas also feature adjustable lights, cell phone holders, televisions (with built-in DVD player), and outlets for additional entertainment equipment (satellite systems, cable/antenna, USB inputs, etc.).





Weight Capacity and Removable Ladder

Coaches equipped with a bunk bed may have labels adhered to a surrounding area to provide special instructions or weight capacities. Acknowledge and follow all warning labels to prevent any damage to equipment or personal injury. The following labels are examples only. Actual instructions and weight restrictions may vary. In most cases, the upper bunk has a maximum load (weight) capacity of 250 pounds.

To use the top bunk, hang the bunk ladder, making sure all four hooks are securely mounted over the bed frame. When not in use, store the ladder on top of the bunk mattress, in a wardrobe, or inside of the bedroom's bed base.



CAUTION 250 lbs. Maximum load capacity



FLOORING

Carpet and Woven Flooring Care and Maintenance

This article provides care and maintenance recommendations for carpets. The installed carpeting and woven flooring is made of synthetic materials, mostly nylon fiber, and is easy to maintain.

A IMPORTANT

In carpeted or woven flooring areas that receive the most sunlight, close the curtains, blinds, or shades to prevent fading.

Vacuum regularly to remove dirt, dust, lint, and other abrasive grit. Water-based spills and spots should be soaked up and removed immediately with a damp cloth. Grease or oil-based stains and spots should be spot-cleaned with a commercial spot cleaner intended for this purpose.

A IMPORTANT

Act quickly to clean up when anything is spilled or dropped on the carpet and woven flooring.

When complete shampooing is desired or necessary, it is best to have it done by a professional carpet cleaner. Wait for

the carpeting or woven flooring to dry thoroughly before walking on it.

A IMPORTANT

Do not soak or water-log your carpeting or woven flooring.

A IMPORTANT

Slideout rollers may leave indentations in the flooring. This condition is normal and does NOT warrant flooring replacement.

Tile Flooring Care and Maintenance

This article provides care and maintenance recommendations for tile flooring, which is installed with Newmar's own inhouse process. The tile in every Newmar coach is placed with the highest level of care for the best fit, quality, and longevity.

Ceramic and Vinyl Tile

As needed, sweep your floor to remove dirt and grit. Wipe up any spills promptly. Damp mop once a week (or more often for heavy traffic areas) using a tile cleaner. Use a neutral pH cleaner compatible with grout cleaning.

A IMPORTANT

Never use detergent, soap or other harsh cleaners, which can dull the surface or promote mildew growth. Cleaners should never contain acids, vinegar, chlorine, or ammonia, as these chemicals can damage and discolor the grout and the stone or tile.

A IMPORTANT

Slideout rollers may leave indentations in the flooring. This condition is normal and does NOT warrant flooring replacement.

Humidity and Other Environmental Factors

Controlling the coach environment is necessary for vinyl tile care and maintenance. Vinyl products can expand and contract with changes in temperature and humidity, so it is crucial to maintain a stable environment to prevent potential separation issues that may arise under certain conditions. Avoid exposing the flooring to extreme temperature variations or high humidity levels, as these can cause the tiles to separate.

A NOTICE

Tile separation and/or cosmetic grout cracks may be accentuated due to environmental factors and are not warrantable repairs.

Coach owners traveling around the country may be more prone to this issue, as their coach is exposed to fluctuating temperature and humidity levels. It is necessary to acknowledge that vinyl changes according to its environment. Newmar recommends maintaining relative humidity levels within the range of 35-50 percent and temperature levels within the range of 40-90 degrees.

INTERIOR FURNISHINGS AND FURNITURE

Interior Furnishings Overview

Interior furnishings such as clocks, artwork, and other decorations help make your coach feel like home. Other furnishings may be installed to provide the essentials and the amenities for your convenience while traveling.

Most pictures, clocks, and wall art installed at the factory have a hanger at the top and Velcro at or near the bottom. There may also be Velcro on the sides.





To remove the picture or wall art, pull the Velcro loose at the bottom and sides, and then remove it from the hanging device. Some decorations without a frame may have exposed screws that may be difficult to find. For this type of decor, locate the screws, and remove them.

Ceiling and Walls Care and Maintenance

The ceiling in your coach may be covered with a padded vinyl ceiling headliner and should be cleaned periodically to maintain a new appearance. Use a non-abrasive cleaner with a soft cloth. Do not use solvents of any kind, as they may damage the surface.

The decorative wall coverings can easily be maintained and are not much different from wallpaper and should be cleaned with a solution of mild soap and water or a non-abrasive cleaner with a soft cloth.

A CAUTION

For stubborn spots, test any cleaner on a area that is hidden, as some cleaners may fade or discolor the wall covering. Do not use solvents of any kind, as they may damage the surface.

Interior Doors and Hardware Overview

The interior doors add to the beauty and privacy of your coach. Newmar installs a variety of functional doors from the basic hinged-swinging door, recessed hardwood pocket doors, and even pivoting doors on select floorplans. Each interior door is designed to fit and function for trouble-free operation.

A IMPORTANT

Always secure all interior doors prior to travel to prevent damage to the doors and any surrounding objects.

Interior Steps, Cover, Lighting, and Storage Overview

This article provides basic information about the interior steps, step covers, step well lighting, and step well storage.

Step Well Lighting

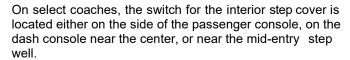
Some coaches may also have a switch that operates the step well lighting, and others may have step well lights that turn on with the patio light switch.

A CAUTION

For safety purposes, keep your steps clear of debris and other personal objects.

Step Cover

The step cover switch operates the front or mid-entry step cover installed on select coach models. When extended, it covers the steps to prevent falls, allows you to freely walk inside the coach when parked, and provides extra surface area for the passenger's feet during transit (front entry coaches only).

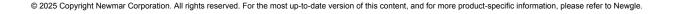


Press the switch forward to extend the step cover to make it level with the coach floor. Press the switch backward to lower and retract the cover in the stored position.









Stepwell Storage

Select coaches are equipped with step treads that can be lifted for additional storage and/or battery access.

A CAUTION

Make sure all stored contents fit entirely inside of the step box. Raised step treads or loose items in the stepwell can create a trip or fall hazard.

Cabinetry and Woodwork Care and Maintenance

This article provides an overview of the cabinetry and woodwork in a coach.

Newmar's exquisitely crafted cabinetry newly gleams with chrome-finished hardware, the perfect complement to the array of appliances that make cooking and clean-up a breeze. Amish craftsmanship and elegance in design meld the wood cabinetry and furniture seamlessly with the Newmar interior. All Newmar cabinetry is custom built in our facility and designed with function and convenience in mind, as well as to provide as much storage as possible in your coach.

Construction

All joints on Newmar hardwood cabinets are glued, and then screwed together for extra durability. Hardwood raised panel cabinet doors are standard throughout the coach.

NOTICE

This vehicle is TSCA TITLE VI COMPLIANT and contains composite wood products that comply with the applicable California Code of Regulations Section 93120.2(a) Phase 2 (P2) formaldehyde emission standards specified on the above date of manufacture.

NOTICE

This vehicle is TSCA TITLE VI COMPLIANT (conforme au titre VI de la TSCA) and contains composite wood products that comply with the applicable California Code of Regulations Section 93120.2(a) Phase 2 (P2) formaldehyde emission standards specified on the above date of manufacture.

Depending on your coach model, you may have hardwood cabinets or vinyl veneer finished cabinets. A variety of vinyl veneer and stain finishes are available for the cabinetry. A hand-sanded finish helps minimize seams so your hardwood cabinetry is as beautiful as it is durable.

Metal drawer guides provide a smooth opening and closing of the drawers in your coach. To open a drawer, lift up slightly and pull open. This features helps prevent the drawers from opening during transit. Your unit may also include features such as adjustable pull out pantry boxes in the kitchen, soft-close drawers, or a molded silverware divider tray for added storage.

Humidity and Climate Change

Controlling the coach environment is the first priority of cabinet care and maintenance. Wood products shrink and grow according to the environment in which they are placed. These changes are in direct relationship to the relative humidity levels. As the humidity increases, the wood expands, and as the humidity decreases, the wood shrinks. This process does not happen instantaneously the longer the wood is exposed to low humidity, the more it will shrink as it dries out, and visa versa.

Coach owners who travel around the country may be more prone to this issue, as their coach is exposed to both extreme humidity and extreme dryness. It is necessary to acknowledge the fact that wood changes according its environment. Newmar recommends maintaining relative humidity levels between the range of 35-50 percent and temperature levels between the range of 40-90 degrees. The air conditioner or a dehumidifier will reduce the humidity level; however in dry climates, a humidifier may also aid in maintaining the appropriate humidity levels by raising the humidity level.

The labels included in this article are examples of the notices that may be posted in the coach in regards to condensation prevention and formaldehyde exposure.

NOTICE This vehicle is designed as a Recreational Vehicle

When used for an extended period of time, while furnace heating is required, sweating and condensation conditions may occur.

The following precautions should be taken to minimize these conditions:

- (1) Use range hood when cooking.
- (2) Use the bathroom power vent when bathing or showering.
- (3) Open windows slightly for ventilation whenever possible
- (4) Use dehumidifier to keep humidity as low as possible.

IMPORTANT NOTICE Certain of our forest product suppliers have advised that usea-formaldshyds is us of particle board, hardwood phywood or paneling which they supply us and which wo reduct. These suppliers have requested that we communicate this to our customer roduct. These uppliers have requested that we communicate that to our customer.

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Care and Maintenance

The cabinetry should be wiped down with furniture polish to sustain the natural beauty and luster of the wood.

A NOTICE

Hardwoods may change color or darken when exposed to sunlight. It is important that the window shades be down during long periods of storage. Changing shades of color, or discoloration, from exposure to sunlight is not a warrantable repair, as it is the nature of the hardwood products in your coach.

A IMPORTANT

As with any wood product, do not saturate these cabinets with water or any other liquid. Be sure to wipe up spills as they occur to avoid staining.

Kitchen Cabinet Extensions and Peninsulas Overview

This article provides basic information about kitchen extensions and peninsulas.

Stationary Peninsulas

The stationary peninsula provides additional storage and countertop space. The kitchen slideout extends and retracts around the peninsula while it stays in place.

A IMPORTANT

Make sure the countertop is clear of obstructions or debris in the path of the slideout before extending or retracting the slideout. Do not allow any objects to fall between the peninsula and the slideout, as they may cause damage.





Pull-Out Cabinet Extensions

The cabinet "extension" is incorporated directly into the kitchen cabinetry, and glides out on drawer guides to provide additional counter space when needed.

Coaches with particular floorplans are equipped with a counter extension and an electric latch release. To extend the counter:

- 1. Turn on the coach battery disconnect.
- 2. Extend the slideout.
- 3. Press the button right above the pull-out island (between the counter extension and the main countertop) to release the island extension.
- 4. Pull out on the extension until the magnetic catches engage.

To retract the counter, push in the extension until it latches.

Solid Surface Countertop and Backsplash Care and Maintenance

This article provides proper care and maintenance instructions for solid surface countertops and backsplashes. No special cleaning products are necessary; however, the countertops and backsplashes can be damaged if they are not cared for properly.

Cleaning

The solid surface composite countertops are non-porous, so most dirt and liquids sit on the surface and can easily be cleaned with a soap or mild detergent.

A IMPORTANT

Avoid using window cleaners that may leave a waxy build-up that dulls the surface.

Wipe up spills as soon as they occur. Film can also build up on the countertop if water is left to dry, making it appear blotchy and uneven. Always wipe the countertop completely dry with a soft cloth after spills and cleaning.

Spray the surfaces with a hard-surface cleaner, and leave it for a few minutes before wiping clean with a damp cloth.

Strong chemicals and solvents may damage the surface and should be wiped up immediately, then rinsed with water.

Avoiding Damage

Heat

The solid surface countertops can be damaged with excessive heat or the use of harsh chemicals. Never put hot pans directly on the counter or in the sink. Avoid pouring hot liquids directly into a solid surface sink; run cold water while pouring hot liquid into the sink to avoid damage. If possible, allow the pan or pot to cool first.

Use caution when using heated appliances, such as crock-pots, electric frying pans, toaster ovens, etc. When possible, never use these appliances directly on the countertop.

A IMPORTANT

Always use a heat pad or trivet to protect the surface from heat that may mar or damage the surface.

Scratches

Try not to cut or chop food directly on the countertop, as you can score and scratch it. Slight abrasion marks may occur during normal daily use; cleaning regularly will ensure the durability and longevity of the countertops. Darker and heavily pigmented colors may show wear and tear more readily, and may require additional or more frequent maintenance.

IMPORTANT

Always use a cutting board when cutting or chopping. Never cut or chop food directly on the countertop.

Some deep scratches can be sanded out, and defects in solid surface countertops can be repaired, by trained professionals.

Chemical Spills

Strong acids and cleaners may discolor the surfaces and should be wiped up immediately and cleaned with soapy water to prevent damage to the surface. Prolonged exposure may require professional repair or replacement.

Furniture Overview

This article provides an overview of the furniture available in coaches.

Covered in coordinating fabrics and accented with pillows, a variety of furniture is available in your coach depending on the coach model and floorplan, as well as the options that were ordered. Options may include recliners, theater seating, sofa beds, dinettes, and booths.

Your furniture is designed with function and style in mind. Many of the furniture pieces are multi-functional and may recline, turn into sleeping areas, open to access hidden storage areas, etc. Any furniture with seatbelts installed from the factory has been tested and is intended only to be used in the seating position when the slideouts are in the retracted position for travel.

WARNING

Do not attempt to use recliners, theater seating, or any furniture that opens or reclines and changes from the basic seating position unless the coach is in the set-up position (i.e., parked and with the slides open). Otherwise, occupants may become injured, and furniture and surrounding items may become damaged.

Fabrics and Materials Care and Maintenance

This article provides care and maintenance recommendations for the fabrics and materials installed in a Newmar coach.

A IMPORTANT

The fading of upholstery, carpet, and other interior fabrics can be caused by excessive sunlight. The drapes, blinds, or shades should be kept closed if the coach will be parked for an extended period of time to minimize fading. Normal deterioration due to wear and/or exposure to sunlight is not covered by the Newmar Limited Warranty.

The fabrics used in your coach may contain fire-retardant additives that may be damaged by use of improper cleaning

products. Cleaning instructions for these items are DRY CLEAN ONLY. Water-based products are not recommended for cleaning the fabrics in your new unit. Most water-based household cleaning products are not formulated for use on these fabrics and may cause excessive shrinkage or fading. For best results, the fabrics in this unit should be cleaned by a professional carpet and upholstery cleaner.

Spills, spots, or stains should be treated as soon as possible to avoid permanent damage. If a spill occurs, blot the fluid with a dry towel. Do not rub the spill. Rubbing may cause the liquid to "set" in the fabric. When attempting to clean a spot or stain, always start from the outside and work inward to avoid spreading it further.

A IMPORTANT

Some stains or soils are extremely difficult or impossible to remove completely. These should receive immediate, professional attention. Spills, spots, stains, or soils are the responsibility of the owner and are not covered by the Newmar Limited Warranty.

A WARNING

When cleaning the upholstery and fabric in the unit, do not use lacquer thinner, nail polish remover, laundry soaps, or bleach. Never use carbon tetrachloride or gasoline for cleaning purposes. These items may cause damage to the materials being cleaned, and most are highly flammable.

Stack-On Security Wall Safe Quick Start (Model: PWS-1822E)

This article provides basic operation instructions for a Stack-On Security Wall Safe (Model: PWS-1822E).

Getting Started

When you first receive your new electronic safe you will need to open the door with the key in order to install the batteries. Batteries are included and are located inside the safe.

NOTE FROM NEWMAR

This key can be found inside the coach information packet. This is the black bag containing user manuals and other coach-specific documentation. If the key is not available, the default code set by the factory is "1-5-9," followed by the green checkmark button. This code will only work if the batteries have already been installed and a security code has NOT yet been entered.





To open the door with the key, first remove the lock cover from the front of the faceplate using a thin bladed flathead screwdriver. Insert the key and turn left. Hold the key in the open position and turn the knob to the right to open the door.

Note: This key has been provided in case you lose or forget your security code or the batteries run low. If you lose your key, you may purchase a replacement key by referencing the serial number located under the removable lock cover.

Locate the batteries inside the safe. Open the battery compartment on the back of the door by pushing the tab in the direction of the arrow and install the batteries.

Note: The reset button located on the inside of the door is covered with a removable cap. When you use the reset button while setting your own combination, remove the cap to access the button. Use the tip of a ballpoint pen or the end tip of a paper clip to push the reset button.

Replace the cap securely over the reset button after setting your combination. Failure to do so will compromise the safety and security of the safe.

Entering Your Security Code

To enter your own security code you will need to follow the steps listed below:

- 1. After installing the batteries, locate the reset button on the back of the door.
- 2. Press the reset button with a pen and then release it; you will hear a beep. Do NOT shut the door until you have confirmed that your new security code has been entered correctly.
- 3. With the door open, enter your own personal security code, which can be 3-8 digits long, and confirm your new code

by pressing the checkmark key on the electronic touch pad. You will have 3 seconds to press the checkmark key, otherwise you will have to start over from step one. There will be 2 beeps (if the sound is turned on) and the green light will flash twice if your code has been entered successfully. Before you close the door, enter the new security code and press the checkmark key to make sure the lock releases the knob so you can turn it and retract the live action locking bolts.

If the code fails, go through steps 1-3 again. If the code works successfully, then you should lock the safe. When you open the safe in the future, enter the security code you have set, followed by the checkmark key, and turn the knob.

If an incorrect security code is entered 3 times, the safe will beep 5 times (if the sound is turned on) and the red light will flash 5 times resulting in the safe being automatically locked out for 60 seconds before you can try your code again. The safe will beep one time (if the sound is turned on) and the green light will flash once when the lockout period is over.

If an incorrect security code is entered 1 additional time, the safe will beep 5 times (if the sound is turned on) and the red light will flash 5 times, resulting in the safe being automatically locked out for 5 minutes before the code can be tried again. The safe will beep one time (if the sound is turned on) and the green light will flash once when the lockout period is over.

A IMPORTANT

If you write down your combination, you must keep this information in a secure place, away from children, not inside the safe.

A IMPORTANT

Do not store keys or your combination inside safe.

Locking the Safe

To close the safe, push the door closed until locked.

Battery Replacement

This safe uses 4 - AA batteries. Under normal use, batteries will last about 1 year.

- Do not mix old and new batteries.
- Do not mix alkaline, standard or rechargeable batteries.

If the batteries are low, the yellow light will flash when you start to enter your code. To replace the batteries, open the battery compartment on the back of the door by pushing the tab in the direction of the arrow and install all new batteries.

Internal LED Light

This safe includes an internal LED light that will activate when the correct combination is entered and will remain on for 30 seconds.

Turning the Keypad Sound Off/On

Your safe comes with the "Beep" sound turned on. You can turn off the "Beep" sound of the keypad by pressing the Volume key. To turn the "Beep" sound on, press the Volume key again.

Key / Combination / RFID Device Request

A NOTICE

You can store your Key #, Serial # and Combination on Stack-on's SECURE website - stackon.com under Customer Service. Storing your Key # or Combination will provide instant access to this important information should you ever lose your keys or your combination. Only you will have access to this information.

Verification of ownership is required in order to receive a replacement Key / Combination / RFID devices for your security product.

In order to receive a replacement Key or Combination or RFID devices for your security product:

- 1. Please visit the following link: https://stack-on.com/customer-service/.
- 2. Locate and click on the "Keys replacement" or "Lost combination assistance" icon.

3. Follow the instructions provided to receive your key, combination, or RFID devices.

Source: Stack-On PWS-1822-E Security Wall Safe Owner's Manual Product: (Model: PWS-1822-E, Newmar Part Number: 144484)

SHADES AND WINDOW COVERINGS

Manual Day and Night Shade Operation

This article provides basic operation instructions for manual day and night shades.

A CAUTION

When lowering the day or night shades, be careful not to overextend by pulling them down too far. Overextension may require shade service and/or replacement.



Day Shades

The first section visible when closing the shade is the "DAY" section. This material is translucent. Sunlight passes easily through the material into the unit while allowing a degree of privacy.

To lower the day shade: Grasp the shade near the center, and gently pull it down to the desired position. Release it slowly and gently to maintain the desired position.

To raise the day shade: Quickly pull down the shade and gently release it, allowing it to retract. If necessary, hold on to the bottom to control the speed of the retraction.

Night Shades

The second visible section is the "NIGHT" section. This material is a heavier, more opaque material. Very little to no light passes through it, so these shades are generally used in the evening or when more privacy is desired, though under certain light conditions, it can cast shadows and silhouettes.

To lower the night shade: Grasp the shade near the center, and gently pull it down to the desired position. Release it slowly and gently to maintain the desired position.

To raise the night shade: Quickly pull down the shade and gently release it, allowing it to retract. If necessary, hold on to the bottom to control the speed of the retraction.

Super C Power Sky Window Shade Overview

This article provides basic operation instructions for a Power Sky Window Shade installed in Super Star, Supreme Aire, and Summit Aire coaches. This pleated shade is located above the front cab of the Super C coaches and can be used to block out unwanted sunlight or offer additional privacy.

To operate the power sky window shade, press and hold the Shade switch on the dash. The pleated shade can be operated at any time, including during travel, and the switch can be released at any time to stop the shade in any desired position.





Super C Windshield and Window Privacy Cover Overview

This article provides an overview of the windshield and window privacy covers available in Super C coaches (beginning at the end of the 2024 model year).

These removable covers can be placed individually across the windshield and over the driver and passenger windows. When installed, the covers can be used to block out unwanted sunlight and/or offer additional privacy.

To install the covers, simply match the shape and size to the appropriate window or windshield, then put them into place, allowing the support rods to hold them securely.

WARNING

Do not attempt to drive or operate the coach while the windshield privacy drape is fully or partially installed.

To remove the covers, simply pull them away from the window or windshield. If desired, fold and store the privacy covers in the provided bag.





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PLUMBING

This chapter provides detailed information about the coach's fresh and waste water system and all of the related components: faucets and fixtures, filters, sinks and showers, toilets, and much more.

A IMPORTANT

Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. Read all literature provided, paying special attention to any references to the following terms throughout Newgle and the Owner's Guide: Danger, Warning, Caution, Important, Notice, and Note From Newmar. These terms indicate important information that must be understood and followed.

A CAUTION

Read and understand all operating instructions for the plumbing system before using your coach. Failure to connect and operate the system correctly may result in damage not covered by the Newmar Limited Warranty.

WATER COMPARTMENT OVERVIEW

2026 Super Star Water Compartment Overview

This article provides a general breakdown of the components installed in a 2026 Super Star Super C water compartment.

Overview

The water compartment in the coach typically contains the tanks and most of the controls for the plumbing system. It is usually located on the driver side of the coach immediately in front of the rear wheels, as it is isolated from other compartments and is heated and insulated. The water compartment contains parts of both the fresh and waste water systems.



Water Pressure Requirements: Ease of operation was the key element in the design of the water compartment and plumbing systems. The fresh water system in your coach is designed to operate at a maximum of 60 PSI. Water pressure levels above this level can damage the fresh water plumbing. If the water pressure ever surpasses 60 PSI, a pressure regulator must be installed to reduce the incoming pressure, or fill the fresh water tank and use the internal water pump to supply water to your coach.

A IMPORTANT

The following information is generic for the 2026 Super Star. Components installed may vary by floorplan or optional equipment. Some plumbing components may be located in other compartment(s) and may not be mentioned in this article or labeled in the graphic.

Example of a Water Compartment and Component Definitions

- (1) Drain Outlet and Cover: The drain outlet is used to attach a 4" sewer hose, and the drain cover is used to prevent leakage of waste material. Make sure the drain cover is securely installed on the drain outlet unless actively dumping the tanks via a 4" sewer hose. If not in the water compartment, the drain outlet may be located to the front or rear of the drive axle.
- (2) Electric Dump Switches for Waste and Sewage Tank Valves: Used on coaches with electrically-operated dump

valves, the switches open and/or close the holding tank dump valve(s). In an emergency (if there is an issue with the electrically-operated dump valves), the dump valves can also be operated by disengaging and manually operating the t-handles on the gate valves. The location of the t-handles may be dependent on the floor plan but is typically located between the tank and drain connection (may even be above the frame rails).

- (3) Exterior Shower: An exterior shower faucet with a wand can be used to rinse off shoes and/or feet, bathe a pet, wash your hands, or rinse off the sewer hose after dumping the waste water tanks. When finished using the exterior shower, shut off both the hot and cold valves. Do not simply shut off the valve on the shower head itself, as it may cause hot and cold water to mix at the exterior shower and could allow drastic changes in water temperature throughout the coach.
- (4) Fresh (City) Water Connection via Hose Reel: This potable water connection is used in conjunction with the Fresh Water Fill Valve for a number of purposes, including pressurizing the plumbing in the coach and filling the fresh water tank. Connect the coach to the potable water source via the hose reel.
- (5) Fresh Water Hose Channel: This channel prevents the compartment door from crushing the potable water hose when the door is closed.
- **(6) Fresh Water Tank (Not Shown):** This tank is used to hold fresh potable water for use throughout the water system and is usually located on the floor of the water compartment; however, some coach floorplans may be equipped with a water tank located in another compartment. The fresh water tank is filled from the city water connection with a hose or hose reel via the fresh water tank fill valve or auto fill system. This tank may be located behind a panel, cover, or the macerator and may not be visible from the outside.
- (7) Fresh Water Tank Fill Valve: The rotating fresh water tank fill valve is used to pressurize the fresh water system in your coach, as well as to fill the fresh water tank when the coach is connected to city water. With pressurized water supply connected, simply rotate the valve to the desired position:
 - Manual fill position fills the fresh water tank when connected to a pressurized water source
 - Auto fill position supplies pressurized water to the coach on demand from the city water connection and, if the auto fill function is enabled on the coach's tank monitoring system (i.e. Silverleaf, KIB, or Digi-Level), fills the fresh water tank to match the auto fill settings.
- (8) Fresh Water Tank Low Point Drain: The fresh water tank low point drain is used to empty the fresh water tank. Open the low point drain valve to drain the fresh water tank, and close the low point drain valve when filling the fresh water tank or storing fresh water in the tank. This low point drain is located near the fresh water tank and may be difficult to see from the outside. It is often located just behind the lip of the white drain pan when the fresh water holding tank is located in the main water compartment. When the fresh water holding tank is located outside of the main water compartment, the fresh water tank low point drain is typically near it. Super C fresh water tank low point drains may be located in the exterior entertainment or pedboard compartment.
- (9) Hot and Cold Low Point Drains: Typically the coach has one hot water low point drain and one cold water low point drain, which are used to empty the water lines. Open the valves to relieve water pressure and drain the water lines. Close the valves for normal operation of the pressurized water system.
- (10) LED Light Strip (Not Shown): Some lights are operated automatically via a plunger switch that activates the lights when the compartment door is opened.
- (11) Oasis Heat Exchanger (Not Shown): The Oasis heat exchanger is used to heat the water compartment in order to keep the bay temperature above freezing. This exchanger may be located behind a panel or cover and may not be visible from the outside.

Note: Power must be supplied to the Oasis system and the system must be turned on via the control panel or SilverLeaf coach management system in order for heat to be provided to the water compartment. Once both conditions are met, the thermistor will turn the heater on once the compartment falls to approximately 40 degrees.

(12) Saniflo Lift Station Pump: Certain floorplans may use a lift pump in locations where plumbing drains are too low or too far away for gravity drains to effectively reach the waste water holding tanks. The design is a small collection tank with an inlet from the sink or shower with a submergible pump to push the water out of the discharge to the holding tank. The pump starts automatically (if 120 volt power is being supplied) as soon as the bath, shower, or sink begins to drain. It shuts down when the water has been drained.

Note: Only select floorplans are equipped with lift station pumps, which may or may not be located in the water compartment.

(13) Sewage (Black) Tank (Not Shown): The black tank is generally for sewage waste from the stool. It is typically located between the frame rails in the water compartment. This tank may be located behind a panel or cover and may not be visible from the outside.

- (14) Sewage (Black) Tank Rinse Connection: When draining your sewer tank, attach a water hose to the sewage tank rinse connection. After the tank is drained, leave the gate valve open, and open the water valve to the attached hose, allowing water to spray inside the sewage tank for several minutes to flush and rinse the tank.
- (15) Waste (Gray) Water Tank (Not Shown): The gray water holding tank is typically located in the underbelly of the coach, sometimes on top of the fresh water tank. It is primarily used for the drainage from the kitchen and bath sinks, shower, and the washing machine (if equipped). This tank may be located behind a panel or cover and may not be visible from the outside.
- **(16) Water Pump Switch with LED Indicator:** Press the water pump switch momentarily to activate the water pump. The LED illuminates when the pump is activated.
- (17) Water Pump with Filter (Not Shown): When not connected to city water, the coach's water pump is used to pump and pressurize water from the fresh tank for distribution through the hot and cold water lines. When activated, the water pump will automatically turn on and off to maintain proper water pressure in the coach.
- (18) Whole House Water Filter: The whole house water filter system uses a replaceable extruded carbon filter cartridge to remove sediment and certain impurities from the incoming water supply. This filters the fresh water as it is brought in to the coach from the city water connection through the hose or hose reel. The water filter canister may be white or clear in color.
- (19) Winterizing and Antifreeze Inlet Valves (A and B): The winterizing valves are only used during the coach winterization process. To determine proper valve positioning throughout the process, follow the posted instructions in the coach water compartment for the A and B valves. These valves may be located outside of the main water compartment on some coaches.

FRESH WATER SYSTEM

The Fresh Water System consists of the fresh water holding tank, water pump, valves, connection hoses, and fresh water plumbing lines. This system is responsible for providing potable water for drinking, cooking, bathing, and all other activities that require clean water.

The fresh water system begins with a hose or hose reel, which provides the connection to the fresh potable water. Then, via the fresh water valve, the water is diverted through the coach to be distributed through the cold water plumbing lines to the fresh water holding tank or to the cold water connections of each faucet and the water heater. From the water heater, the water is then dispersed through a series of water lines to each faucet on the hot water inlet and the hot water spigots (if equipped).

Fresh Water Connection via Hose Reel Overview

This article provides a basic overview of the fresh water connection via a hose reel.

Located in the water compartment, the city water connection is made with a white hose approximately 35 feet in length wrapped on the reel. In conjunction with the "Fresh Water Fill Valve," this water source is used for several purposes, including pressurizing the plumbing in the coach and filling the fresh water tank.

The hose reel deploys manually by pulling the hose outward from the compartment. Once the desired length of hose has been extended, hook up the hose to a potable water source. A switch located on the side of the hose reel requires activation for power retraction.





Note: The house battery disconnect must be turned on for the power hose reel to be operated.

The fresh water system in the coach is designed to operate at a maximum of 60 PSI. Water pressure levels above this level can damage the fresh water plumbing in the coach. If the water pressure ever surpasses 60 PSI, a pressure regulator must be installed to reduce the incoming pressure, or fill the fresh water tank and use the internal water pump to supply water to the coach.

Connect the hose from the coach to the city water supply (if equipped with a hose reel). Turn on the supply valve at the

water source, and open each of the faucets to remove any air pockets in the coach plumbing lines. Once the water flows freely, close the faucet(s).

To disconnect from the city water supply, close the valve from the water supply. Release the pressure by rotating the fresh water valve to the tank fill position. Remove the hose from the city water supply, and store it in the water compartment. Once the pressure is relieved, rotate the fresh water valve to the appropriate operating position.

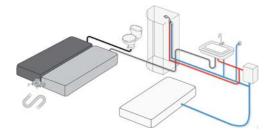
Fresh Water Lines and Low Point Drains Overview

This article provides a basic overview of Fresh Water Lines and Low Point Drains.

Fresh Water Lines

Fresh water lines are used to distribute potable water throughout the coach. The hot water lines are typically red in color or translucent with red lettering. The cold water lines are typically blue in color or translucent with blue or black lettering.

The hot and cold plumbing lines connecting slideout-installed components, such as the kitchen sink and other optional equipment





utilizing the coach water supply, are typically hard-plumbed within the slideout. To ensure flexibility, a braided hose connects the rigid plumbing from within the slideout to the rest of the plumbing in the coach. This hose easily moves with the slideout as it extends and retracts. The plumbing lines are normally tied to the flexible drain pipe and extend and retract smoothly as the slideout travels.

Heated Fresh Water Lines and Inline Water Valves

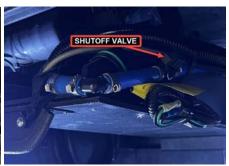
Fresh water lines located beneath the slideout floor are typically heated to prevent freezing (i.e. refrigerator water supply). The water lines are routed in the heated water bay(s) and inside the heated living area as much as possible. Heated fresh water lines are typically used on floorplans with bath fixtures or a refrigerator containing an ice maker or water dispenser located in a slideout.

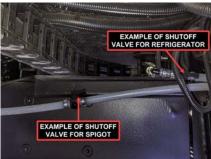
Some coaches may incorporate inline water valves on some water lines which may include the water spigot to the generator area or other non-heated compartment bays, ice maker water lines, and/or inline water filters. The valve(s) could be located various places depending on the coach year, model, and floorplan (i.e. under the kitchen sink, under the dinette booth, in the false pantry floor bottom, under the couch, or in the basement).

Heated water lines are used to connect the plumbing from the basement area to the refrigerator where the water lines are exposed under the slideout. The heated water line normally has a shut-off valve near the top of the compartment, which is routed to the slideout (varies by floorplan). The 12 volt power to the heated water line is usually fused in the cord compartment fuse panel in diesel coaches, on the firewall fuse panel on older gas coaches, and in the first passenger side compartment on newer class A gas and front diesel coaches.



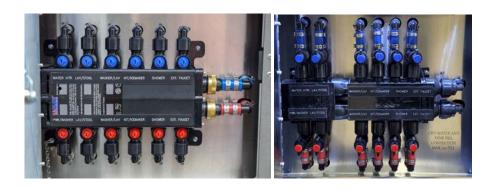






Water Distribution Manifold

Some coaches may be equipped with a water distribution manifold that allows water to be shutoff to individual water lines. For more information, refer to Newgle.



Hot and Cold Low Point Drains

Low point drains are normally located in the water compartment and are marked "Low Point Drains." Some valves are mounted in the water control panel and others are placed close to the water compartment and marked with a sticker nearby. Typically the coach has one hot water low point drain and one cold water low point drain, which are used to empty the water lines. Open the valves to relieve water pressure and drain the water lines. Close the valves for normal operation of the pressurized water system.

On coaches equipped with tank rinse low point drain(s), turning the tank rinse drain valve to the "open" position will remove pressure and drain the tank rinse line. When finished using the tank rinse, it is recommended to turn off the water supply to the tank rinse connection. Open the valve, and drain off the pressure in the line before disconnecting the water hose.









Preventing, Stopping, and Repairing Plumbing Leaks

A IMPORTANT

In the event of a water leak, immediately shut off the water pump and/or disconnect the coach from the pressurized water source. Open the low point drains in the water compartment. This will relieve pressure and allow time to locate the leak and/or a shutoff valve (if the coach is equipped).

Poor or improper winterization may cause leaks, and/or vibration and flexing during travel can cause pipes and fittings to work loose. Follow this checklist to prevent or repair any plumbing leaks:

- Check all of the plumbing connections for leaks yearly.
- If the water pump runs when all faucets are turned off, check for a leak.
- Be sure the drain valves are closed.
- Tighten any loose faucet connections with a wrench.
- Disconnect the leaking connections completely, and check for mineral deposits or foreign material on the sealing surfaces. Clean the surfaces thoroughly, and reinstall the fitting.

A IMPORTANT

Plumbing repairs should be performed by an authorized service center, followed by a pressure test.

Fresh Water Tank and Drain Overview

This article provides a basic overview of the fresh water tank and drain.

Fresh Water Tank and Fill Valve

The fresh water tank is used to hold fresh potable water for use throughout the water system and is usually located on the floor of the water compartment; however, some coach floorplans may be equipped with a water tank located in another compartment. The fresh water tank is filled from the city water hook-up with a hose or hose reel.

The fresh water fill valve located in the water compartment near the water hook-up determines whether the city water is going through the water system or into the fresh water tank.



The excess water will be vented from an overflow vent pipe onto the ground when the tank capacity has been reached. This pipe is installed in the fresh water tank to prevent tank rupture from overfilling. For more information about the fresh water tank fill valves, refer to the Fresh Water Valve Overview in Newgle.

Fresh Water Tank Drains

Fresh water tank drains are located a few inches in front of or beside the fresh water tank and are connected to the fresh water tank with a 1/2" or 1" water line. Whenever possible, drain the fresh water tank before traveling or only carry what you will need to get to your destination, as water in the tank will reduce the carrying capacity of the coach. All of the water should be drained from the fresh water system when the coach is not in use for more than one week to prevent stagnant water and reduce organic growth.

A WARNING

Potable water only. Sanitize, flush, and drain water tank before using. Failure to maintain tank can result in death or serious injury.

To drain the fresh water tank, open the low point drain valve located near the fresh water tank. The following images are example fresh water tank drain configurations.







For more information, refer to the How to Winterize a Coach and How to Sanitize the Water System articles in Newgle.

Fresh Water Valve Overview

The article provides a basic overview for the fresh water valve in a coach.

The rotating Fresh Water Valve (Tank Fill) located in the water compartment is used to pressurize the fresh water system in your coach, as well as to fill the fresh water tank when the coach is connected to city water. The valve position determines whether the water supply fills the tank or pressurizes the fresh water system in the coach. Simply rotate the valve to the appropriate position to perform the desired function.







A IMPORTANT

If you leave this valve in the manual tank fill position, you may experience low water pressure while operating the water pump.

Auto Fill

For coaches equipped with an Auto Fill function, the coach must be connected to a pressurized water source and have

the Fresh Water Valve in the "Auto Fill" position. In addition to turning the valve, the coach must also have the Auto Fill function enabled within the tank monitoring system. This function is used to automatically fill the fresh water tank and shut off the water supply based on the tank levels. The system will turn on the Auto Fill valve when necessary and turn it off when the tank reaches capacity.

City Water Connection

Before connecting to your coach, use a potable water source to purge any remaining air and stale water in the hose. Then, connect the hose from the potable water source to your coach or the hose from your coach to the city water supply (if equipped with a hose reel). Turn on the supply valve at the water source, and open each of the faucets to remove any air pockets in the coach plumbing lines. Once the water flows freely, close the faucet(s).

Water Pump

The water pump is used to pressurize the fresh water system when the unit is not connected to city water. The city water supply is under pressure, so the water pump is not necessary while you are connected to city water. Once the city water fill valve is not in the manual fill position, the water is supplied to the fresh water system components, including the hot water heater and faucets.

To disconnect from the city water supply, close the valve from the water supply. Release the pressure by rotating the fresh water valve to the tank fill position. Remove the hose from the city water supply, and store it in the water compartment. Once the pressure is relieved, rotate the fresh water valve to the appropriate operating position.

A IMPORTANT

Use a water hose manufactured and labeled for potable water to ensure that the hose is drinking water-safe and will not alter the taste of the water.

FRESH WATER RECLAMATION SYSTEMS

2026 Super Star Aqua View Fresh Water Reclamation System Overview

This article provides basic operation instructions for an Aqua View (SinkMi\$er, ShowerMi\$er) Fresh Water Reclamation System as it is installed in 2026 Super Star Super C coaches.



The exact system setup will vary by year, model, floorplan, and faucet style. The following information is based on 2026 Super Star coaches.

How the Fresh Water Reclamation System Works

Coaches equipped with an Aqua Miser Fresh Water Reclamation System have the ability to conserve water and grey tank capacity. This system is especially useful when dry camping.

By using water in the system supplied by the pump or pressurized water from a city water connection, this system allows you to redirect or recycle the cold water back into the fresh water tank before it comes out of the shower head. This water would normally go down the drain, filling up the gray water tank and wasting the fresh water supply.

Once the water is warm, the blue "magic mushroom" will let the user know when it is time to adjust the diverter in order to allow water to freely flow from the shower.

If you use the diverter valve to stop water flow during the shower once the magic mushroom turns from blue to white, you are diverting hot water to the fresh tank.



A CAUTION

If the coach is connected to a pressurized water source while the diverter valve is in the recycle position, this may cause the fresh water tank to overflow.

Aqua View Operation

To shower while dry camping, follow these steps:

Place the Aqua Miser lever in the "recycle" position. The diverter is labeled according to which direction the valve should be turned to divert the water back to the fresh tank instead of wasting the water and filling the grey tank.



FRESH WATER

The blue magic mushroom located near the shower faucet will remain blue in color while the water is cold. When the magic mushroom turns milky white in color, the water temperature is warm, and the system is ready for final shower temperature adjustments to be made. Turn the diverter valve back to the water flow position. Turn the shower mixing valve (large lever on faucet) until the desired temperature has been reached.

Aqua View and Auto Fill

A IMPORTANT

If left in the diverted/recycle position while the coach is connected to city water, the Aqua Miser system will continue to add water to the tank if the fresh water fill valve in the water compartment is turned to the auto fill or auto city supply position. Adding water to the fresh tank in this manner is unregulated and may cause the fresh tank to overflow, which may make the auto fill system appear as though it is malfunctioning.

Aqua View and Dry Camping

A IMPORTANT

If left in the diverted/recycle position while the coach is not connected to city water and the pump is turned on, the Aqua Miser system will continue to circulate water from the fresh tank through the Oasis and back to the fresh tank. Circulating water to the fresh tank in this manner is unregulated and may cause the water in the fresh tank to become hot, which may make it appear as though something is malfunctioning, and the water pump will run continuously.





This condition may cause all faucets throughout the coach to provide warm or hot water from both the hot and cold positions. To prevent this condition, the Aqua View diverter valve should be left in the water flow position, except when trying to pre-heat the water to the shower faucet (just before taking a shower).

Winterizing the Aqua View Fresh Water Reclamation System

This article provides additional winterization instructions relevant to coaches equipped with an Aqua View Shower Miser Fresh Water Reclamation System. This information should be used in conjunction with the coach winterization process as written in Newgle.

- 1. Cycle the valve to the recirculate position to purge the water out of the line back to the fresh water tank while pressurized air supply is connected.
- 2. Place the valve back to normal flow mode to the shower head.
- 3. Then purge the shower.
- 4. Run RV antifreeze through the shower system.

A NOTICE

Ensure shower miser valve is not set to recirculate to potable water tank before winterizing.

A IMPORTANT

Do not leave the valve in bypass mode when running antifreeze in the line because it will allow antifreeze into the fresh tank.

WATER HEATING

Domestic Hot Water via Oasis Hydronic Heating

This article provides a basic overview of domestic hot water via the Oasis hydronic heating system.

Oasis Controls

The hot water in your coach is heated by the Oasis hydronic heating system. To operate an appliance that uses hot water, or to assure plenty of hot water for showering, turn on the boiler or heating elements using the appropriate control panel (depending on coach year and model):

- the KIB 5" and 10.1" Monitor Panel(s) (2026 and newer)

For more information about the control panel installed in a coach, refer to the product pages and knowledge articles in Newmar's owner's guide or in Newgle.

Both heat sources (diesel burner and heating elements) can be used at the same time for the maximum water heating capability. Turning only the 120 volt heating element(s) on will usually provide sufficient hot water for most household chores, but may not be sufficient for showering.

The diesel burner is the primary heat source with at least 50,000 BTU (more on select Oasis models), and the electric elements are secondary. Depending on your hot water usage, using only the electric elements may be sufficient; however, if not, use the diesel burner when not plugged into shore power or in conjunction with the electric elements.

Potable Hot Water Capacity

	Zephyr	CH50	CHINOOK	NE-S
ВТИ	33,000	50,000	50,000	85,000
Maximum Water Temperature (at incoming water temperature of 60°F)	120°F	120°F	120°F	120°F
Gallons Per Minute (GPM)	1.0	1.5	1.5	3.0

WATER PUMPS AND CONTROLLERS

Water Pump Operation and Basic Troubleshooting

This article provides basic operating instructions and troubleshooting tips for a water pump.

Overview

The water pump is self-priming and totally automatic, operating on demand whenever water is required. When not connected to city water, the coach's water pump is used to pump and pressurize water from the fresh tank for distribution through the hot and cold water lines.

When the water pump switch is turned on, the water pump builds pressure in the system and will shut off as soon as the system is correctly pressurized. When a faucet is opened, the pump will turn on and operate as necessary to maintain the preset pressure in the system. Water pump operation is not necessary while the coach is connected to city water, since the potable water is already pressurized.

When using water at a low flow rate (GPM), the pump may pressurize the system and short cycle, meaning the pump

shuts on and off quickly. In many cases, the pump will stop short cycling if the flow rate of the water is increased.

Operation

- 1. Fill or partially fill the fresh water supply tank.
- 2. Open the kitchen and bathroom faucets.
- 3. Turn the water pump switch on, and allow the water to fill the water line and the hot water heater. The switch to this pump may be located in the exterior water compartment, in the kitchen, or in the bathroom.
- 4. Close each faucet after it delivers a steady stream of water (close the cold water first). Leave the hot water faucets on until they also deliver a steady stream of water. This will ensure that the water heater is filled with water.
- 5. The water pump should stop running once all faucets are closed.
- 6. The pump is now ready for automatic operation. The pump will run when a faucet is opened and stop when a faucet is closed and the correct pressure has been reached.

A CAUTION

Never allow the pump to run for long periods of time without water in the supply tank, as pump damage or blown fuses may result.

Care and Maintenance

All of the water should be drained from the fresh water system when the unit is not in use for more than one week.

Troubleshooting

If water doesn't flow when a faucet is turned on while using the demand system, use the following troubleshooting tips.

If the pump is running, but there is no water:

- Fill the tank.
- Clear the water line to the pump or the pump inlet filter.
- Rotate the city water / tank fill valve to the correct position.
- Make sure the winterizing valve(s) are not in the winterizing position(s).

If the pump isn't running:

- Check the pump switch.
- Check the 12 Volt fuses.
- Check the electrical connections.
- Check the battery.

2026 KIB Capacitive Touch Panels with Standard User Interface Guide: Tanks

The Home screen on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays water-related switches for controlling the water pump, as well as the settings for top off and auto fill. It also displays settings for tank heat, as well as the tank capacities for the fresh, grey, black, and LP tanks (if equipped). The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

A IMPORTANT

The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from what is shown, but the operation of the panel is the same.

Tank Monitoring

This area shows the different tank levels. The Graph displays from 0%-100% with 5% increments.

- Fresh tank = Blue fill
- LPG tank = Orange fill (Optional)
- Grey tank = Grey fill
- Black2 tank = Black fill (Optional)
- Black tank = Black fill
- Grey2 tank = Grey fill (Optional)

Note: Percent vs Gallons is not guaranteed in the 0%-100% display. There are factors outside of the system that make this imperfect.





Tank Heat

The tank heat icon will only appear on coaches equipped with tank heat pads installed on the coach. This allows the user to enable the tank heat circuit from the KIB screen and power to be activated to the tank heat pads. The tank heat will only turn on if the tank level is at or above five percent (5%) and the sensor in the heat pad detects heat is needed.

Coaches equipped with a KIB system without tank heat on the screen have compartment bay heat provided by a furnace or an Oasis hydronic heating system (if the heat source is enabled).

Water Pump

The home page will display the water pump switch on all the coaches, which will supply power to the water pump.

The water pump may be activated and deactivated via the KIB Monitor Panel, or, if equipped, via a momentary contact switch with LED indicator. The KIB switch panels communicate with a circuit board and touchscreen monitor on a dedicated V-BUS. The V-BUS receives on/off commands from the water pump button on the KIB display monitor or the water pump switch located in the water compartment.

The KIB circuit board is typically located in the cord compartment and sends 12 volt power to complete the water pump circuit. Once the pump pressure switch makes contact, the pump will supply water pressure to the fresh water system. The pump will shut off once the pump pressure switch is satisfied.

Top Off and Auto Fill

The top off and auto fill icons will appear on coaches equipped with an auto fill feature, which, when activated, allows automatic filling of the fresh tank while the coach is hooked up to a pressurized potable water source.

FAUCETS AND FIXTURES

Faucets and Fixtures Overview

Your installed bathroom and kitchen faucets and fixtures are available in many styles, finishes, and configurations, often complementing the other fixtures in your coach.

With proper maintenance, the faucets in the coach should provide years of trouble-free usage. The faucets and fixtures can be cleaned by wiping with a soft, damp cloth. Washing with warm water will remove dry water spots. Turn off the water and drain the pressure before attempting repair or replacement of the faucet.

A IMPORTANT

Avoid using "S.O.S." type cleaning pads or other abrasive cleaners because they may scratch the surface. Do not use cleaners that contain harsh or abrasive chemicals. Alcohol or similar solvents should never be used.

Super Star Hot Water Outlet Overview

This article provides an operational overview of the hot water outlet in the front compartment on the passenger side in

Super Star Super C coaches (Option # P230).

To use the hot water spigot above the fuel tank:

- 1. Make sure the fresh water tank has water in it.
- 2. Make sure the water pump is turned on or the coach is connected to a pressurized potable water source.
- 3. Hook up a garden hose, and use the water as desired.
- 4. If you exceed the gallons per minute (GPM) rating of the hydronic heater, you will run out of hot water until the system has enough time to recoup and heat more water.
- 5. Do not forget to winterize this line while following the directions in Newgle for winterizing the coach.



FILTERS

Clean Liquid Master CTO Whole House Water Filter with Clear Canister Quick Start (Model: CLM2)

This article provides basic instructions for replacing a Clean Liquid Master CTO Whole House Water Filter (Model: CLM2). Your coach may be equipped with a fresh water filtration system, which uses extruded carbon filter cartridges to remove sediment and certain impurities from the incoming water supply. The filter assembly is located in the basement water compartment.

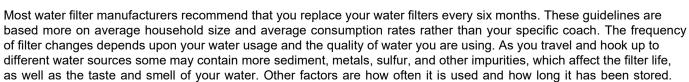
Overview¹

The Clean Liquid Master 2 CTO Premium Filter absorbs colors, odors, residual chlorine and organic substances in water and improves the taste. This product is only suitable for municipal tap water. In areas where the water pressure is higher than 0.4MPa, please install a pressure-reducing valve at the water inlet. The specific replacement cycle varies according to the water quality and water consumption in different places.

Purchasing a New Filter

Replacement filter cartridges are available through the Newmar parts department. For parts inquiries, refer to the NewPar (formerly ComNet) parts catalog or contact the parts department at 1-800-731-8300 (select the appropriate menu option).

Replacement Cycle



Change the filter at least every six months and at any time you notice decreased water flow or notice an unpleasant taste, odor, or algae after flushing and sanitizing the water system. Water filters and fresh water system maintenance are the customer's responsibility to ensure safe potable water.

Replacing the Filter

• To replace the filter cartridge, turn off the water supply to the coach at the city water connection, or turn off the water pump if using potable water.





- Drain the water pressure off the system by opening a faucet or low point drain.
- Unscrew the filter canister by rotating to loosen and remove it. If the blue Anti-Rotation Safety lock has been installed and engaged to prevent the filter housing from unscrewing, remove it by pulling up on the lock.
- Insert the new filter cartridge, positioning it so the opening in the bottom of the filter is placed on the molded ring at the bottom of the canister.

A CAUTION

When replacing the filter, make sure the rubber O-Ring seal is properly positioned in its groove in the cartridge housing. An improperly positioned or missing seal will cause leakage around the perimeter of the filter housing.

- Reattach the canister to the filter housing by rotating the canister until it's tight. Do not over-tighten the canister when attaching it back to the housing.
- If the blue Anti-Rotation Safety lock was previously installed, line it up and re-engage it to prevent the filter housing from unscrewing.

¹Winterizing Instructions



DO NOT ALLOW FILTER HOUSING TO FREEZE!



Do not allow water to freeze in the water filter canister. Freezing will crack and permanently damage the filter housing and associated plumbing. Always remove the filter cartridge prior to winterization.

- 1. Remove the filter cartridge before using anti-freeze to winterize the system.
- 2. Reinstall the empty housing back on the cap.
- 3. Proceed to winterize coach.
- 4. Flush housing thoroughly before it is put back into service after winterizing.
- 5. For best results, replace the cartridge seasonally.
- 6. Flush the new cartridge for approximately 2 minutes to remove any carbon particles.
- 7. Do not use carbon cartridges where water is microbiologically unsafe or of unknown quality.
 - 1. Maximum operating pressure is 100PSI/0.7Mpa
 - 2. Maximum operating water temperature is 100°F/38°C

Source(s): 1Water Filter Label and CLM Website: https://clm-products.com/documents

POWER WASHERS, SPRAYERS, AND EXTERIOR SHOWERS

Exterior Shower Overview

An exterior shower located in the water compartment on the driver side may be an optional feature on your coach and can be used to rinse off sand or grass, muddy shoes, or bathe a pet outside of the coach. The exterior shower may also be used to wash your hands or rinse off the sewer hose after dumping the waste water tanks.

The faucet operates just as it would in the kitchen or bathroom. When finished using the exterior shower, shut off both the hot and cold valves. Do not simply shut off the valve on the shower head itself, as it may cause hot and cold water to mix at the exterior shower and could allow drastic changes in water temperature throughout the coach.







WASTE WATER SYSTEM

There are two separate waste systems: the gray tank system and the black tank system, which includes sinks, lavatories, showers, tubs, and toilets. Each tank has its own control valve, and both tanks drain through the sewer drain hose. The waste water system catches and contains the used water and divert the waste water through the traps and drain lines to the grey or black holding tank(s). It is then stored until the tanks are emptied using a sanitary drain or dump station.

Sinks, Tubs, and Showers Overview

This article provides an overview and care and maintenance recommendations for sinks, tubs, and showers. The sink and shower are the beginning of the waste water system. The basic purpose is to contain the used water so it can be drained via the attached waste water drain line to the holding tank.

Care and Maintenance

The maintenance requirements for sinks and the shower are on an as-needed basis. Occasionally, the attached drain and trap may need to be cleaned of soap scum and hair to maintain efficient drainage. The basins and shower walls can be cleaned to maintain the original luster. Clean the entire surface, including the exterior, of the lavatory and kitchen sinks and shower with mild soap and warm water. Wipe the entire surface completely dry with a clean, soft cloth.

A IMPORTANT

Avoid using "S.O.S." type cleaning pads or other abrasive cleaners because they may scratch the surface. Do not use cleaners that contain harsh or abrasive chemicals. Alcohol or similar solvents should never be used.

Follow these tips to maintain the shower(s) in the coach:

- 1. Make sure the shower doors are closed and latched or locked prior to travel.
- 2. Check for leaks in the shower seals. Reseal them as needed.
- 3. Using a mild detergent and a soft cloth, wipe down the shower walls and glass enclosures after each use to avoid soap scum and hard water deposits.
- 4. When winterizing the coach, clean up any remaining antifreeze in the shower, as it may cause staining.

Waste Water Drain Lines

The drain lines are plumbed from the sinks, showers, and toilets are sloped to drain waste water to the grey or black tank. However, if the coach is equipped with a lift pump, refer to the "Lift Pump" article in Newgle. If the coach is equipped with macerator toilet(s), refer to the toilet article(s).

The drain lines connecting slideout-installed components, such as the kitchen sink and other optional equipment utilizing the coach water supply, are typically hard-plumbed within the slideout. The hard plumbing from the kitchen slideout connects to the hard plumbing from the tank using a braided drain line to ensure flexibility as the slideout extends and retracts.

The fresh water plumbing lines are normally tied to the flexible drain pipe and extend and retract smoothly as the slideout travels.



P-Trap and Waterless Trap Overview

This article provides an overview and care and maintenance recommendations for traditional and waterless p-traps.

Waterless Traps

Some coach models with a rear shower may have waterless traps in lieu of conventional P-traps. Waterless traps are designed to allow water to drain and to prevent odor from entering the coach without the height requirements of the conventional p-trap. Pressure builds and the self-sealing valve opens as water drains from a fixture. The valve closes to

form a tight seal after the water has completely drained from the sink or shower. No routine or seasonal maintenance is required for the waterless trap.

Foreign objects, such as hair, in the trap may allow odor to enter the coach and impede or slow water drainage and require occasional cleaning. When removing the waterless trap for cleaning, the ridges must be down and the direction of water flow must be correct when re-installed.

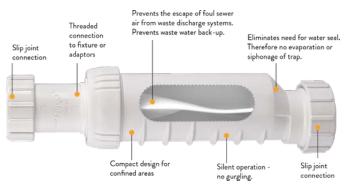
NOTICE

Remove the waterless trap before using mechanical drain-cleaning devices. Waterless trap can be damaged.

AD-12

A IMPORTANT

If standing water occurs in your shower, do not attempt to unplug or open the drain with a coat hanger or a sewer snake. Before taking your coach to a service center, try leveling your coach so that the rear is raised slightly higher than the front. This may correct the condition and prevent drain-cleaning or a service repair. If this does not correct the issue, Newmar recommends taking your coach to a service center for drain-cleaning or repair.



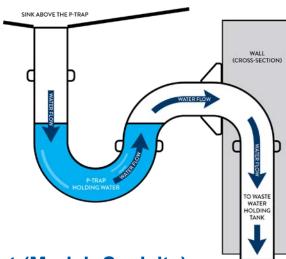


Traditional P-Traps

The sinks and shower drain have a water trap to prevent holding tank odors from entering the coach. These traps must have water in them in order to trap the odors.

While traveling, the water may leave the P-Trap. While stored, the water may evaporate, allowing an odor to enter the coach. If this occurs, run water from the faucet into the drain, allowing water to fill the trap.





SFA Saniflo Lift Station Pump Quick Start (Model: Sanivite)

This article provides basic operation instructions for a SFA Saniflo Lift Station Pump (Model: Sanivite).

Overview

Certain floorplans may use a lift pump in locations where plumbing drains are too low or too far away for gravity drains to effectively reach the waste water holding tanks. The design is a small collection tank with an inlet from the sink or shower with a submergible pump to push the water out of the discharge to the holding tank.

Note: Lift pumps operate on 120 volt power. The coach must be plugged into shore power or using the generator, or, when dry camping, the batteries must be charged and the inverter must be operational. Some coaches may have a

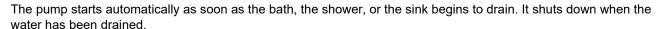
separate small inverter just to operate the lift pump; however, most will share the inverter with other inverted circuits.

NOTE FROM NEWMAR

On floorplans with lift pumps, follow proper winterization instructions to prevent the system from freezing.

Operation

After storage and/or winterization, run the water from the bathroom or from the kitchen appliance connected to the pump. Check to make sure connections are water tight and that the pump starts and stops correctly.



Note: The pump may cycle on and off several times as it discharges the drain water.

Source(s): SFA SaniVite Installation Instructions and Technical Data

Product(s): SFA Saniflo Lift Station Pump (Model: 8-59925-00208-4, Newmar Part Number: 125332)



This article provides a basic overview of the waste water holding tanks. There are two separate waste systems: the gray tank system and the black tank system. Each tank has its own control valve, and both tanks drain through the sewer drain hose.

The waste drainage system was designed to provide adequate and safe storage and/or disposal of waste materials. The drainage system uses plastic piping and fittings connected to the sinks, toilet, and holding tanks to provide for their drainage to an outside termination. All waste water tanks are vented through the roof and covered with a vent cap. The coach should be reasonably level for best operation of the system.

Some coaches not equipped with Oasis Hydronic Heating may have optional tank heating pads to reduce the risk of tank contents freezing.

Gray Water Holding Tank

The gray water holding tank is located in the underbelly of the coach, sometimes on top of the fresh water tank. It is primarily used for the drainage from the kitchen and bath sinks, shower, and the washing machine (if equipped).



A CAUTION

The gray tank valve must be in the open position when operating the optional washing machine.

Black Water Holding Tank(s)

The black water holding tank(s) are generally for sewage waste from the stool. It is typically located between the frame rails in the water compartment directly beneath standard flushing toilets. Macerator-style toilets can be installed away from the black tank.



During normal use, tank buildup may occur on the inside of the tank. How quickly buildup occurs varies from user to user and is affected by many factors such as water hardness, the amount of solid waste, how easily the toilet paper breaks down, how often the tank is dumped, and how well the tank is flushed. When buildup occurs, it may impair the tank sensor's ability to read tank levels properly. Preventive tank maintenance is recommended.

The gray and black tank(s) should be rinsed after dumping and treated with a waste tank additive to help break down and liquefy solid waste and help reduce odors. This chemical is readily available at any RV supply store. Add tank chemicals and the amount of water recommended by the chemical manufacturer. If the coach is equipped with two black tanks, add the chemicals to both toilets.



A IMPORTANT

Be careful not to spill the chemical on your hands, clothing, or the carpet as it may cause a permanent stain.

A CAUTION

Use only approved RV odor-controlling chemicals in the holding tanks. Products containing ammonia and petroleum will damage the ABS plastic holding tanks and seals.

Waste Water Disposal

This article provides basic instructions for draining the waste water holding tanks.

Both of the holding tanks terminate in a valve arrangement that permits draining each tank separately or together. The valves that open to release the water are called gate valves. The blade that closed the opening in the sewer drain pipes is connected to the T-handle to release the contents of the tank(s) when pulled.

The sewer line must be securely capped during self-containment use to prevent leakage of waste material onto the ground or pavement.

Do not pull the holding tank gate valve open, or operate the electric dump valve switch (if equipped) when the protective cap is installed on the pipe. Always drain the tank into an acceptable sewer inlet or dump station.





Keep drain valve closed to minimize the presence of sewer gases. Sewer gases can be present when RV is connected to campground sewage hookup. Can lead to illness or personal injury.

A WARNING

Holding tanks are an enclosed sewer system and must be drained into an approved dump station. Both black and gray water holding tanks must be drained and rinsed thoroughly on a regular basis in order to prevent the accumulation of harmful or toxic materials.



▲ WARNING

When routing the sewer or macerator hose, do not place on or near the Oasis, generator, or engine exhaust pipes. Otherwise, damage may occur.

How to Drain the Waste Water Holding Tanks

The holding tanks should only be drained when they are at least three-fourths full, to provide sufficient water to allow the complete flushing of waste materials in the drain lines and hose. If the tanks are not three-fourths full, add enough water to allow for sufficient flushing. Whenever possible, drain the holding tanks prior to traveling. The carrying capacity of your unit will be reduced if water is left in the black or gray tanks.

To empty the waste water tanks, follow the procedure below, depending on the type of waste system your coach uses. It is recommended to drain the black water tank before the gray water tank. The holding tank valves may be operated via a tank gate valve (t-handle) or an electric dump valve switch (when equipped).

Draining the Waste Water Tanks on a Coach with a Standard Gravity Drain and Dump System

- 1. Connect the adapter to the drain hose.
- 2. Unscrew the drain cap, and connect the hose with the adapter to the drain fitting. Support the hose as needed for optimal flow.
- 3. Open the gate valve all the way by pulling on the T-handle. The tank will start to drain as soon as the T-handle is pulled.
- 4. After you have drained the black water tank, immediately drain the gray water tank, allowing the water from the gray tank to wash the black water residue from the drain lines and hose.

- 5. When both of the tanks are empty, flush them with fresh water before you close the valves. Flush the gray tanks by pouring a couple of gallons of water into a sink drain. The drain outlet is engineered for quick release of the drain hose adapter.
- 6. Always close the gate valves and secure the end cap to prevent leakage while in transit.
- 7. Add a holding tank deodorant to help control the odor and break down the solid waste.

Draining the Waste Water Tanks on a Coach with a Macerator Waste System (Sani-Con)

The Sani-Con macerating waste system provides the following convenient features:

- Provides a sanitary method for discharging liquid waste from the RV by easily and quickly emptying waste-water from the RV's holding tanks, without relying on gravity.
- The macerating system pumps liquid waste from holding tanks and does not rely on gravity.
- The macerator is designed to process human waste and toilet tissue, making the Sani-Con ideal for black water, as well as gray water, discharges.
- 1. Make sure the black and gray water dump valves are closed.
- 2. Point the hose nozzle upward, and remove the nozzle cap.



A IMPORTANT

Select coaches equipped with a Sanicon macerator may have a valve to shut off the waste flow to the macerator drain hose. This valve can be shut off when using the larger gravity drain to prevent pressure and waste in the small hose when not in use or in the event that the small hose develops a leak. However, this valve must be open if you plan to use the macerator drain hose. You must open the valve prior to turning on the macerator.

- 3. Insert the nozzle into the sewer connection.
- 4. Open the gray water dump valve, and run the macerator pump for a few seconds to confirm that the system is operating correctly.

A IMPORTANT

If there is a problem with the connection, or if the system is not functioning correctly, the macerator may need to be cleaned or serviced.

- 5. Shut the gray water dump valve, and turn off the pump switch once you have determined that there are no problems.
- 6. Open the black water dump valve, and turn on the macerator pump switch.
- 7. Monitor the tank as it empties. The pump will run louder when the tank is empty.
- 8. Turn off the pump switch once the tank is empty.
- 9. Flush the black tank, and operate the macerator while it is flushing.
- 10. Turn off the flush system, then turn off the macerator.
- 11. Close the black water dump valve.
- 12. Add tank chemicals and the amount of water recommended by the chemical manufacturer. If the coach is equipped with two black tanks, add tank chemicals to both via the toilets.
- Drain the gray tank next to help flush out the macerator and sewer hose.
- 14. Open the gray water dump valve.
- 15. Turn on the pump switch.
- 16. Monitor the tank as it empties. The pump will run louder when the tank is empty.
- 17. Turn off the pump switch once the tank is empty.
- 18. Flush the gray tank, and operate the macerator while it is flushing (if equipped).
- Turn off the flush system, then turn off the macerator.
- 20. Close the gray water dump valve.
- 21. Place the cap on the hose and store it.
- 22. Add tank chemicals and the amount of water recommended by the chemical manufacturer.









Camping with Sewer Hook-Up

When camping at parks with sewer hook-up, it is important to keep the black water holding tank gate

valve closed at all times, except when dumping. The gray tank can be kept open while hooked to a sewer connection, but the black water tank must be kept closed. This is done so that an ample supply of liquid remains in the tank to provide a smooth flow through the gate and drain valve when dumping.

Sufficient liquid in the tank causes a swirling action that should take any accumulated solid wastes with it. Accumulation of solid wastes in the black water tank can be avoided by keeping the gate valve closed when connected to the sewer hook-up. If the valve is left open, solid wastes may accumulate in the tank. This may eventually result in costly repairs.

Holding Tank Rinse (No Fuss Flush) Overview

This article provides an overview of the holding tank rinse (no fuss flush) system. The coach may be equipped with a flushing system for the holding tank(s).

Tank Rinse Overview

The basic tank rinse system consists of: a water inlet, a vacuum breaker to prevent water from siphoning back out of the tank and into the hose (normally located in a lavatory cabinet to provide placement above the height of the tank), a fixed sprayer in the tank, and connecting water lines.

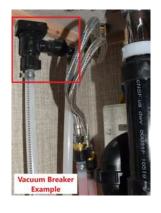
Black Tank Rinse

When draining your sewer tank, attach a water hose to the sewer spray hookup. After the tank is drained, leave the gate valve open, and open the water valve to allow water to spray inside the sewage tank.

Allow the water to rinse the tank for a minimum of three to five minutes to ensure it is clean. This should flush the inside of the tank of any debris that may be left inside. Next, disconnect the freshwater hose and close the gate valve.

If there are any solids still left inside the tank, fill the sewage tank with approximately ten gallons of water and holding tank chemical through the stool. As you travel, the agitation of the water should help liquefy any solids left in the tank. You can dump the sewage tank again at your next destination.





ACAUTION

Do not use the tank flush valve unless the fullway termination valve is in the open position.

Can result in an unsanitary condition leading to illness or personal injury.

Grey Tank Rinse

Select coaches may also have a tank flush on the grey water tank. Follow the same flush procedure by leaving the grey tank gate valve open while flushing.

Tank Rinse Low Point Drain(s)

On coaches equipped with tank rinse low point drain(s), turning the tank rinse drain valve to the "open" position will remove pressure and drain the tank rinse line. When finished using the tank rinse, it is recommended to turn off the water supply to the tank rinse connection. Open the valve, and drain off the pressure in the line before disconnecting the water hose. Leave the tank rinse low point drains open when the coach is winterized.

For coaches without low point drains for the tank rinse(s), the line to the vacuum breaker should automatically drain through the hose connection when the hose is disconnected, as this connection does not have a check valve.





A CAUTION

Do not use the same hose for the No Fuss Flush that is used for filling the fresh water tank. The gate valve to the sewage tank must be in the OPEN position while rinsing with the No Fuss Flush system.

A IMPORTANT

Always drain the sewage/gray tank prior to rinsing. Never rinse a sewage/gray tank that is full. The sewage/gray tank drain must remain open while rinsing the sewage and/or gray tank, and the drain hose must be positioned to drain into an approved sewage dump station. Failure to open the sewage/gray tank dump valve will cause the sewage/gray tank to fill with water, and can cause damage to your coach plumbing and interior.

If you need additional instructions on gray/sewage tank valve operation, please refer to the <u>Waste Water Disposal</u> article in Newgle.

TOILETS

Toilet Overview, Care, and Maintenance

This article provides an overview of toilet operation and care and maintenance. "Go" in style and comfort, no matter where your travels may take you.

Waste Water Drain Lines

The drain lines are plumbed from the sinks, showers, and toilets are sloped to drain waste water to the grey or black tank.

Care and Maintenance

Before using the stool, treat the tank with water that is mixed with an odor-controlling chemical, which is readily available at any RV supply store. Mix as directed on the holding tank chemical package. After mixing and flushing the chemical mixture, the waste tank is ready for use. The stool should be cleaned regularly for maximum sanitation and operational efficiency.

A IMPORTANT

Be careful not to spill the chemical on your hands, clothing, or the carpet, as it may cause a permanent stain.

A CAUTION

Use only approved RV odor controlling chemicals in the holding tanks. Do not use chlorine or caustic chemicals like laundry bleach or drain-opening chemicals, as they will damage the seals in the toilet and dump valves. Products containing ammonia and petroleum may damage the ABS plastic holding tanks and seals.

When using your stool, it is wise to fill the bowl 3/4 full of water. This will help to wash the solids away from directly below the stool and to ensure complete dumping of the holding tank. After flushing, a small amount of water should remain in the bowl.

A IMPORTANT

Before adding water, consult the toilet manufacturer's owner's manual for the specific procedure relating to your system.

A NOTICE

To prevent holding tank odors from entering the living space, make sure a small amount of water remains in the toilet bowl.

A NOTICE

Residual water trickle in ceramic bowls: Due to integrated rim of this toilet bowl, water may continue to slowly trickle into toilet bowl for up to 20 minutes after flushing. If water trickle continues after 30 minutes, replace the water valve.

A WARNING

Do not flush diaper wipes, feminine hygiene products, or any other products that would not be easily liquefied. Also avoid using holding tank deodorant capsules, as they may cause damage to the macerator. Damage resulting from flushing any materials or objects other than organic waste and toilet paper are not warrantable repairs.

Dometic Macerator-Style Toilets with Flush Handle or Switch Quick Start (Model: 8700 and 8900 Series)

This article provides basic operation instructions for a Dometic Macerator-Style Toilet with Flush Handle or Switch (Model: 8700 and 8900 Series).

The Dometic MasterFlush toilets provide an electric-flush that macerates waste and pumps it to a holding tank or other effluent storage/disposal system using an inline macerator hidden in the base of the toilet.

Operation

Operated by a wall-mounted flush switch or electronic flush handle, the toilet allows the user to add water to the bowl (before using or flushing) and to flush the toilet by pushing a button. The Dometic flush switch panel includes lights to indicate when electric power to the toilet is activated, and when the holding tank (if applicable) is full.

Dometic macerator toilets use a Dometic control module and a wall-mounted flush switch, which can be located in a basement compartment, cabinet, or on the floor (behind the toilet). The module will be located no more than 6 feet from the toilet. The module has power, ground, two tank level warning wires, and a communication cable.



Adding Water to the Toilet Bowl

Press the "Add Water" switch until the desired water level is achieved. The water flow will shut off automatically if switch is pressed too long to avoid overflow. More water is usually added only when flushing solids.

Flushing the Toilet

Press "Flush" switch, then release it. This activates a powerful macerator pump that siphons water and waste from the bowl, macerates, and propels the effluent through the discharge line to the holding tank.

Changing Flush Modes

MasterFlush toilets offer two flush settings to help manage water consumption:

- 1. Normal Flush: Uses 0.85 gallons per flush and adds water to bowl after ever flush.
- 2. Dry Bowl Flush: Uses 0.45 gallons per flush and does not add water to bowl after flush.

To change from Normal to Dry Bowl flush setting, press the "Flush" switch for about five seconds. When the "Power On" light begins flashing, release "Flush" switch. The flush mode has been changed to Dry Bowl setting. Change the mode to Normal flush by following the same procedure.

Indicator Lights

"Power On" Indicator: On the Dometic flush switch panel, as steady green "Power On" light indicates when electrical power to the toilet is activated. A momentary flashing green light indicates when flush mode is changing.

Tank Level Indicator: The flush switch panel includes a bi-color "3/4 Full" (amber) and "Full" (red) Tank Level light to indicate when the holding tank is approximately 75% or 100% full and should be pumped out. When the red light is illuminated, electrical power to the toilet automatically shuts off to prevent overfill of the holding tank.

Source(s): Dometic 8700 Series MasterFlush Macerator Toilet Operation Manual and Dometic 8900 Series Masterflush Toilets

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SLIDEOUTS

This chapter provides information about electric flat floor, bedroom, kitchen, wardrobe, and full wall slideouts, as well as hydraulic slideouts.

MIMPORTANT

Before operating any slideout, read and follow the warning labels and operation instructions posted in your coach.

Leveling and Full Wall Slideout Sequence of Operation

This article provides step-by-step instructions for leveling the coach and operating the slideouts.

A IMPORTANT

In the past, Newmar has recommended leveling the coach prior to deploying the slideouts. As of 2015, Newmar makes the following recommendation for the extension and retraction of slideouts. The following sequence of operation relates to ALL coach years and models.

Motorhomes, like all vehicles, flex in travel. Flexing may be different due to terrain and the coach's fulcrums (resting on tires or jacks). As the coach flexes, this movement is more noticeable in the outside reveal on a wider slideout.

Extending the Slideouts and Leveling the Coach

- 1. Park the coach on a reasonably level campsite.
- 2. Leave the coach at ride-height with air in the air bags (if equipped with air suspension) or on normal suspension (coaches without air suspension).
- 3. Plug the coach into shore power (if available) or start the generator to increase the voltage for better slideout operation.
- 4. Look at the "reveal" or "gap" of the two vertical wall trims around the slideouts to make sure there is plenty of clearance so the trim will not rub when extending the slideout. If the gap looks good, then the slideout can be operated. Most often, the gap will look best when sitting on the tires with the air suspension inflated (at ride-height), and not on the jacks.

A IMPORTANT

In the unlikely occasion that the slideout trim has inadequate clearances, try leveling or repositioning the coach and rechecking the clearances before extending the slideout.

- Close all compartment doors, and verify that the path of the slideout is unobstructed and free from any surrounding objects, both inside and outside of the coach.
- 6. Once the appropriate conditions are met, follow the operating instructions posted in your coach to extend the slideouts (image for example only).
- 7. Dump the air suspension (if equipped). This step is included in the auto-leveling process for most coaches.
- 8. Deploy the leveling jacks. (Refer to the leveling system manufacturer's documentation for complete operation instructions.)





A NOTICE

To extend the jacks, the ignition may need to be in the engine run or on position and the park brake may need to be applied. If these conditions are not met, you may hear a deny tone from the leveling system keypad and the jacks may not deploy.

Retracting the Jacks and Slideouts

- 1. Retract the leveling jacks.
- 2. Start the coach.

- 3. Allow the coach air suspension to fill and return to ride height (units without air suspension will return to normal suspension).
- 4. Turn the engine off.
- 5. Close all compartment doors, and verify that the path of the slideout is unobstructed and free from any surrounding objects, both inside and outside of the coach, including any water or debris that may have collected on the slideout roof or the topper awning. Note: If pooling has occurred after rain, one way to remove water on the slideout roof or topper is to tilt the coach using the leveling system to aid in water runoff.)

A IMPORTANT

Debris left on the roof or topper may prevent the slideout from sealing properly when retracted, as well as prevent the mechanical lock arms from closing properly when the slideout is extended.

6. For a full wall slideout, visually inspect the front vertical trim for adequate clearance before complete retraction (when the slideout trim spacing can be observed). The spacing should look even from top to bottom (see image for reference).

A IMPORTANT

In the unlikely occasion that the slideout trim has inadequate clearances, try leveling, or if necessary, repositioning the coach, and rechecking the clearances before fully retracting the slideout.

- 7. Retract the slideouts. Inspect all slideouts for complete retraction.
- 8. If the coach is equipped with manual lock arms, make sure to lock them.
- 9. Unplug the coach from shore power when you are ready to depart.

ELECTRIC SLIDEOUTS

Electric Slideout Operation

This article provides basic operation instructions for an electric slideout.

Slideout Switches

Electric Flat Floor Slideouts: Newmar pushed the RV industry forward by introducing the first flat floor slideouts. We continue to lead today with our patented flat floor slideout designs. The operating switch for the flat floor slideout is usually located in the overhead cabinet above the driver or passenger chair or the overhead cabinet above the entrance door.

Electric Full Wall Slideouts: Most electric full wall slideouts extend from the living area to the master bathroom in a Newmar coach.





Electric Bedroom Slideouts: The operating switch for the bedroom slideout is usually located on the bedroom wall. If there is a full wall slideout on the driver side of the coach, the switch may be located on the wall that separates the bedroom from the living room.

Electric Kitchen Slideouts: The operating switch for the kitchen slideout is usually located in the overhead cabinet above the driver or passenger chair or the overhead cabinet above the entrance door.

Electric Wardrobe Slideouts: The operating switch for the wardrobe slideout is usually located in the bedroom, on the wall beside the corresponding slideout.

Slideout Safety

A WARNING

- Do not allow children to operate the slideout.
- Do not allow any person to place their arms, legs, body or head between any pinch point of the lock arms, slideout fascia, interior walls, exterior walls, objects, or floor as serious injury or death could result.
- Any adjustments, or repairs, must be made only by "Newmar" qualified personnel.
- Always check the interior and exterior of the coach for objects, or persons, that are in the path of the slideout when extending or retracting the room.
- Always check the room to be sure any objects, or debris, are removed before retracting the room.
- Operator must remain continually in control of the slideout room control switch while the room is moving in or out.

WARNING

Do not allow children to operate the slide-out. Do not allow any person to place their arms, legs, body or head between any pinch point of the lock arms, slide-out fascia, interior walls, exterior walls, objects, or floor as serious injury or death could result.

Any adjustments, or repairs, must be made only by "NEWMAR" qualified personnel. Always check the interior and exterior of the coach for objects, or persons, that are in the path of the slide-out when extending or retracting the room.

Always check the roof to be sure any objects, or debris, are removed before retracting the room. Operator must remain continually in control of the slide-out room control switch while the room is moving in or out.

Electric Slideout Operation

To operate a slideout with the required voltage levels, batteries should be fully charged, the generator should be powered on, or the coach should be connected to shore power. This maintains the voltage levels required to operate the slideouts.

A IMPORTANT

Read entire slideout room instructions posted in your coach before extending or retracting the slideout.

- On diesel coach slideouts: The park brake must be engaged before operating the slideout rooms. The slideout room will not operate when Park Brake is released.
- On gas coach slideouts: The ignition key must be turned off or in the accessory position before operating the slideouts. The slideout rooms will not operate when the ignition key is in the ignition ON position.

WARNING

Be sure that the driver's seat is in the forward position before activating the slideout room.

Extending the Slideout Room

- 1. Slideout end windows must be shut before moving room.
- 2. Look for and remove any obstructions before moving room.
- 3. Caution on motorhomes: Move the driver seat forward before moving room.
- 4. If rooms are equipped with Manual Lock-Arms, be sure to release arms before running room out.
- 5. Press and hold the appropriate slideout switch until the slideout is fully extended and stops moving.
- 6. Release the switch. Note: The slideout room movement can be stopped at any time by releasing the switch.

Retracting the Slideout Room

- 1. Slideout end windows must be shut before moving room.
- 2. Look for and remove any obstructions before moving room.
- 3. Caution on motorhomes: Move driver seat forward before moving room.
- 4. Press and hold the appropriate slideout switch until the slideout room is fully retracted and stops moving.
- 5. Release the switch. Note: The slideout room movement can be stopped at any time by releasing the switch.
- 6. If rooms are equipped with Manual Lock Arms, be sure to engage lock arm when rooms are in and before moving coach.

Manual Operation of Room

Refer to the Manual Operation Instructions located on the kitchen overhead cabinet. The examples provided may not be specific to your exact coach model and/or year. Manual Retraction procedures are also available in Newgle.

AWARNING

Be sure that driver's seat is in the forward position before activating the slide out room.

NI-043

INSTRUCTIONS GENERAL INSTRUCTIONS: 1) On Diesel coach side-out: Park Blake must be engaged before operating the slide-out rooms will not operate when the Park Blake is released. 2) On Ges coach side-out: Park Blake must be engaged before operating the slide-out rooms will not operate when the Park Blake is released. 2) On Ges coach side-out: Signifion key must be turned off or in accessories position before operating the slide-outs. The slide-outs rooms will not operate when the ligntion key sin the ligntion key sin the ligntion key sin the ligntion key sin the lightion on the ligntion key sin the ligntion key sin the lightion on the lightion o

Electric Slideout Maintenance

This article provides care and maintenance information for the electric slideout. Electric slideout drive mechanisms do not require lubrication as part of the scheduled maintenance. Some noise is normal during extension and retraction from the various moving parts and seals.

Chains, Rollers, and Tubes

If a technician determines lubrication is needed on some component(s) such as chains, rollers, or tubes, Newmar recommends using a light coat of LPS 1 Greaseless Lubricant, which provides a dry, thin lubricating film that is resistant to dirt and dust buildup.

A IMPORTANT

Newmar does not recommend the use of grease, silicone, or WD-40 on the slideout tubes or chains, as these products tend to collect dirt and dust.

Seals

If slideout seal lubrication is necessary, the slideout seal provider (<u>Clean Seal</u>) recommends using a silicone-based spray or water-based 303 protectant on the rubber slideout seals. They state this will not hurt the seal. They also stated that baby powder could be used but would need to be applied frequently, as it would wash away. The silicone base spray would last longer and would not need to be applied as often. Newmar recommends bi-annual treatment of slideout seals.

Motor Mounting Bolts

In addition, the torque on all electric slideout motor mounting bolts should be checked annually by an Authorized Newmar Service Center.

Cleaning the Slideout Rollers

This article provides information about when and how to clean the rollers on an electric slideout.

When to Clean the Rollers

A IMPORTANT

It is important to clean the slideout rollers under the floor regularly. Dirt and other debris may adhere to the rubber coating on the rollers, which may lead to a dull finish, scratching, scoring, or further damage to the flooring. Such damage is NOT covered under warranty.

There is no set schedule for cleaning the slideout rollers. It will vary based on the cleanliness of the coach, and other factors such as dust, dirt, sand storms, as well as the type and condition of the roads traveled.

The following list provides examples of when the rollers should be cleaned:

- Liquid spills on the roller, floor, or under the slideout
- Fragments from broken glass, pottery, or other sharp objects on the roller, floor, or under the slideout Sand or other abrasive materials on the roller, floor, or under the slideout
- Hair wrapped around the roller or shaft
- The roller begins sliding on the floor instead of rolling smoothly

A IMPORTANT

Slideout rollers may leave indentations in the flooring. This condition is normal and does NOT warrant flooring replacement.

How to Clean the Rollers

- 1. The slideout rollers can usually be accessed by extending the slideout half way.
- 2. Blow any remaining debris from under the slideout.
- 3. If possible, clean the ramps for the electric flat floor slideouts.
- 4. If more room is necessary to clean the ramp and rollers, push out on the top of the room and slide a wooden wedge between the floor and the bottom of the slideout in a few different places to create more clearance.
- 5. Clean the rollers one at a time with a soft cloth and a mild cleaner. A wet Swiffer cloth can also be used. Do not use harsh cleaners or solvents that may soften plastics.
- 6. Another alternative is to clean a portion of each of the rollers, then move the room slightly to clean the next portion. Repeat this process until all of the rollers have been cleaned all the way around.

Adhesive-Backed Felt Slideout Roller Tile Protector Transport Pads Overview

This article provides basic use and care information about adhesive-backed electric slideout roller tile protectors, which began being used mid-model year 2025 and are designed to be used during coach transportation.

If your coach is equipped with tile protectors, place them over clean tile at each slideout roller location before retracting your slideout for travel. After arriving at a destination and extending the slideout(s), remove the transport pads and store them it is necessary to retract the slideouts again in preparation for travel.



A IMPORTANT

Slideout rollers may leave indentations in the flooring. This condition is normal and does NOT warrant flooring replacement.

The transport pads should be kept clean and free from dirt and debris. Clean the floor before placing the protectors on it at each slideout roller location. When not in use, storing them in a clean environment will prolong the effectiveness of the adhesive that keeps them in place while the slideout roller is retracting.

A IMPORTANT

It is important to clean the slideout rollers under the floor regularly. Dirt and other debris may adhere to the rubber coating on the rollers, which may lead to a dull finish, scratching, scoring, or further damage to the flooring. Such damage is NOT covered under warranty.

Once the protectors have become contaminated by dirt, debris, and/or pet hair, they may be able to be washed with warm soapy water and air-dried to regain some adhesion. Once a protector can no longer be cleaned enough to regain adhesion, it should be replaced. New protectors can be purchased through the Newmar Parts Department (Newmar part # 170421A).

A IMPORTANT

It is important to clean or replace the transport pads regularly. Dirt and other debris may adhere to the adhesive coating on the transport pads, which may lead to a dull finish, scratching, scoring, or further damage to the flooring as the slideout rollers move over the transport pad. Such damage is NOT covered under warranty.

Manually Retracting an R3 or O1 Series Electric Bedroom Slideout with a Square Shaft

This article provides instructions for manually retracting a bedroom slideout with a square shaft if it will not retract on its own.

A IMPORTANT

If the slideout is stuck in the retracted position, take the coach to an authorized service center for diagnosis and repair. Do NOT attempt any of the following procedures.

A IMPORTANT

Prior to proceeding with a manual retraction procedure, make sure the ignition key is in the off position and the park brake is set. Then, try retracting the slideout again, as some controllers require the ignition to be off, and others require the park brake to be set.

WARNING

The manual retraction procedures are for emergency use only. These procedures bypass all normal safety features. It is the responsibility of the person(s) performing the procedure to watch for moving parts and pinch points in order to avoid injury.

Option 1

This option requires the motor and gear box to be operational. This procedure bypasses the slide controller, switch, and the wiring. If battery power is unavailable, or if the motor/gear box is inoperable, move to a different option.

A IMPORTANT

This procedure can be performed on any single motor electric slideout.

- 1. Disconnect the red and black wires connected to the motor.
- 2. Using the the wires attached to the motor, connect to a 12 volt cordless battery to retract the slideout. If the wire polarity is reversed, the slideout will extend instead of retract.

IMPORTANT

If the slideout motor has a brake installed, you must also hook one brake wire to the battery with the red slideout motor wire and one with the black slideout motor wire.

This can also be done at the slideout controller's wiring harness by removing the motor's red and black harness plug from controller and jumping a 12 VDC power source at the Molex plug.

3. Disconnect the wire(s) from the cordless battery pack.

Option 2

If the slideout is stuck in the extended position and option 1 is unavailable or fails:

Remove the four mounting bolts, and move over the slideout motor until it disengages from the square shaft. Manually push the room in or out. Then complete the remaining steps:

Coaches with Mechanical Lock Arms

- Slide the motor back over onto the square shaft, and reinstall the four mounting bolts.
- 2. The motor and brake assembly must be installed (or another way devised) to hold the slideout in the retracted position prior to traveling.
- 3. Take the coach to an authorized service center for diagnosis and repair.





A IMPORTANT

This procedure can be performed on coaches with a brake on the slideout motor.

Option 3

If the slideout is stuck in the extended position and option 1 and/or 2 is unavailable or fails, try the following steps to manually retract the slideout by removing the brake and turning the shaft. Only a few tools are necessary to complete this procedure; however, it requires the gear box to be operational.

A IMPORTANT

Make sure you do not damage portions of the shaft that will slide through the motor, trantorque, bearing, and cog wheels.





- 1. First, locate the strap that secures the rubber boot on the outside of the motor.
- 2. Remove the strap, and pull off the rubber boot, removing it from the motor.
- 3. Remove the four screws from under the rubber boot on the brake.
- 4. Once the brake is removed, use a wrench to turn the shaft to retract the slideout.
- 5. After the slideout is fully retracted, reinstall the brake.

Manually Retracting a Single Motor Flat Floor or Wardrobe Slideout with a Square Shaft

This article provides instructions for manually retracting a single motor flat floor or wardrobe slideout with a square shaft if it will not retract on its own.

A IMPORTANT

Prior to proceeding with a manual retraction procedure, make sure the ignition key is in the off position and the park brake is set. Then, try retracting the slideout again, as some controllers require the ignition to be off, and others require the park brake to be set.

A WARNING

The manual retraction procedures are for emergency use only. If the slideout is stuck in the retracted position, take the coach to an authorized service center for diagnosis and repair. Do NOT attempt any of the following procedures. These procedures bypass all normal safety features. It is the responsibility of the person(s) performing the procedure to watch for moving parts and pinch points to avoid injury.

Option 1

This option requires the motor and gear box to be operational. This procedure bypasses the slide controller, switch, and the wiring. If battery power is unavailable, or if the motor/gear box is inoperable, move to a different option.

A IMPORTANT

This procedure can be performed on any single motor electric slideout.

- 1. Disconnect the red and black wires connected to the motor.
- Using the the wires attached to the motor, connect to a 12 volt cordless battery to retract the slideout. If the wire polarity is reversed, the slideout will extend instead of

retract. If the slideout motor has a brake installed, you must also hook one brake wire to the battery with the red slideout motor wire and one with the black slideout motor wire. This can also be done at the slideout controller's wiring harness by removing the motor's red and black harness plug from controller and jumping a 12 VDC power source at the Molex plug.



3. Disconnect the wire(s) from the cordless battery pack.

Option 2

If the slideout is stuck in the extended position and option 1 is unavailable or fails, try the following steps to manually retract the slideout by removing the brake and turning the shaft. Only a few tools are necessary to complete this procedure; however, it requires the gear box to be operational.

- 1. First, locate the strap that secures the rubber boot on the outside of the motor.
- 2. Remove the strap, and pull off the rubber boot, removing it from the motor.
- 3. Remove the four screws from under the rubber boot on the brake.
- 4. Once the brake is removed, use a wrench to turn the shaft to retract the slideout. **Make sure you do not damage portions of the shaft that will slide through the motor, trantorque, bearing, and cog wheels.** On slideout motors equipped with the 5/8" reduction gear nut, it can be turned to retract the slideout.
- 5. After the slideout is fully retracted, reinstall the brake.







Option 3 - Wardrobe Slideout Motor with Square Shaft

A IMPORTANT

This procedure can be performed on coaches with a brake on the slideout motor.

If the Slideout is Stuck in the Extended Position

Remove the four mounting bolts, and move over the slideout motor until it disengages from the square shaft.

Manually push the room in or out, or use a wrench to rotate the shaft. Make sure you do not damage the shaft with the wrench.

with Manual Lock Arms

- 1. Lock the room with manual lock arms (if equipped).
- 2. Take the coach to an authorized service center for diagnosis and repair.

with Mechanical Lock Arms

- 1. Slide the motor back over onto the square shaft, and reinstall the four mounting bolts.
- 2. The motor and brake assembly must be installed (or another way devised) to hold the slideout in the retracted position prior to traveling.
- 3. Take the coach to an authorized service center for diagnosis and repair.



A NOTICE



Depending on the year, model, and floorplan of the coach, the exact slideout motor(s) location may vary. Generally, they may be accessed from under the slideout in the compartment area. Some motors may also be located in the wheel well area under a cover.

Manually Retracting a Dual Motor Electric Full Wall or Kitchen Slideout with Square Shaft

This article provides manual retraction procedure options for a dual motor electric full wall or kitchen slideout with a square shaft. Due to the dual motor setup, manual retraction using a separate battery or 12V source is not recommended since motors run at different speeds. This may increase the risk of binding the room and/or causing extensive damage to the drive assembly.

Option 1

A IMPORTANT

This procedure can be performed on coaches with a brake on the slideout motor.

If the slideout is stuck in the extended position, try the following steps to manually retract the slideout by removing the brakes from each motor and turning the shaft. Only a few tools are necessary to complete this procedure; however, it requires the gear box to be operational and the person(s) retracting the room to keep the slideout from binding. This can be done by alternating moving each side in small increments or by turning each side simultaneously with a person at or near each motor or shaft assembly.

- 1. First, locate the strap that secures the rubber boot on the outside of the motors.
- 2. Remove the strap, and pull off the rubber boot, removing it from the motors.
- 3. Remove the four screws from under the rubber boot on the brake.
- 4. Once the brake is removed, use a wrench to turn the shaft to retract the slideout. **Make sure you do not damage portions of the shaft that will slide through the motor, bearing, and/or cog wheels.** On slideout motors equipped with the 5/8" reduction gear nut, it can be turned to retract the slideout.
- 5. After the slideout is fully retracted, reinstall the brake.







Option 2

Remove the four mounting bolts, and move each slideout motor until it disengages from the square shaft.

Manually push the room in or out, or use a wrench to rotate the shafts. Make sure you do not damage the shafts with the wrench and keep the room in sync to prevent binding.

Coaches with Mechanical or Scissor Lock Arms

- 1. Slide the motors back over onto the square shaft, and reinstall the four mounting bolts at each motor.
- 2. The motor and brake assembly must be installed or another way devised to hold the slideout in the retracted position prior to traveling.
- 3. Take the coach to an authorized service center for diagnosis and repair.

A NOTICE

Depending on the year, model, and floorplan of the coach, the exact slideout motor(s) location may vary. Generally, they may be accessed from under the slideout in the compartment area. Some motors may also be located in the wheel well area under a cover.

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CARE AND MAINTENANCE

This chapter includes information about required and recommended maintenance, inspection of components, as well as other maintenance items to help retain the coach's dependability, safety, visual appearance, and resale value.

How to Weigh a Coach

This article provides the Newmar-recommended procedure for weighing the coach. Below are some samples of the weight information labels that may appear in your coach.

A IMPORTANT

The sales literature may give approximates or standards. Each individual unit may weigh differently based on the factory and/or dealer options added.

Weight Descriptions

The following definitions are provided to help with communication issues with weight and your coach.

Gross Axle Weight Rating (GAWR): The maximum permissible weight for an axle.

Gross Combination Weight Rating (GCWR): The value specified by the manufacturer of the vehicle as the maximum allowable loaded weight of the motorhome and any towed trailer or towed vehicle.

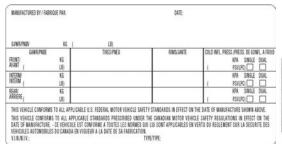
Gross Vehicle Weight Rating (GVWR): The maximum permissible weight of the fully-loaded motorhome. The GVWR is equal to or greater than the sum of the UVW plus the CCC. (GVWR UVW + CCC)

Unloaded Vehicle Weight (UVW): The weight of this motorhome as built at the factory with full fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, propane gas, or dealer-installed accessories.

Cargo Carrying Capacity (CCC): The weight equal to GVWR, minus each of the following: UVW, full fresh (potable) water weight (including water heater), full propane gas weight, and SCWR. (CCC = GVWR - UVW - Water Weight - Propane Weight - SCWR)

Gross Vehicle Weight (GVW): The weight of the unit with all items and supplies that are loaded into the unit at any point in time.

Sleeping Capacity Weight Rating (SCWR): The manufacturer's designated number of sleeping positions multiplied by 154 pounds (70 kilograms).



Weighing Your Coach

A IMPORTANT

To ensure the accuracy of your weights, make sure the unit is always level during weighing.

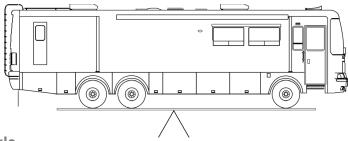
The unit has been built to comply with the component suppliers' recommended limits to provide you with a realistic CCC. When loading the unit, distribute the items so that not all of the weight is added to one area of the unit.

Gross Vehicle Weight (GVW)

If you have questions as to what the weight of the unit is after it has been loaded, take the unit to a drive-on scale or use individual wheel scales, and verify that the weights are within the limits of those specified for the unit.

When weighing the unit, follow these instructions. Failure to follow these instructions may give an erroneous weight reading.

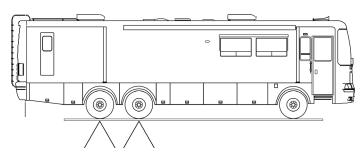
To find the total weight of the unit, pull the unit onto the scales so that all of the wheels are on the scale as shown. Record the weight. This is the GVW and should not exceed the GVWR supplied by Newmar for the unit.



Gross Vehicle Weight (GVW) Minus Front Axle

To find the total weight of the coach, except for the front axle, move the unit so that the front wheels are off the scales as shown. Record the weight.

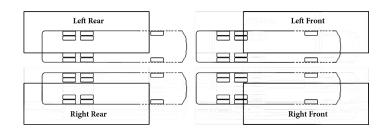
This weight should not exceed the total rating of the axles remaining on the scales. The front axle weight is determined by subtracting this weight from the GVW that was obtained in step one. This amount should not exceed the listed front axle weight rating.



Alternate Weighing Procedure

The recommended procedure to accurately weigh a motorhome is on individual corner scales. Since these are not always available, this diagram shows how to weigh a motorhome on a typical truck scale.

Since only one corner can be weighed at a time, the remaining three corners need to be as close to the scale as possible without being on the scale, and the unit needs to be as level as possible.



Remember, wind and rain can cause inaccuracies in weights.

▲ IMPORTANT

Your coach has been aligned at the factory as part of the production process. To provide optimum tire longevity and offer the best handling characteristics, Newmar recommends you have your unit re-aligned after loading your belongings. Though highly recommended, this alignment is not mandatory, and as such, is not warrantable by Newmar or the chassis manufacturer.

Washing and Drying a Coach

This article provides the BASF/Newmar-recommended procedure for washing and drying the coach.

A IMPORTANT

Damage caused by inappropriate or unapplied maintenance is not covered under warranty as expressed in the Newmar Expressed Limited Written Warranty.

Washing the RV

Following these procedures can provide a long-lasting, high-gloss finish to your RV. These same procedures can also be applied to your everyday automobile, producing the same long-lasting results.

The clear coat used on all painted Newmar RVs is similar to the technology used by automotive manufacturers. The painted surface is baked in our state-of-the-art bake booths which cures the clear coat finish. The end result is a Masterpiece Finish which is the highest quality in the industry. The same care needs to be performed and maintained on the RV exterior surface as on an automobile finish.

Make sure the coach's surface temperature is under 90 F. Never wash the vehicle in direct sunlight, [while the vehicle is hot, or with hot water].

Rinse the entire coach to remove all loose dirt and grime. Never hold a pressure washer close to the surface. Use a fan

type spray nozzle, making sure that the water coming out of the gun has a fan and not a single straight stream.



Keep the stream at least 18 inches from the edge of any decals, as high pressure water may cause the decals to loosen and peel.

Most automotive stores offer mild car wash shampoos that are safe for clear coat finish. We recommend using baby shampoo as it will not leave a film on the painted finish. Adding ½ of a cup of food-grade vinegar to the water will boost the cleaning ability of any cleaner and also soften the water. This also helps to minimize water spots.

A IMPORTANT

Do not use dish soap, detergents with degreasing agents, or industrial cleaners as they can cause damage to the finish.



Do not use solvents such as acetone, MEK, toluene, etc. on the decals. Any solvent including alcohol may soften or smear colors. Do not use lacquer thinner on the paint or decals. Do not overcoat the decals with clear paint. Do not allow gasoline or other fuels to drip or stay on the decals for any length of time. If this occurs, immediately flush the area with water.

Use 100% cotton or lambs-wool pad or wash mitt for washing the painted surface of the RV. Use a different mitt for washing the wheels and undercarriage. Change water in the wash bucket often or place a "dirt guard" in the bottom of the bucket to keep the cleaning pad or wash mitt free of dirt and debris.

The following products may assist you when cleaning your coach, and may be purchased through the Newmar parts department:

- Lambswool Pad (Newmar part #018461A)
- 4-way Swivel Pad Holder (Newmar part #018461)
- Lambswool Mitt (Newmar part #018464)
- Extension Pole (Newmar part #018463)
- EZE Squeegee (Newmar part #016462)

A IMPORTANT

Absolutely no brushes should be used on the painted surface. Use of these on your RV's painted surface will cause damage to the finish, as it would an automobile finish. Newmar does not support using of any style, type, or material of brush, even though it may be marketed as 'RV Safe' or 'Approved.



The use of any cleaning products outside of Newmar's recommendation is at the customer's discretion. However, Newmar and BASF take no responsibility for any scratches, swirls, or damage to the finish of the coach caused by the use of non-recommended products.

Drying the RV

Drying the RV is just as important as washing it. Today's tap water and well water contains many chemicals that could leave water stains on the finish. After washing, dry the RV with EZE Squeegee (Newmar part # 018462) or a clean 100% leather chamois.

A IMPORTANT

You can also use fresh microfiber towels for drying. Please use caution, as these towels are made partially with polyester (which is plastic), which can break down over time from extended use and washing, eventually causing damage to the clear coat finish.

Source(s): BASF Recommended procedures for a long-lasting, high-gloss finish, AD6622 REV 11.2021 Product(s): BASF Finishes

Waxing and Polishing a Coach

This article explains the BASF/Newmar-recommended benefits and suggestions for using waxes and polishes to maintain your coach's finish.

The coating on your RV is a state-of-the-art base coat/urethane clear coat. This means that what you wash and polish is a clear coating designed to protect the colored base coat. The clear coat needs to be maintained especially in harsh environments. Clear coats will appear to fade or lose gloss as the surface becomes contaminated by the environment. A finish that is dull or low in gloss is a result of contamination. Occasional washing alone will not adequately remove some forms of contamination and will require polishing of the finish.

Polishes and waxes primarily serve to:

- Remove minor surface imperfections caused by water spots and acid rain.
- Remove minor scratches by filling them and leveling the surface.
- Seal the pores of the finish creating an easier-to-clean surface.
- Beautify the paint finish appearance with more depth and high gloss.
- Protect the paint finish from the elements.

A IMPORTANT

Do not use products that contain harsh abrasives such as rubbing compounds. These products should be used by an experienced technician with proper training and equipment.

Most polishes and waxes are designed to clean and polish in one application, whether by hand or machine. A machine-applied polish will last longer than one applied by hand because the high RPMs of the buffing wheel create heat, resulting in a deeper film with higher gloss. However, a hand-applied polish or wax will offer outstanding performance and protect the RV's finish. When applying the polish or wax, do so in a shaded area making sure the RV surface is at the specified temperature according to the polish manufacturer's recommendations.

NOTE FROM NEWMAR -

Apply polish or wax while the coach is parked in a shaded area so the coach's surface is at the specified temperature according to the polish manufacturer's recommendations.

Due to the variations of polishes and waxes, incorporate the following:

- Condition the polishing pad by rubbing a slight amount of polish on it.
- Use only the amount of polish specified in the label directions.
- Work a small area at a time.
- Rinse off and remove dried polish from crevices, trim and moldings.

NOTE FROM NEWMAR

The exterior finish of your coach will require a routine waxing. When water will not bead and roll off a freshly washed vehicle, a new coat of wax is needed. Wax not only improves the appearance of the vehicle, but it also protects the finish against oxidation and corrosive materials. The recommended type of wax is one that is compatible with painted or gel-coated fiberglass finishes, and contains a UV (ultra-violet) inhibitor. Buffing with a polishing compound will improve a dull or discolored finish.

NOTE FROM NEWMAR

When using a polishing compound that does not contain a wax preservative, reapplying a coat of hard wax after polishing is recommended.

A IMPORTANT

Refrain from waxing or polishing for at least 90 days from [the coach's] date of manufacture.

Source(s): BASF Recommended procedures for a long-lasting, high-gloss finish, AD6622 REV 11.2021 Product(s): BASF Finishes

How to Clean Exterior Chrome

This article provides the Newmar-recommended procedure for maintaining your exterior chrome accessories.

Removing Tarnish and Water Spots

Wash chrome items with soap and water the same way you wash the exterior paint. If the chrome still has some tarnish and water spots on it, clean it with a soft cloth and vinegar. Add a little baking soda to the rag if you need a stronger cleaner.

Removing Rust/Oxidation

Rust is not a warranty issue, as it is a common occurrence (especially in southern states where there is a lot of humidity) and requires frequent maintenance. Most exterior chrome can be cleaned, even the plastic, except for the side marker light bezels. To clean oxidation/rust off of the chrome, complete the following steps:

- Regularly clean chrome with WD-40 using a white or blue Scotch Brite pad or very fine steel wool. Test it in an inconspicuous area to ensure no damage is occurring while using the pad or steel wool.
- 2. Then use a chrome polish to help maintain the finish and make it last longer.

A IMPORTANT

The more often the chrome is cleaned, the easier the cleaning process. Coaches exposed to salt spray from the road or ocean air should be cleaned more often to maintain the best appearance.



How to Winterize a Coach

This article provides the Newmar-recommended step-by-step instructions for winterizing a coach. Follow the winterizing instructions to reduce the risk of leaks caused by cracks from freezing pipes.

A WARNING

Winterizing is the responsibility of the consumer. Make sure you have protected the complete water system any time your coach is in freezing temperatures. Failure to complete the winterization process may result in extensive damage to the water system, appliances, and coach. Damage caused by the fresh water system freezing can be extensive and costly to repair.

If a new coach has been winterized before leaving the production factory, it may be equipped with the following label: "This fresh water system has been protected with non-toxic anti-freeze. Please flush and drain lines before using."

IMPORTANT

Once water has been introduced into the system, it is no longer protected and must be winterized again any time the coach may be subjected to freezing temperatures.

This fresh water system has been protected with non-toxic anti-freeze. Please flush and drain lines before using. AD-70

A NOTICE

The following instructions are generic to Newmar coaches and are NOT specific to your coach. They should only be used as a reference guide for this process. Appliances, drain locations, and plumbing components may vary by coach, affecting the total volume of antifreeze required to complete the process (typically 5-10 gallons). The following images are for example purposes only. Your coach may or may not be equipped with the same components as shown.









When to Winterize a Coach

Although great care has been taken to build a well-insulated unit, recreational vehicles are not intended for extended

use in sub-freezing weather without special precautions. When the outside temperature drops below freezing, the furnace must be turned on to keep the coach warm. Continued use in cold weather will require the coach to be winterized.

It is critical to winterize the plumbing in your coach when storing it in temperatures below freezing or using it in extremely cold conditions. If subjected to these conditions without being properly winterized, the heating system may be unable to keep the coach and its compartments above freezing temperatures.

A IMPORTANT

A regulated compressed air supply is needed to properly complete this procedure. The pressure should be regulated between 40 and 60 PSI (pounds per square inch). Higher pressures may cause damage.

How to Winterize a Coach

- 1. Drain the black and grey tanks. If equipped, also empty the macerator hose.
- 2. Drain the fresh water tank. Open the tank drain valve located in the driver-side water bay.
- 3. Turn off the switch(es) to the water heater or the hydronic heating system, including the burner and the 120 Volt element, depending on your coach's equipment.
- 4. Turn on the refrigerator.
- 5. While the tank is draining, remove all of the water filters. Install a bypass or the filter canister, including the whole house, refrigerator, and drinking water filters (whether standard or UV), if your coach is equipped.
- 6. For units with a tank-style water heater instead of a hydronic heater:
 - a. Close the valves to the water heater, and open the bypass valve, which is normally located at the back side of the water heater. Depending on your particular floor plan, access to the back of the water heater may be located in a cabinet, the closet, or in an exterior compartment.



b. Remove the drain plug at the bottom of the water heater tank on the exterior of the coach.

A IMPORTANT

The 120 Volt water heater element must be turned off by flipping the switch near the water heater's drain plug.

A NOTICE

For units with a tankless water heater, do NOT put the water heater in by-pass mode. Instead, blow it out, and install the antifreeze as directed for a hydronic heater.

A IMPORTANT

On coaches equipped with a Truma AquaGo water heater mounted above the floor line of the coach, open the low point drain located in the hot water recirculation loop between the shower loop and the water heater. The exact location will vary, but the low point drain is typically located in the basement area at or near the lowest point in the loop and may be marked with a low point drain label.

- 7. Open the low point drains by turning the valve to the "open" position or by pulling up on the handle if the coach is equipped with T-Handle valves. There should be one drain for hot and one for cold, and they are normally located in the water compartment.
- 8. Connect the regulated air supply to the inlet of the hose from the hose reel (if equipped) or the city water fill inlet using a blowout plug. Air will flow out of the low point drains.
- 9. Cycle all faucets and the auto fill or tank fill valve (whichever the coach is equipped with) to all possible positions for a minimum of 10 seconds at each position. Do not forget the hot water spigot with low point drain next to the generator (if equipped).
- 10. Cycle the tank fill valve to all positions in order to purge water out of the lines and valve assembly.

A IMPORTANT

On coaches equipped with Aqua View Showermi\$er Fresh Water Reclamation System, cycle the valve to the bypass position to purge the water out of the line back to the fresh water tank while pressurized air supply is connected. Then place the valve back to normal flow mode to the shower head, and then purge the shower. Do not leave the valve in bypass mode when running antifreeze in the line because it will allow antifreeze into the fresh tank.

11. After blowing the water out of the system with pressurized air, disconnect the hose, and pour approximately one cup of antifreeze into the hose. Hook the hose back up to the pressurized air, and blow the antifreeze through the hose and hose reel to protect it.

- 12. Close the low point drains. This must be done prior to pumping antifreeze through the lines, or the antifreeze will be pumped onto the ground.
- 13. Remove the whole house filter canister, and dump any remaining water, and reinstall.
- 14. Locate the winterizing valves marked "A" & "B" located in the water compartment.
- 15. Close valve "A" by rotating the valve clockwise. Open valve "B" by rotating the valve counter clockwise.
- 16. Remove the plug at the end of the clear winterizing hose.
- 17. Insert the hose into a jug or bucket of antifreeze.
- 18. Replace the empty jugs, or refill the bucket as needed to complete the entire process.
- 19. Turn on the water pump by activating water pump switch. Red antifreeze will start flowing through the clear hose into the water lines.
- 20. Run cold water from the kitchen faucet until the red potable antifreeze is detected. Run hot water from the kitchen faucet until the antifreeze is detected.

A IMPORTANT

Make sure you run enough antifreeze through each faucet to fill each P-trap.

21. Proceed to the next faucet, and repeat process for each faucet, including the lavatory, shower sprayers, and outside shower faucet. If equipped, repeat the process for the instant hot water, drinking water dispensers, and hot water spigot with low point drain (next to the generator).

A IMPORTANT

For coaches equipped with a sink or shower connected to a Saniflo Sanivite lift pump, the lift pump must be completely emptied, or enough RV antifreeze must be poured down the drains to allow the lift pump to cycle until the antifreeze concentration is sufficient for freeze protection. Pour at least one liter of antifreeze down the drain connected to the lift pump. Make sure the pump cycles at least once, then pour another liter down the drain. Wait for the lift pump to cycle again; then the remaining liquid in the lift pump should have an adequate antifreeze concentration at this point.

- 22. Flush each toilet until the red antifreeze is detected. If the toilet is equipped with a sprayer, activate and flush it until the antifreeze flows from the sprayer.
- 23. Run the dishwasher through a cycle to winterize the water inlet plumbing, as well as the pump and drain line.
- 24. If the coach is equipped, turn on the washing machine. Select a wash cycle setting that uses warm water to activate both the hot and cold inlet valves. Allow the washing machine to fill for approximately two minutes. Press the "cancel" and "drain" selection to begin draining the machine. This will winterize the pump and drain, as well as the washing machine's P-trap.
- 25. Depress the refrigerator's external water dispenser while holding a container to catch the fluid. Continue to let the fluid flow until the red antifreeze is detected.

A NOTICE

The red antifreeze may not appear instantly, as most refrigerators have a reserve for cold water. However, if you did not remove the water filter in the refrigerator in Step 5, the fluid will run clear for a long time.

26. Make sure the ice maker is turned on. Once it reaches the proper temperature, it will attempt to make ice cubes, which will become pink in color. This may take several hours. Once they become pink, turn off the ice maker and the refrigerator. Empty the ice cube tray, and clean out the ice maker and freezer area.

A NOTICE

If the coach is equipped with an Oasis hydronic heating system, it will automatically be winterized as the antifreeze circulates through the coach's fresh water system.

- 27. Turn off the water pump. Close the winterizing valve "B", and open valve "A".
- 28. Insert the plug into the clear hose, and stow the winterizing hose.
- 29. If the coach is equipped, winterize the macerator by turning it on and emptying the black and gray holding tanks, allowing the macerator and macerator hose to fill with antifreeze. If there is no macerator in the coach, use the sewer hose to drain the black tank, followed by the gray tank.

How to De-Winterize a Coach

This article provides the Newmar-recommended step-by-step instructions for de-winterizing a coach.

- 1. Connect your water hose to a fresh potable water supply.
- 2. Set the auto fill or tank fill valve for city water supply.
- 3. Run water through each faucet, toilet, and shower on both hot and cold settings.
- 4. Run the dishwasher and the washing machine through a complete cycle before using.
- 5. Depress the refrigerator water dispenser while holding a container to catch the fluid being dispensed. Continue until clear water is dispensed.
- 6. Install the refrigerator filter (if equipped).
- 7. Turn off the water supply drain pressure from the system using low point drains. Install all filters in the system.

A NOTICE

Newmar recommends installing clean filters unless the sanitization process will also be completed at this time.

- 8. Close the low point drains.
- 9. Turn on the ice maker, allowing it to run through multiple cycles. Throw away any ice with antifreeze. Clean out the ice maker and the tray until clear ice is available.
- 10. If the coach is equipped with a water heater, install a drain plug. Open the water heater valves, and close the by-pass valve on the back side of the water heater.
- 11. Turn on the fresh potable water supply.
- 12. Open the hot water faucet until the water heater is filled and flows through the faucet without air.
- 13. Flip the water heater switch to the "ON" position. This is located near the drain plug (if equipped with a water heater).
- 14. Check the tank level, and dump if necessary.
- 15. The coach is now ready to use.

How to Sanitize the Water System

This article provides the Newmar-recommended step-by-step instructions for sanitizing a complete water system.

A NOTICE

The following instructions are generic to Newmar coaches, and are NOT specific to your coach. They should only be used as a reference guide for this process. Appliances, drain locations, and plumbing components may vary by coach.

Follow the sanitizing instructions to reduce the risk of fresh tank contamination. All of the water should be drained from the fresh water system when the coach is not in use for more than one week. Whenever possible, drain the fresh water tank before traveling or only carry what you



will need to get to your destination. Water in the tank will reduce the carrying capacity of the coach.

When to Sanitize the Water System

Newmar recommends sanitizing your water system under the following scenarios to discourage organic growth and contamination:

- Purchasing a new or used coach
- After your coach has been in storage for a lengthy amount of time
- At least once per year for proper maintenance
- If an unpleasant odor arises from your water

The Fresh Water System may need to be sanitized more often depending on the source of the water supplied to the coach.

How to Sanitize the System

- 1. Drain the fresh water tank by turning the tank drain valve to the open position.
- 2. Drain the water heater (if equipped) by removing the drain plug.

A NOTICE

Do not attempt to drain the water heater when the water is hot or the system is pressurized, as scalding may occur.

While the tank is draining, remove all of the water filters, including the refrigerator and drinking water filters (standard or UV), if your coach is equipped, and install a bypass. Not all filters have a "bypass," so it may be necessary to install the canister without the filter.

- 3. Remove the main (whole house) filter housing.
- 4. Remove the filter, and pour household bleach (1/4 cup per 15 gallons, as determined by your tank capacity) into the filter housing. For example: 1.75 cups of bleach for coaches equipped with a 105 gallon fresh water tank or 1.25 cups of bleach for coaches equipped with a 75 gallon fresh water tank. This will approximately be a 50 ppm (parts per million) bleach solution.

A NOTICE

For any coaches not equipped with a whole house filter, skip these steps. Instead, use a funnel to pour bleach into the hose before connecting the coach to a potable water supply.

- 5. Reinstall the housing and the water heater drain plug after it has drained completely.
- 6. Hook up the water hose from the hose reel (if equipped), or hook up a drinking water-safe portable hose to a potable water source.
- 7. Turn the valve to 'tank fill' or 'manual tank fill.'
- 8. Turn on the potable water source, and fill the water tank. (This will flush the bleach/water solution from the filter housing [Step 4] into the water tanks.)
- 9. Turn off the tank fill valve (on non-auto fill coaches).
- 10. Turn on the water pump.
- 11. Run water out of one faucet on both hot and cold settings until a strong bleach smell becomes evident.
- 12. Repeat this for all faucets, as well as the refrigerator, dishwasher, washing machine, toilets, low point drains, etc.

A NOTICE

Top off the water tank so that the sides and top of the tank are sanitized as well.

- 13. Turn on the refrigerator and the ice maker. Depending on your refrigerator model, the ice maker may have a flip lever or an ON/OFF switch. Let the ice maker run until the bleach/water solution is detected. This may take a few cycles. One cycle consists of the ice maker filling the trays with water, freezing the water, and then dumping the ice into the ice bin. This cycling process will occur automatically if the refrigerator, the ice maker, and the water pump are all turned on.
- 14. Disconnect the water hose, and dump out some water.
- 15. Pour one ounce (1 oz.) of bleach into the water hose, and reconnect it to the potable water supply.
- 16. Turn on the water for a brief moment to flush the bleach through the water hose, allowing it to mix in the hose reel or the portable hose used for potable water.
- 17. Turn off the water supply, and disconnect the water hose.
- 18. Cap the end of the hose.
- 19. Let the bleach water sit in the system for a minimum of four hours. However, for best results, allow the solution to sit overnight or up to 12 hours.
- 20. Drain the fresh tank using the drain valve.
- 21. Fill the fresh tank with clean potable water.
- 22. Run water out of each faucet on both hot and cold settings until the bleach smell is no longer evident.

A NOTICE

If the bleach smell is still noticeable, repeat steps 21-22 to flush the system again.

A IMPORTANT

If algae or slime is detected in the fresh water system, it may be necessary to repeat the entire process until the system is flushed clean.

Once the system is flushed, Newmar recommends replacing the water filters. Do not re-use the contaminated filters, as this will greatly reduce the effectiveness of the sanitization process.

A NOTICE

Sanitizing through the winterization process will not sanitize the fresh tank or all of the water lines.

Newmar-Recommended Routine Maintenance Checklist

This article provides a basic checklist for Newmar-recommended routine maintenance.

A IMPORTANT

All routine maintenance is the responsibility of the owner and is not covered by the Newmar Limited Warranty. Please note that damage caused by improper or unapplied maintenance is not covered by the Newmar Limited Warranty. Cosmetic adjustments and alignments must be performed within the first three (3) months from the date of the original purchase for warranty consideration. Thereafter, these items are considered routine maintenance.

RV Maintenance

Weekly

• Test the smoke alarm, carbon monoxide detector, and propane gas detector.

Quarterly

- Clean the range hood exhaust fan filter and blades.
- Inspect and clean slideout rollers on each slideout.

Bi-Annually

- Check all gas appliances for proper operation.
- Check and replace the water filters.
- Check the operation of windows, latches, and hinges.
- Clean and inspect all door and window seals, and reseal where necessary.
- Lubricate the exterior door hinges and latches with a graphite (silicone) lubricant.
- Inspect the slideouts for proper seals. If realignment is necessary, please contact an authorized Newmar service center.
- Clean the roof ducted air conditioner filters (quantity of filters varies by ceiling style and number of air conditioners installed).

Annually

- Check exterior lights, including the tow plug.
- Test and lubricate the entry step.
- Perform generator maintenance per manufacturer's recommendations.
- Perform refrigerator maintenance per manufacturer's recommendations.
- Sanitize and flush the fresh water system and add treatment to waste tanks.
- · Clean the roof drains.
- Replace the cabin (dash) AC filter (when applicable).

As Needed

• Wash and wax coach (as needed).

For more information, refer to the Newmar Factory Service Center Routine Maintenance Schedule file in Newgle.

Chassis Maintenance

For more information, refer to the chassis manufacturer's documentation, or the RV Maintenance Sheet, Spartan-Freightliner Chassis Service, and Ford Chassis Service files in Newgle.

How to Prepare A Coach for Storage

This article provides general steps and recommendations to prepare a coach for storage.

The following information is not intended to provide detailed instructions relating to any specific year, model, or floorplan of the coach. Some of the general statements may not apply to a coach, depending on its installed equipment and/or options. Whether stored for one month or even longer, there are several things you can do to help ensure the coach is ready to go after the downtime.

Pre-Storage Steps

Make sure the fuel tank is full. You can also add a fuel stabilizer appropriate to your type of fuel. Run the engine long enough to distribute the stabilizer. It is also recommended to have engine and generator oil changes before storing for a few months or more. Refer to your chassis owner's manual for recommended products.

If the coach is being stored for winter, please refer to the "How to Winterize A Coach" article for additional information.

Choose a Good Spot for Storage

- The best option is indoor storage. The second best option is under a carport or other shelter. The last option is outdoor storage. Store away from machinery, heat sources, and areas that generate noxious fumes.
- If storing outside, avoid parking near trees or where weeds and grass can grow tall. This will help protect the coach from damage from limbs, moisture, and other hazards.

Newmar recommends leaving your coach plugged into shore power during storage, so parking in a location where this option is available would be best. This will help maintain the battery charge. Newmar's recommended best practice is to store the coach while plugged into 50 amp or 30 amp shore power. If you choose to store plugged into 20 Amp, refer to the Newgle article titled "Can I store My Coach While Using 20 Amp Service?" for more information.

Prepare the Coach's Interior

- Remove any kitchen or bath items that are perishable, including food, beauty items, and anything that can freeze. Defrost the refrigerator and put a carton of baking soda inside. Leave the doors propped open for air circulation.
- Put out insect and/or mouse bait to help eliminate any vermin that might enter the coach.
- Make sure all the lights are off, including the storage and exterior areas. Turn off the breakers to all appliances that
 you do not want to operate during storage (i.e. the refrigerator, stove, etc.).

Inspect and Clean the Coach Exterior

- Inspect roof and window sealant for cracks that might admit water. Reseal any cracks with the appropriate sealant for the surfaces. Allow any sealant to cure before washing the exterior.
- Inspect the underside of the coach. Block or seal any gaps that are big enough to admit mice or other vermin.
- Inflate the tires to the maximum recommended pressure, which is noted on the tire.
- Thoroughly wash the exterior and clean the interior of the coach. Make sure the exterior is completely dry, including fabric awnings before storing inside or using an RV cover.

Prepare the Batteries

- If the batteries are liquid lead-acid, top off the cells with distilled water.
- Make sure the batteries are fully charged, which will protect them from freezing and sulfation.
- Make sure all other battery types are charged before storing the coach.

A IMPORTANT

Owners who decide not to follow Newmar's recommendations to keep the coach plugged into the appropriate outlet (shore power 50 amp or 30 amp) during storage will need to do very frequent checks on the coach to check/maintain and charge batteries.

Prepare the Generator

- If you are storing the coach inside and your coach has auto gen start (AGS), disable this function.
- If stored outside, the AGS can be enabled to help maintain battery charge if and when shore power is not available.

Inverter Power

Depending on your unique situation, you may want to power off the inverter to prevent it from providing 120 volt power, which will drain batteries that are not being charged. Some coach owners may want to leave the inverter powered on to keep the refrigerator cold in case of power loss. This applies to coaches that are typically plugged in during storage and checked frequently (depending on the length of storage time and shore power availability).

Turn off or disable the inverter if you do not wish to provide 120 volt power during storage. When shore power is not available and if the inverter is not off or disabled, the battery bank will be drained. If left drained, unattended dead batteries in a cold climate may result in frozen and/or damaged batteries that may require replacement.

Some inverters may have the ability to turn the charger section on or off. When shore power is available, it is recommended to leave the charger on or enabled to charge the batteries as needed. For additional information about inverter(s)/charger(s), refer to the product page(s) in Newgle for your installed component(s).

When Ready to Store

- If storing outside, pull onto blocks to help protect the tires from direct contact with the ground. These give the tires some defense against changes in ground temperature. Make sure the block is large enough so that the tires fully rest on them and do not touch the ground at all.
- Plug the coach into shore power, if available.
- Finally, if storing the coach outside, covering the tires and the coach with breathable covers will help protect them from the sun and other elements.

Checks While in Storage

- Check the batteries weekly if not plugged into shore power and monthly if plugged into shore power, and charge
 them if below 12.5 volts. Plug the coach into shore power or use a portable charger to top off the batteries to their
 full charge, as needed.
- If the coach is stored outside, do a visual check for damage, leaks, rodents, etc., every month.
- The leveling system should be cycled at least once a month to keep the system in operating condition.
- If the coach will be stored for more than three months, move the coach slightly every three months to rotate the tires and help prevent flat spots. Top off the air in the tires, if needed.

Maintenance and Service Record

Use this chart to keep track of all service work performed on the coach. For additional pages, refer to Newgle.

Date of Service	Service Center / Dealer Name and Address	Description of Service Work Performed	Cost

	IL.	

Fuel, Oil, and MPG Record

Use this chart to keep track of all odometer mileage, fuel, oil, and average MPG for the coach. For additional pages, refer to Newgle.

Date	Odometer Mileage	Fuel (Gallons)	Oil (Quarts)	Average MPG	Cost
				1	

