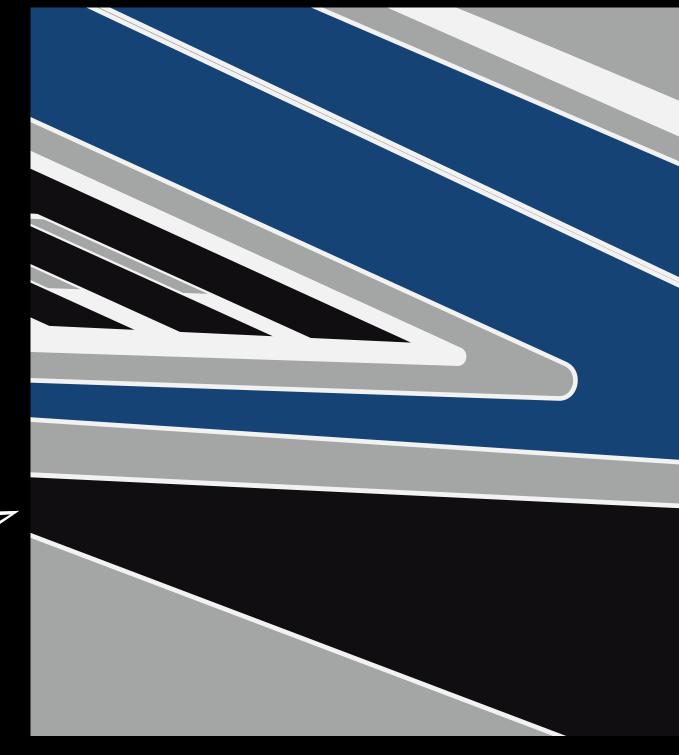
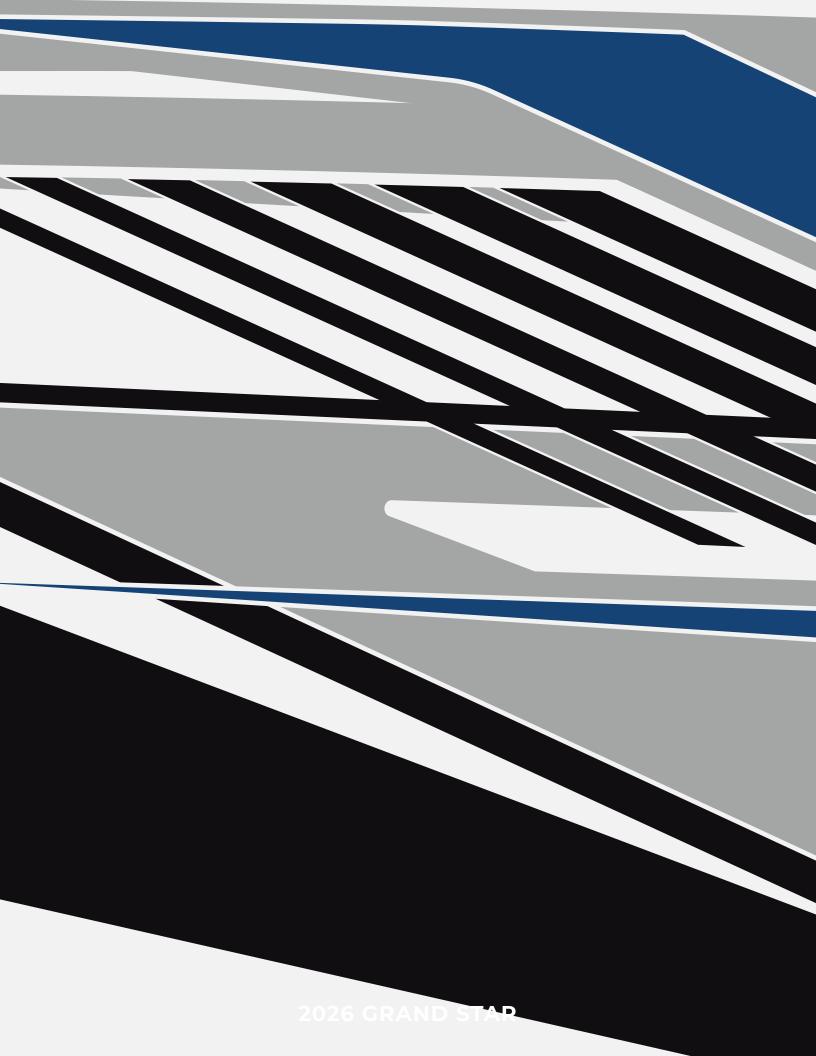
# GRAND STAR

2026









# 2026 Grand Star Owner's Guide Table of Contents

This article provides an overview of the content published in the 2026 Grand 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

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# 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

**Parana** 

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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.

# TRACE FOR POR PROCESSING A QUALITY REMONA PROPERTY FOR STORN CONTINUENCE. WIS COLD TO CLASSING A TRACE AND AND THE OF THE STORN CONTINUENCE. WIS COLD TO CLASSING A TRACE AND AND THE OF THE STORN CONTINUENCE. WIS COLD TO CLASSING A TRACE AND AND THE OF THE STORN CONTINUENCE. PROPERTY TO THE STORY OF THE STORY THE OWN COLD TO COMMITTEE THE OWN COLD THE STORY THE STORY THE OWN COLD THE

# **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.

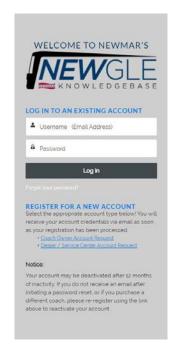
# **A** NOTICE

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

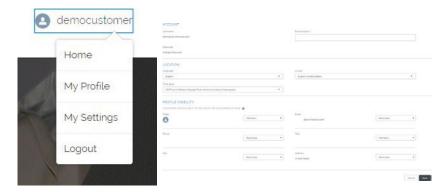
This link is only valid one time. Please use the direct URL - <a href="https://newgle.newmarcorp.com">https://newgle.newmarcorp.com</a> - for future access to the site.

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 - <a href="https://newgle.newmarcorp.com">https://newgle.newmarcorp.com</a> - 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 (<a href="https://www.weather.gov/">https://www.weather.gov/</a>) 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.

# **▲** 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.

# **A 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.

# 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.

# **A** 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.

# **A** 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.

# **A** 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.

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 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.

# **A**AVERTISSEMENT

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.

DD-9

# **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; Si

**When You Test the Alarm -** Horn: Short "chirp", then 3 beeps, pause, 3 beeps; Power LE 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

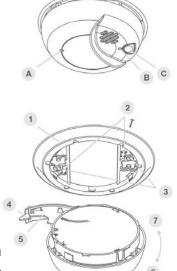
Low Battery Signal is Silenced - Horn: Silent (for up to 8 hours); Power LED: Flashes Green 1 time every minute; Smoke LED: Off

**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.

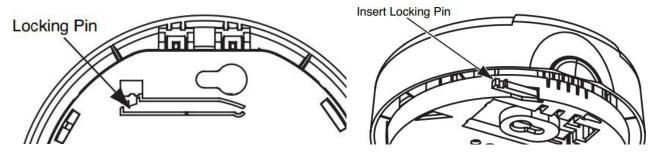
- Test it at least once a week.
- Clean the Smoke Alarm at least once a month; gently vacuum the outside of the Smoke Alarm using your
  household vacuum's soft brush attachment. Test the Smoke Alarm. Never use water, cleaners or solvents since
  they may damage the unit.
- If the Smoke Alarm becomes 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.

# **▲** 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

#### **▲ 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.

#### **A 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** 

## **A** 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.

### **A 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)

# **Propane Safety**

This article provides details about the propane fuel system in a Newmar coach, including propane safety and maintenance.

## **Propane System Overview**

Your coach may be equipped with an ASME (American Society of Mechanical Engineers) approved propane tank. This tank is controlled with an automatic pressure regulator. The propane tank contains liquid petroleum gas under high pressure. As the fuel is used, the liquid gas vaporizes and passes through the tank valve to a regulator that automatically reduces the pressure. The low-pressure gas is then distributed to the appliances throughout the pipe manifold system.

The components relating to the propane gas system in your coach have been approved for use in recreational vehicles by a nationally recognized testing laboratory. Propane gas is a clean-burning dependable fuel when properly handled.

## IMPORTANT

While in high altitudes or extreme cold weather, a gas shortage may be experienced. Running one appliance at a time can help adjust to this problem.

#### A DANGER

Exhaust gases contain carbon monoxide (an odorless, colorless, and poisonous gas) produced by burned gasoline, diesel, or propane gas. Items such as the range, furnace, water heater, refrigerator, chassis engine, or generator engine can produce these gases. These fumes should not be inhaled.

## Propane (LP) Detector

The propane detector in your coach is located in the main living area close to the floor. It is wired to the 12 volt electrical system in your unit and may be controlled by a switch in the front overhead cabinet. Operating instructions and a test button are located on the face of the detector. The propane detector should be tested after the vehicle has been in storage, before each trip, and at least once per week during use.

Never attempt to repair the propane detector. Do not remove the fuse or disconnect wiring to the propane detector. If the propane detector will not function, check for 12 volt power at the detector. If an issue is found, or if the 12 volt electric circuit not operational, repair the 12 volt issue or replace the propane detector.

#### **A** WARNING

Do not use the coach with a non-operational LP detector.

#### **A** IMPORTANT

Never spray any type of aerosol or cleaner directly onto or into the propane detector. Spraying any type of material into the opening on any of these detectors can render them useless, and would not be covered by the manufacturer's warranty.

Refer to Newgle for more information about your coach's propane (LP) gas detector.

## **Propane Warning Labels**

#### **A** IMPORTANT

Read and understand the following precautions, as well as any warning labels in your coach, to protect yourself and others from the risks of operating an LP system.

#### If You Smell Propane or Suspect a Gas Leak

If the detector alarms while in use, or if you smell propane or suspect a gas leak (the odor smells similar to rotten eggs or sulfur), follow the warning labels in your coach.

#### A DANGER

Never test for a leak by lighting a match or having an open flame where you suspect leaking gas.

## **A** DANGER

Ignition of flammable vapors could lead to a fire or explosion and result in death or serious injury. If you smell

#### propane:

- Extinguish any open flames and all smoking materials.
- Shut off the propane supply at the container valve(s) or propane supply connection.
- Do not touch electrical switches.
- Open doors and other ventilating openings.
- Leave the area until the odor clears.
- Have the propane system checked and leakage source corrected before using again.

## **Propane Operation**

## A DANGER

Do not use gas cooking appliances for comfort heating. Can lead to carbon monoxide poisoning, which can lead to death or serious injury.

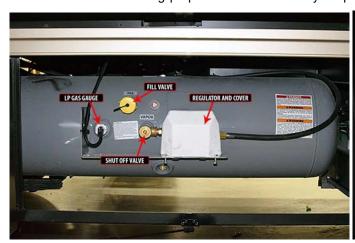
### **A WARNING**

Gas cooking appliances need fresh air for safe operation. Before operating:

- Open vents or windows slightly or turn on exhaust fan prior to using cooking appliance.
- Gas flames consume oxygen, which should be replaced to ensure proper combustion.
- Improper use can result in death or serious injury.

Check the LP level either from the monitor panel in the coach or the gauge on the LP tank to ensure an adequate fuel level. Make sure the LP valve is open. To open it, turn the valve counterclockwise.

When having the tank filled, or if the coach is in storage, or if LP is not currently needed, turn off the gas at the LP tank by turning the valve clockwise. The tank fill valve and the 80% bleeder valve should not be tampered with by the user. These valves are for filling purposes and should only be performed at a licensed filling station.





## **Propane System Maintenance**

It is recommended to have the propane system inspected by an authorized service technician at least once a year and after every extended trip. This system is tested by both the manufacturer and the dealer; however, leaks may be caused by travel vibrations.

## Filling the Propane System

Tank filling should only be performed by trained professionals. Prior to filling the propane tank, turn off all flame or spark-producing appliances, extinguish any smoking items, and turn off the coach engine.

#### **A** WARNING

Inspect the propane fill valve for foreign materials before refueling. Introducing foreign material into the fill valve may cause leaking or overfilling, resulting in uncontrolled gas flow and a fire or explosion.

## **A WARNING**

While refilling the fuel or propane tank, the engine must be off, all pilot lights must be extinguished, and

appliances turned off. The vehicle should be as level as possible, and the service valve should be turned off. Smoking is also prohibited at this time.

## **A WARNING**

Shut off the propane gas valve when refueling to avoid potential danger from pilot lights igniting fuel fumes. Some appliances, such as the refrigerator, water heater, and furnace, have DSI (direct spark ignition) boards, so it is important that you turn the appliances off when the propane gas is turned off. The ignition in the appliances may continue to spark even if there is no propane gas available.

## **A** IMPORTANT

All protective covers and caps must be replaced after filling the propane system. Once the valve is closed, securely latch the propane door.

## **WARNING**

Propane gas is extremely flammable. Propane gas containers, gasoline, or other flammable liquids shall not be placed or stored inside the vehicle. Propane cylinders are equipped with safety devices that relieve excessive pressure by discharging propane to the atmosphere. Failure to comply could result in serious injury or death.

#### **A WARNING**

Do not fill propane container(s) to more than 80 percent capacity. Overfilling the propane container can result in uncontrolled propane flow, which can cause fire or explosion. A properly filled container contains approximately 80 percent of its volume as liquid propane. Failure to comply could result in serious injury or death.

## **A** WARNING

This propane piping system is designed for use with propane only. Do not connect natural gas to this system. Securely cap inlet when not connected for use. After turning on propane, except after normal cylinder replacement, test propane piping and connections to appliances for leakage with soapy water or bubble solution. Do not use product that contain ammonia or chlorine to test for leaks. May lead to a fire or explosion, which could result in death or serious injury.

## **A** WARNING

When removing or servicing any gas appliance, close the main gas valve on the propane tank before disconnecting the appliance to prevent dangerous gas leakage that could result in an explosion and possible serious injury. If a gas leak is suspected, have the system inspected and repaired by a qualified service technician as soon as possible.

## Storing a Propane-Equipped Coach

Keep the tank valve closed and all of the appliances turned off when the unit is stored. If any of the Propane gas valves do not close leak-tight by hand, consult a service technician.

On older coaches, an LP switch may be located in the front overhead or toward the bottom of the passenger chair. This switch shuts off power to the propane detector to prevent an unnecessary draw from the battery bank while the coach is in storage.

Newer coaches are wired to the disconnect side of the battery disconnect solenoid to prevent the detector from draining the battery while the coach is in storage with the disconnect turned off. Keep this switch turned on when the coach is in use for the capability of detecting a leak in the propane system.

## **A** CAUTION

Shut off the main gas valve at the tank when the vehicle is not in use.

#### Servicing the Gas Distribution Lines

The primary gas supply manifold is a black steel pipe running the length of the unit. Most secondary lines leading to the gas appliances are made of copper tubing with flare fittings.

## **A** WARNING

If any of these lines rupture, do not attempt to splice them. Always run a new line. Gas distribution work must be performed by an authorized service technician.

# RV Safe 12 Volt Propane Leak Detector Quick Start (Model: RVLP-2B)

This article provides basic operation instructions for a RV Safe 12 Volt Propane Leak Detector (Model: RVLP-2B).

## **Understanding the Dangers of Propane Gas**

Liquified petroleum (LP) gas is commonly called propane and is used as fuel for heating and cooking appliances, especially for RV's. Propane gas is explosive at the lower-explosive-limit (LEL), which is 21,000 parts per million (ppm). RV Safe will alarm at 10% LEL, or 2,100 ppm.

Propane gas is denser than air, and will usually accumulate close to the floor. Therefore, RV Safe should be placed near the floor in order to quickly detect propane gas leaks.



## **Alarm Features and Functions**

RV Safe includes an 85dB audible horn, two LEDs, and a Silence/Test button. The chart below summarizes the alarm outputs in each state.

State	Green LED	Red LED	Audible Horn
Normal Operation	ON	OFF	OFF
Power Off	OFF	OFF	OFF
Self Test	OFF	ON/Flashing	4 Chirps constant beeps
Propane Alarm	OFF	ON	Constant beeps
Alarm Silenced (5 Minutes Max.)	OFF	Flash each second	OFF
Low Battery	Flash each minute	Flash each minute	Chirp each minute
End-of-Life or Other Failure	OFF	Double flash each minute	Chirp each minute

## **Normal Operation State**

The green power LED is ON when the alarm is functioning normally and no CO or propane gas is present. Press the Silence/Test button to perform a self test and enter the Test State. Note: Supply current will remain higher for 30 seconds after power-up. Alarm will not detect CO or Propane for the first 30 seconds and will draw extra current.

#### **Power Off State**

If no LEDS are on, then the alarm is powered off. Apply power to the alarm to resume normal operation.

#### **Self Test State**

If the Silence/Test button is pressed while in normal operation, the alarm will perform a self test of the CO sensor, propane sensor and battery voltage. It is recommended to perform a self test weekly, after power up from storage, and before each trip. If the self test passes, the alarm will perform 2 cycles of the CO horn pattern (4 rapid chirps followed by a 4 second pause), followed by 2 cycles of the propane horn pattern (constantly beeping).

#### **Propane Alarm State**

If propane gas exceeds 10% of the lower-explosive-limit for more than 30 seconds, the alarm will enter propane alarm state. The horn will sound with constant beeps and the red LED will be on. Immediately turn off all propane appliances and gas valve at the propane tanks. Open doors and windows to properly ventilate the RV. Check for any gas leaks and contact a qualified RV technician to diagnose possible propane leaks. The alarm may be silence for 5 minutes by pressing the Silence/Test button.

#### **Alarm Silence State**

A CO alarm or propane alarm can be silenced for up to 5 minutes by pressing the Silence/Test button. The red LED will flash each second while the alarm is silenced. The original alarm state will resume after 5 minutes if the CO or propane levels still exceed safe levels.

## **Low Battery State**

If the supply voltage drops below 8VDC, the alarm will enter Low Battery State. The horn will chirp every minute and both LEDs will flash every minute. Alarm performance cannot be guaranteed as the supply voltage drops below the low battery threshold. Charge or replace the RV battery immediately. Do NOT disconnect the alarm.

#### **End-of-Life or other Failure State**

If the CO or propane alarm fails a self test, or if the End-of-Life is reached (after 5 years of operation), the alarm will enter the Failure State. The horn will chirp every minute and both LEDs will do a double flash every minute. Replace the alarm immediately.

## **Maintaining Your Alarm**

- Verify proper alarm function by pressing the Silence/Test button after storage, before every use and once per week during extended use.
- Vacuum the alarm with a soft brush attachment to remove dust monthly.

Source(s): RV Safe Propane Gas Alarm (RVLP-2 and RVLP-3) for RVs Owner's Manual Product(s): RV Safe Alarm 12V Propane Detector (Model: RVLP-2B, Newmar Part Number: 152865)

## **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

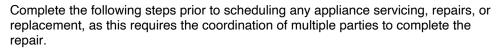
Any of the following quick start instructions should not take the place of the complete documentation provided by the product manufacturer and/or Newmar. Additional operating instructions, troubleshooting, care and maintenance, safety information, etc. may be available in Newgle for specific components. 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.





#### **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.

#### **▲** 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.







# **Bi-Fold Solid Surface Cooktop Cover Overview**

This article provides an overview of the solid surface bi-fold cover for the range or cooktop.

Your range may be equipped with a bi-fold 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 in the full upright and folded position, preventing the cover from falling on the range top during cooking.

To use the cooktop, fold up the bi-fold cover or remove the solid surface cover. Store the cover away from the stove prior to use.



## **A** IMPORTANT

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

# Suburban Airxcel 3-Burner Range with Air Fryer or Slide-In Cooktop Quick Start (Models: 3907A and 3913A)

This article provides basic operation instructions for a Suburban Airxcel 3-Burner Range with Air Fryer or Slide-In Cooktop (Models: 3907A and 3913A).

## **Operating Instructions**

**Top Burners** 

## **A WARNING**

Do not use surface burners with cover in closed position.

Know which knob controls which burner. Always be sure the correct burner is turned on. Depress knob and turn fully counter-clockwise to "Lite" position (Backlit LEDs: red for on, soft white for off).



Verify sufficient gas supply before attempting to light the burner. Air in the gas line will significantly delay burner ignition. The burner may light unexpectedly as the air in the line clears and is replaced by propane gas. This unexpected ignition could burn you. Air in the gas lines may occur after the vehicle gas bottle and/or tank is refilled, during and after servicing other appliances on same gas line, etc.

The burner can be lit by rotating piezo knob clockwise rapidly. This produces a spark at the burner which ignites the gas. Do not attempt to light more than one burner at a time.

### **A** CAUTION

Hand held ignitors may be used but be sure they are the type designed for lighting open flame burners.

If any burner should extinguish after initial lighting or due to accidental blow-out, turn gas off by turning control knob clockwise to "OFF", wait five (5) minutes before attempting to relight the burner. Failure to follow these instructions could result in a fire or explosion.

If the burner should go out while cooking, or if there is an odor of gas, turn control knob(s) clockwise to "OFF". Wait five (5) minutes for gas odor to disappear. If gas odor is still present - do not relight burners.

To turn burner(s) "OFF", turn the appropriate control knob clockwise to "OFF".

#### WARNING

Be sure all control knobs are turned "OFF" when you are not cooking. Someone could be burned or a fire could start if a burner is accidentally left on or unattended even if only momentarily.

#### Oven (3907A Model Only)

**Dehydrate:** To use the dehydrate function, rotate the oven thermostat to the DEHYDRATE position. Place a single layer of food in the air fry basket and insert into the oven. Close the oven door and follow recipe directions to complete dehydration.

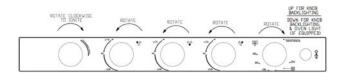
**Air Fry / Baking:** To use the Air Fry / Baking function, rotate the oven thermostat to the desired temperature setting. After the preheat time has passed, insert food in provided air fry basket or other appropriate cookware. Close the oven door and follow recipe directions to complete air frying or baking.

#### A CAUTION

When the recreational vehicle is not in use or while traveling, it is recommended that the gas supply also be turned off.

#### **Light Operation**

To operate the knob backlighting only, press the switch to the up position. To operate the knob backlighting and oven cavity light, press the switch to the down position. To turn all lights off, return the switch to the center position.



## **Maintenance**

- 1. Make sure all controls are "OFF" and the range cooktop and oven are cool before cleaning.
- 2. Make sure that all cooktop surfaces, burner grates and burners are cool before cleaning or disassembling cooktop.
- 3. Do not use oven cleaners, bleach or rust removers on the cooktop or burner grates.
- 4. Clean all surfaces as soon as possible after boil overs or spill overs.
- 5. Use warm soapy water only to clean the burner grates, cooktops, painted surfaces, porcelain surfaces, stainless steel surfaces, air fry basket, drip tray, and plastic items on your range. Do not use grit or acid-type cleaners. Do not use cleaners with ammonia. Cleaners of these types are corrosive and could damage component parts in the range.
- 6. Do not use steel wool or abrasive cleaners. They will damage the cooktop and oven finish. Use only non-abrasive plastic scrubbing pads.
- 7. Do not allow foods containing acids (such as lemon or tomato juice, or vinegar) to remain on porcelain or painted surfaces. Acids may remove the glossy finish.
- 8. Do not wash warm porcelain surfaces. Allow these areas to cool before cleaning. You could burn yourself or the porcelain could crack.
- 9. Pitting and discoloration will result if spills are allowed to remain for any length of time on stainless steel.
- 10. Do not allow spill overs to remain on the burner caps. The caps could be permanently stained if spill overs are not cleaned up promptly.
- 11. If any of the burner ports or the orifice are clogged, carefully clean with a small wire or needle. Be sure not to enlarge ports. Never use a wire brush for cleaning burner ports or orifice. Never use any brush which may "shed" bristles, which may become lodged in the orifice or burner ports and cause a fire or explosion.

## **Grate and Main Top**

Remove the grate by raising straight up. Use caution not to dislodge the grommets in the top (one at each corner). Grasp top in the center and raise front up approximately3". Slide top forward off the two spring clips at rear of top. Lift up top. Align slots in rear flange of top with the tabs on the spring clips. Push top in and press front of top down until the spring clip snaps into place. Reinstall grate by aligning the four (4) legs on the grate with the four (4) grommets in the top. Press grate down into each grommet, being careful not to dislodge the grommets.

#### **Oven Door**

Do not place excessive weight on an open oven door or stand on an open oven door as, in some cases, it could cause the range to tip over, break or damage the door to the extent that the range would be unsafe to use, or cause serious injury to the user. When opening the oven door, allow steam and hot air to escape before reaching in oven to check, add or remove food.

#### **Oven Rack**

Your RV range features one oven rack with two rack positions. The oven rack is designed with a safety lock-stop position to keep the rack from accidently coming completely out of the oven when pulling the rack out to add or remove food. The rack also features two tabs to keep the rack from rattling during travel.

## **A** CAUTION

Do not attempt to change the rack position when the oven is hot.

**To Remove:** Be sure the rack is cool. Pull the rack straight out until it stops. This releases the two tabs on the sides of the rack. Lift the front end of the rack up, then pull and remove from the oven.

**To Replace:** Place the oven rack in the oven on top of the rack supports. Slide the rack to the stop position and lift upward then, as you push the rack back past the two tabs, it will anchor the rack into place and prevent it from rattling during transit.

[...] Never place cooking utensils or aluminum foil directly on the oven bottom.

#### Oven Bulb Replacement (If Equipped)

Ensure the oven is cool and all power is off. Unscrew the glass cover of the oven light assembly. Pull the bulb straight forward out of the socket. Replace the bulb with a G4 base, 12VDC, 10W Halogen bulb resistant to high temperature. Reinstall the glass cover.

Source(s): Suburban 17" and 21" Dual Fuel Range with Air Fryer and Slide-In Cooktops with Built-In Glass Covers (03/09/2024)

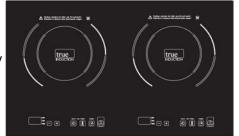
Product(s): Suburban Airxcel 17" 3-Burner Range with Air Fryer (Model: 3907A, Newmar Part Number: 173557) and Suburban Airxcel 21" 3-Burner Slide-In Cooktop (Model: 3913A, Newmar Part Number: 173558)

# 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 (<u>Model: TI-2B (S2F3), Newmar Part Number: 145601</u>) or True Induction 1800w 2-Burner Induction Black Landscape Electric Cooktop (<u>Model: TI-2B, Newmar Part Number: 124108</u>)

# **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

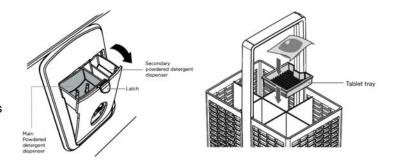
Do not place liquid detergent or tablets in the detergent dispenser.

- 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.
- 2. 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.

#### **▲** 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

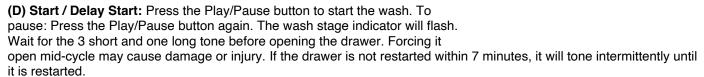
Do NOT use these in your dishwasher: liquid detergents, laundry detergents, hand washing liquids, soaps, disinfectants.

**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.



- 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 Convection Microwave with Air Fry Mode Quick Start (Model: YWMH78519LZ)

This article provides basic operation instructions for a Whirlpool Convection Microwave with Air Fry Mode (Model: YWMH78519LZ).

# **Operating Your Microwave Oven**

## Settings



**Clock:** The Clock is a 12-hour (12:00-11:59) or 24-hour (0:00-23:59) clock. Touch Settings/Clock to reach Clock submenu, and follow the prompts to set the Clock. Clock format (12 hours with AM and PM, 12 hours without AM and PM, or 24 hours) may also be set in the Clock submenu.

**Timer:** With the microwave oven in Standby mode, touch the Timer keypad, enter time, and then touch the Timer keypad or the Start keypad. Cook functions may be entered while the Timer is counting down. To cancel timer, touch Timer keypad while the Timer countdown is active in the display.



**Control Lock:** Activate to avoid unintended start. Touch and hold the Cancel keypad for about 3 seconds until 2 tones sound and Padlock icon appears in the display. Repeat to unlock control.

**Settings/Clock:** Settings/Clock may be adjusted: Set Clock; Scrolling Speed; Sound; Filter Reset; Fan Timer; Light Timer; Calibrate Temp; Demo Mode; Factory Reset.

**Scroll Speed:** Scroll speed of the text may be adjusted. Touch Settings/Clock to reach the Scroll Speed submenu and follow the prompts to set speed.

**Sound (Tones):** Programming tones and signals. Programming tones may be turned off or all tones (including end-of-function signals) may be turned off. Touch Settings/Clock to reach the Sound submenu, then follow the prompts to turn off or on the programming tones or all tones.

**Filter Reset:** If the charcoal filter is used for more than 6 months, from the last time the filter is reset, the 6 month duration will count continuously. If the Filter Alert condition is met, "Change the Charcoal Filter; Reset Alert through Setup or Settings" will shown on the display. Reset the filter status after replacing the charcoal filter. Touch Settings/Clock repeatedly to reach Filter Reset submenu. Touch Select or Start to reset. After reset, another 6 months duration will be resumed.

**Vent Fan:** Various speeds, ranging from high to low, and off. Comes on automatically as cooling fan during any cook function.

**Fan Timer:** Set vent fan to run for exactly 30 minutes or to run for only 30 minutes more (off after 30 minutes). The vent fan may be turned off at any time using the Vent Fan keypad. Touch Settings/Clock to reach the Fan Timer submenu and select the setting.

**Light Timer:** Set the cooktop light to turn on and off at certain times. Touch Settings/Clock to reach the Light Timer submenu and follow the prompts to set the light On time and light Off time in hours and minutes or to cancel Light Timer.

NOTE: Light Timer uses 12-hour clock only.

**Calibration:** The actual convection cooking temperature may be calibrated higher or lower than the displayed temperature. For example, if you want the microwave oven to be a bit hotter, you may try setting the calibration to  $+10^\circ$ . Touch Settings/Clock to reach the Calibration submenu. Use number keypads to select temperature variations in degrees Fahrenheit:  $1 = \pm 0^\circ$  (reset to default),  $2 = +5^\circ$  ( $+2.8^\circ$ C),  $3 = +10^\circ$  ( $+5.6^\circ$ C),  $4 = +15^\circ$  ( $+8.3^\circ$ C),  $5 = +20^\circ$  ( $+11.1^\circ$ C),  $6 = -5^\circ$  ( $-2.8^\circ$ C),  $7 = -10^\circ$  ( $-5.6^\circ$ C),  $8 = -15^\circ$  ( $-8.3^\circ$ C) and  $9 = -20^\circ$  ( $-11.1^\circ$ C).

**Demo Mode:** Activate to practice using the keypad without actually turning on the magnetron. Touch Settings/Clock to reach the Demo mode submenu, then follow the prompts to activate. The Demo icon will light up in the display. Repeat to deactivate.

**Standby Mode:** When no functions are working (12-hour clock is displayed or if the clock has not been set), oven will switch to Standby Power mode and dim the LCD brightness after 5 minutes. Press any keypad or open/close the door, and display will return to the normal brightness.

#### **Features**

**Convection Element and Fan:** The convection element and fan are embedded in the wall of the microwave oven cavity, behind the metal screen.

**Grill Element:** Depending on your model, the grill element has either one 1,000 W halogen bulb and one 500 W quartz bulb or two 600 W quartz bulbs. The halogen bulb glows very brightly, but the quartz bulb has a very faint glow that might not be visible.

**Turntable On/Off:** Turntable may be turned off for manual cooking only. This is helpful when cooking with plates that are bigger than the turntable or when cooking with plates that are side by side. Turntable cannot be turned off during preset or sensor (on some models) functions.

#### **Accessories**

#### Air Fry Basket

Use the provided air fry basket for air frying and grilling. The air fry basket can be folded when cleaning in the dishwasher or storing.

NOTE: When cooking juicy meats, a microwave-safe, ovenproof dish or pan can be placed on the turntable and under the Air fry basket to catch the drippings.

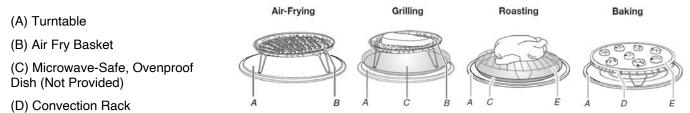




#### **Convection Rack**

Use the short convection rack for convection cycles (baking or roasting). Place cookware directly on rack for bake and for some roast functions. Some roast functions require that the food be placed directly on the rack. Use a microwave-safe, ovenproof dish or pan under the rack to catch the drippings.

## **Accessory Configurations**





A larger, rectangular cooking rack (Whirlpool # W10860255) is not standard or provided by Whirlpool but may be available for purchase via the Newmar Parts Department. Contact Newmar for product availability.

### Microwave Oven Use

## To Cook with Only Microwave Power

Touch Cook Time/Power, touch number keypads to enter time, touch Cook Time/Power (if not 100%), touch number keypads to enter power level (10-90), then touch the Start keypad.

If programming additional stages (up to three), touch Settings/Clock to enter programming for the next stage, then enter the cook time and cook power of each, then touch the Start keypad.

## **Sensor Cooking**

A sensor in the microwave oven detects moisture released from food as it heats and adjusts the cooking time accordingly.

Make sure microwave oven has been plugged in for at least 1 minute. Use microwave-safe dish with loose-fitting lid or cover microwave-safe dish with plastic wrap, and vent. For optimal performance, wait at least 30 minutes after convection cooking or grilling (on some models) before sensor cooking.

#### To Cook with Convection

Use the provided convection rack and a microwave-safe, oven-proof baking dish.

Microwave oven cavity, inside of the door, convection rack, and baking dish will be hot. Use oven mitts to remove the dish and to handle the hot convection rack.

Touch Convect Bake and Select Manual Convection Bake.

Use number keypads to enter a temperature, 250°F (121°C) to 450°F (232°C). Touch Time/Power, and enter time in hours and minutes, up to 4 hours.

Touch Convect Roast and Select Manual Convection Roast.

Use number keypads to enter a temperature, 250°F (121°C) to 450°F (232°C). Touch Time/Power, and enter time in hours and minutes, up to 4 hours. To add microwave power if desired, touch Time/Power, and enter power level, from 10% to 30%.

Touch START to begin preheat. Preheat may be skipped by touching START again. After preheat, place baking dish with food on the convection rack, then touch START to begin cooking.

#### **Add More Time**

At the end of any cycle using less than 100% cook power, "PRESS 0 TO ADD MORE TIME" scrolls in the display. Enter the additional time, if desired, and start the microwave oven. The cook power for all non-sensor cycles will be the same as in the finished cycle but may be changed. If Add More Time is used after a sensor cycle, the cook power will be 100% but may be changed.

### **Doneness**

Adjust doneness for automatic cooking functions by touching Cook Time/Power repeatedly to scroll through "NORMAL," "MORE DONE," or "LESS DONE" within the first 20 seconds of starting the cook cycle. Doneness cannot be adjusted for Defrost functions.

## **Keep Warm**

## **▲** WARNING

Food Poisoning Hazard - Do not let food sit in oven more than one hour before or after cooking. Doing so can result in food poisoning or sickness.

Hot cooked food can be kept warm in the microwave oven. The Keep Warm function uses 10% cook power. Keep Warm can be used by itself or can be programmed to follow a cooking cycle. Opening the door during Keep Warm will cancel the function.

## **Microwave Oven Care**

## **General Cleaning**

## **A** IMPORTANT

Before cleaning, make sure all keypads are Off and the microwave oven is cool. Always follow label instructions on cleaning products.

To avoid damage to the microwave oven caused by arcing due to soil buildup, keep cavity, microwave inlet cover, cooking rack supports, and area where the door touches the frame clean.

Clean with mild soap, water, and a soft cloth or sponge or as indicated below.

- Grease filter: Mild soap and water or dishwasher.
- Door and exterior: Mild soap and water, or glass cleaner applied to paper towel.
- Control panel: Sponge or soft cloth and water.
- Stainless steel (on some models): Mild soap and water, then rinse with clean water and dry with soft cloth, or use stainless steel cleaner.
- Turntable: Mild soap and water or dishwasher.
- Rack(s): Mild soap, water, and washcloth. Dishwasher cleaning is not recommended.
- Air fry basket: Mild soap, water and washcloth. It is easy to clean in the dishwasher after folding the legs.
- Steamer vessel: Mild soap, water, and soft brush or dishwasher.

## Installing/Replacing Filters and Light Bulbs

## **A** NOTICE

A filter status indicator appears in the display when it is time to replace the charcoal filter. See the "Settings" section to reset filter status.

- Grease filters: Grease filters are on the underside of the microwave oven. Clean at least monthly. Slide the filter away from the tab area and drop out the filter. To Install, place end of the filter into the tab area, slide the other end into the opposite tab area.
- Charcoal filters: The Charcoal filters are behind the vent grille at the top front of the microwave oven. The charcoal filters cannot be cleaned and should be replaced every 6 months as prompted on the display. Remove 3 screws on the vent grille, tilt the grille forward, lift it out, and remove filters. To reinstall, place the filters into their slotted area wire mesh side up, replace vent grille, and secure with screws. After replace the charcoal filters. See the "Settings" section to reset filter status.
- Cooktop light: The cooktop light is located on the underside of the microwave oven and is replaceable. Remove bulb
  cover screw and open the bulb cover. Replace bulb, close bulb cover, and secure with screw.
- Cavity light: The cavity light bulb is located behind the vent grille at the top front of the microwave oven, under the bulb cover, and is replaceable. Remove three screws on the vent grille, tilt the grille forward, and lift it out. Open bulb cover and replace bulb. Close bulb cover, replace vent grille, and secure with screws.

Source(s): Whirlpool Microwave Hood Combination User Guide (REV W11603630B)

Product(s): Whirlpool WMH78519LZ 1.9 Cu. Ft. Microwave with Air Fry Mode (Model: WMH78519LZ, Newmar Part Number: 166325)

# 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.
- 2. 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.

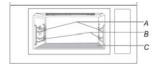
- The provided accessories can help you to achieve the best results, use different accessories depending on the recipe, see cooking tips on the display.
- Metal oven proof bakeware can be used during air fry, toast, bake, convect bake, roast, broil and dehydrate cycles.
- There are 3 levels to place 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)



Rack Position 2
 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.

## Connectivity

- Connect to network: Download or open the app on your smart device to get going. Make sure bluetooth and Wi-Fi
  are on.
- SAID code and MAC Address: SAID code and MAC address is displayed for the Wi-Fi module.

#### Info

- Demo mode: Set demo mode on/off. The demo mode enter code is 1234.
- My appliance: Displays appliance info, customer support contact info.
- Service and Support: Customer support contact info, and Diagnostics is for service technicians only.
- Software Terms and Conditions: The software terms and conditions.
- Wi-Fi Terms and Conditions: Display Wi-Fi terms and conditions.

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

# **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

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 Top-Freezer Refrigerator Quick Start (Model: WRT518SZF)

This article provides basic operation instructions for a Whirlpool Refrigerator with Top-Freezer (Model: WRT518SZF).

## Operating Instructions

Your refrigerator has two controls that affect the temperature. The Temperature control is located at the top front of the refrigerator compartment and the Airflow control is located on the back wall of the freezer compartment.

## Temperature Control

If you need to adjust the temperature in either the refrigerator or freezer compartment, use the settings [...] below.

## **A** NOTICE

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.

Press the Setting button to toggle among the 4 LED lights which indicate the temperature setting. Reading from left to right, the LED in the first position is the least cold. The LEDs indicate increasingly colder settings as you continue to the right until all 4 LEDs are illuminated.





- Condition/Reason: Refrigerator is too warm; Adjustment: Temperature control one setting higher
- Condition/Reason: Freezer is too warm/too little ice; Adjustment: Airflow or Temp control one setting higher
- Condition/Reason: Refrigerator too cold; Adjustment: Temperature control one setting lower
- Condition/Reason: Freezer too cold; Adjustment: Airflow or Temp control one setting lower

## Cooling On/Off

To turn cooling off, press and hold the Setting button for 4 seconds until all lights stay on for 1 second. To turn cooling back on, press and hold the Setting button again for 4 seconds.

## A NOTICE

Neither compartment will cool when the control is set to Off.



#### **Airflow Control**

The Airflow control regulates the amount of air flowing between the freezer and the refrigerator compartments. Changing the Airflow setting to Min removes cool air from the freezer and uses it to cool the refrigerator.

If you want to temporarily increase the cold airflow to a specific compartment, adjust the control:

Max

Recommended

- Max Increase airflow to the freezer
- Min Increase airflow to the refrigerator

## **A** IMPORTANT

Once the performance is achieved, return the Airflow control to the recommended setting to keep the refrigerator operating at optimum efficiency.

- Condition/Reason: Heavy ice use; Adjustment: Max
- Condition/Reason: Hot room temperature; Adjustment: Max to maintain ice making production rate
- Condition/Reason: Large quantity of groceries; Adjustment: Min to quickly chill food and beverages

### Ice Maker



This fridge may also be equipped with a Whirlpool EZ Connect Icemaker Kit W11517113.

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

## Turning the Ice Maker On/Off

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

#### A NOTICE

Your ice maker has an automatic shut-off. 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

#### **A** NOTICE

Turn off the ice maker before removing the ice storage bin to serve ice or to clean the bin. This will keep the ice cubes from dropping out of the ice maker and into the freezer compartment. After replacing the ice storage bin, turn on the ice maker.

- 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.

#### Ice Production Rate

- The ice maker should produce a complete batch of ice approximately every 3 hours, approximately 8 to 12 batches of ice in a 24 hour period.
- To increase ice production, lower the freezer and refrigerator temperature. See "Using the Controls". Wait 24 hours between adjustments.
- Maximum ice production (on some models): If your refrigerator has the maximum ice production feature, push the switch to Max to produce approximately 16 to 20 batches of ice in a 24 hour period.

## **A** NOTICE

The dispenser will automatically turn off Measured Fill after 1 minute of inactivity. When Measured Fill is turned off, any changes you have made will be lost and all defaults will be restored.

Source(s): Top Mount Refrigerator Quick Start Guide, W11401458C, 03/24 and Top-Mount Refrigerator Owner's Manual W11730698A, 07/24 Product(s): Whirlpool 18 cu. ft. Top-Freezer Refrigerator (Model: WRT518SZF, Newmar Part Number: 172189, 172784)

## **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:

- Remove the outside drain cap in the exterior water compartment. The drain cover is used to prevent leakage of waste material when not in use
- 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.

#### **A** NOTICE

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.



Remove outside drain cap before operating washing machine.

NI-12

## 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.

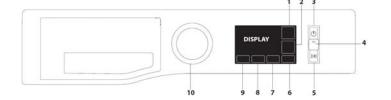


# Splendide Front-Loading Washer Quick Start (Model: WFL1300XD)

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.)

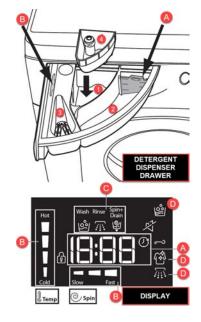
• The fabric softener should not overflow the grid.

#### 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.



## **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)

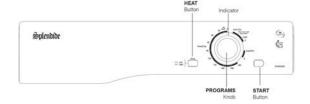
# Splendide Tumble Dryer Quick Start (Model: DV6500X)

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.

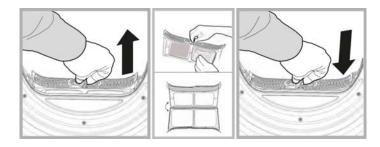
# **Cleaning & Maintenance**

## 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)
  - o 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 S2RV PLUS

# Freightliner S2 PLUS Chassis Instrumentation Control Unit (ICUC) Quick Start Guide

This article provides an overview of the Freightliner S2 PLUS Instrumentation Control Unit (ICUC) installed on Grand Star Super C coaches beginning with the 2026 model year.

## Instrumentation Control Unit: ICUC

The instrumentation control unit (ICU) provides the driver with engine and vehicle information. An S2 Plus Chassis is equipped with an ICUC. This section provides general system and operating instructions for ICUC components. Following sections provide more detailed information.

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.



## **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.

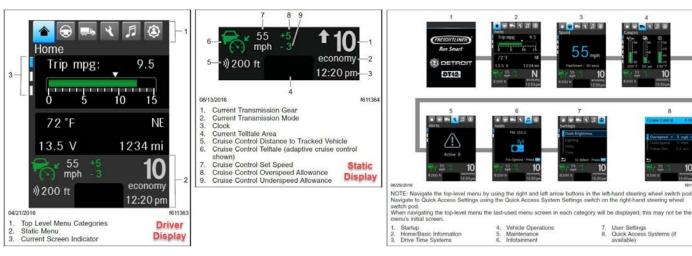
If active faults are present, take the action outlined in "Warnings, Indicators, and Messages" tables in [the Freightliner Business Class M2 PLUS Driver's Manual], then take the vehicle to an authorized Freightliner service facility as soon as possible.

# **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.



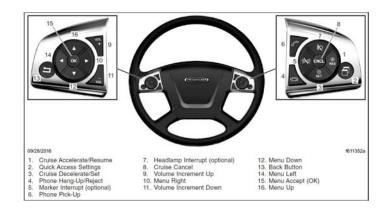
# **ICUC Steering Wheel Switch Pods**

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 S2 PLUS Driver's Manual].

For a list of all telltales, indicator icons, and messages, refer to the complete S2 PLUS Driver's Manual in Newgle.

Source(s): Freightliner S2 PLUS Operator's Manual (STI 434-0, 06.01.2023)

# 2026 Grand Star Cab and Dash Overview (Freightliner S2 PLUS Chassis)

This article provides a general overview of the cab and dash components, controls, and switches installed in a 2026 Grand Star Super C built on a Freightliner S2 PLUS (S2RV) 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, Console, and Battery Disconnect Switch



#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 6

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 6

#### (D) Power Window Switches

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

Power windows are standard on S2 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 S2 PLUS Driver's Manual (9/4/2024) Section 6

#### (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.

(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.



#### (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.

#### (G) Molded Storage Pocket

Storage pockets are molded into the driver and passenger doors.

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 6



# **A** IMPORTANT

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

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 S2 PLUS Driver's Manual (9/4/2024) Section 9

# 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) Off (3) Marker Lights (4) Headlights

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 5

## (B) Dash HVAC Vent

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

#### (C) 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.

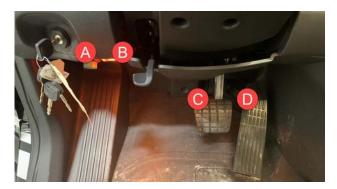
**START:** Turn the key clockwise past the ON position to reach the START position to start the engine. Release the key the moment the engine starts. Do not operate the starter longer than thirty seconds. Allow the starter to cool between attempts. If the starter overheats, the starter protection system 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 S2 PLUS Driver's Manual (9/4/2024) Section 5

# Foot Pedals and Diagnostics



## (A) Diagnostic Port

Your vehicle may be equipped with one or more devices and a port which allows a technician to access engine and chassis-related information for diagnostic purposes.

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 5

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 4

#### (B) Sun Visors

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

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 5

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 5

# **Instrumentation Control Unit (ICUC)**

The instrumentation control unit (ICU) provides the driver with engine and vehicle information. An S2 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 S2 PLUS Driver's Manual (9/4/2024) Section 3

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 3

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 3

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 3

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 3

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 3

# (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 S2 PLUS Driver's Manual (9/4/2024) Section 3

# 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

# A 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 S2 PLUS Driver's Manual (9/4/2024) Section 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 S2 PLUS Driver's Manual (9/4/2024) Section 4

#### (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.

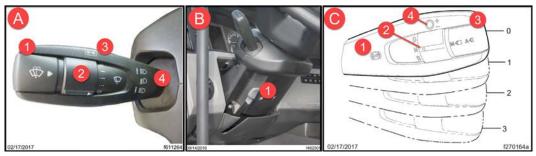
# **A WARNING**

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 S2 PLUS Driver's Manual (9/4/2024) Section 3, 4, 6, 7

# **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 returns to the straight-ahead position after a turn.

(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 S2 PLUS Driver's Manual (9/4/2024) Section 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

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 S2 PLUS Driver's Manual (9/4/2024) Section 4

#### (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: Off (O), Low (1), Medium (2), High (3)

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 4

- (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 and Power Outlets





Sony 10.1" 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), Sony XAV-9500ES-KT01 10" Radio w/ Carplay/AA :: 169190

#### 12 Volt Power Outlets (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.

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

# 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 S2 PLUS Driver's Manual (9/4/2024) Section 4, 16 and How to Operate 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 S2 PLUS Driver's Manual (9/4/2024) Section 20

#### (C, G, H, I) Blank Switches

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.

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 4, 5

## (E) 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 S2 PLUS Driver's Manual (9/4/2024) Section 4

# (F) Fast Idle Switch

With the park brake set and the coach in neutral, the fast idle can be engaged to increase the engine idle speed. This will operate the compressor at a higher RPM to inflate the air system more quickly.

#### (J) 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): <u>Battery Boost (Emergency Engine Start) Switch Overview, Charging House and/or Chassis Batteries</u>



#### (K) 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 KIB/ATC touchscreen (if equipped).

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

## (L) 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

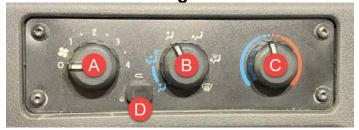
#### (M) Equalizer EQ Smart-Level Hydraulic Leveling System Keypad

The EQ Smart-Level system touchpad allows you to level your coach without leaving the driver's seat. During typical operation, the LED's on the bottom left-hand corner of the keypad should NOT be illuminated. The OPERATING LED should flash during operation, and the POWER LED should be illuminated when the touchpad is active.

Source(s): Equalizer EQ Smart-Level Hydraulic Leveling System Quick Start



# **Dash Air Conditioning and Heat Controls**



#### (A) Fan Switch

The fan switch controls the fan speed and forces fresh or recirculated air through the air outlets. The fan switch has eight fan speeds and an off position. To increase airflow, turn the fan switch clockwise to a higher number. To decrease the airflow, turn the switch counterclockwise to a lower number.

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 9

#### (B) Air Selection Switch

The air selection switch allows the driver to control the flow of air through the face outlets, the floor outlets, the defrost (windshield) outlets, or a combination of these outlets.

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 9

#### (C) Temperature Control Switch

The temperature control switch is used to select the desired temperature. Turn the switch to the left (counterclockwise) for cool air, or to the right (clockwise) for hot air. There are 21 positions on the temperature control switch ranging from full cool air to full hot air.

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 9

#### (D) Recirculation Mode

Fresh air, or outside air, is circulated through the heating and air conditioning system unless the recirculation mode, if equipped, is turned on. The recirculation mode is only available on vehicles with air conditioning. The recirculation mode limits the amount of outside air entering the cab. Press the recirculation button to prevent dusty or smoky air from entering the cab. The recirculation mode can also be used to decrease the time required to cool or heat the cab interior during extreme outside temperature conditions. When the recirculation mode is on, the recirculation indicator will illuminate.

The recirculation mode is not available when the air selection switch is in one of the following modes: floor/defrost mode, selection between floor/defrost mode and defrost mode, or defrost mode. When the recirculation mode is turned on, it will stay on for 20 minutes, or until the recirculation button is pressed again, or the air selection switch is turned to a defrost mode.

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 9

# Passenger's Door and Console



### (A) Power Window Switch

Power windows are standard on S2 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 S2 PLUS Driver's Manual (9/4/2024) Section 5

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 5

#### (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.

#### (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 S2 PLUS Driver's Manual (9/4/2024) Section 6

#### (F) Molded Storage Pockets

Storage pockets are molded into the driver and passenger doors.

Source(s): Freightliner S2 PLUS Driver's Manual (9/4/2024) Section 5

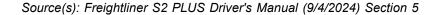
# **Driver and Passenger Seat**

#### **Driver and Passenger Seat**

# **A 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.





# 2026 Grand Star Isringhausen (ISRI) Freightliner Driver and Passenger Seat Operation

This article provides information about the driver and passenger seat controls on a 2026 Grand 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

#### SUMMARY OF FUNCTION AND OPERATION

# 1 - Horizontal Slides (Slide Handle)



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.

#### 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.

#### **▲** 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



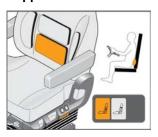
It supports the driver so that the pedals can be reached comfortably by the feet and passed through all the way without force.

- 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 (Not Used)

## 8 - Lower Lumbar Support



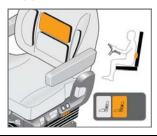
Promotes an upright posture and prevents fatigue by tuning the backrest contour.

- 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

## 8 - Upper Lumbar Support



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.

**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



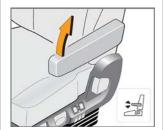
Enables the driver to stay in a comfortable position for a longer period of time by providing a custom inclination of the backrest. An upright position avoids postures with a high load on the back. Pull handle completely over the full adjustment stroke and adjust the backrest position by applying your 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.

#### **▲** 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.

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)

# **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.

# **A** 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.



# A 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.

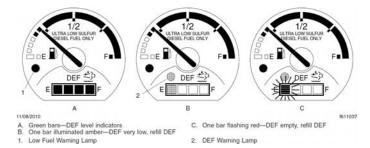
#### **DEF Tank**

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)

Product(s): This source is associated with more than one product. Refer to Newgle for more information about the product(s) offered for your coach's model year.

# 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.

### **▲** 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.



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.

- 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.
- 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.

# 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	ON red following an AUTO LEVEL attempt if system	ON red when voltage is below 10.5 VDC		
OFF when keypad is idle or sleeping	cannot overcome slope OFF when slope is not excessive	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

# 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.
- 2. 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**



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.

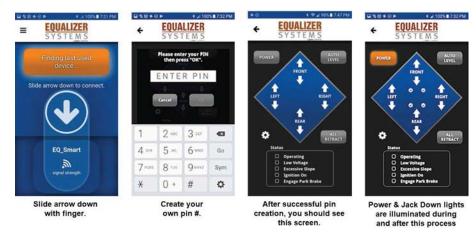
Push and release the Power Keypad button to engage power. All lights will come on, [and] then most will go out. The LED light next to the POWER button should be lit RED when power is on. You will need to have the ignition key switch in the [ON] position to extend the jacks. If you attempt to extend jacks 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)

Product(s): This source is associated with more than one product. Refer to Newgle for more information about the product(s) offered for your coach's model year.

# 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.

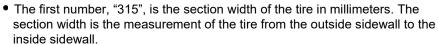
## **A** WARNING

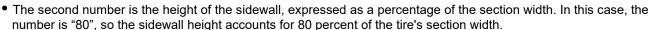
Proper tire maintenance is critical to the safety, operation, and durability of your coach. Failure to follow and monitor tire pressure guidelines may result in premature tire failure.

## **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 "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.

The tire in the example picture was made during the 29th week of 2017.



# 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.

# NOTICE! CHECK WHEEL LUGS

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-2



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.

## **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		
kPa		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	
	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	
KG	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.



Most other coaches have a single lighted battery disconnect switch located in the front overhead or on the passenger console near the entrance door that turns off the house voltage. To learn more, visit the Battery Disconnect home page in Newgle.

# **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.





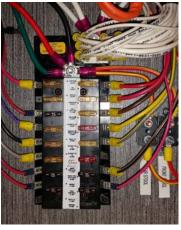


The following photos are examples only. However, they may also be found in areas such as:

- 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.

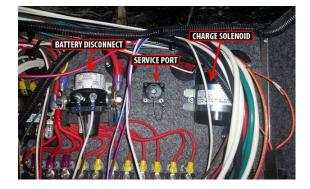




### **Basic 12 Volt Power Flow**

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

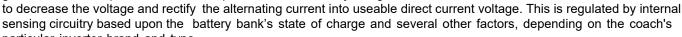
This article provides general information about the components and functions of the 120 Volt Electrical System (AC) in Newmar coaches.

## **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



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 wining and preakers 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.



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	Required Amps
Air Conditioner (depending on brand, BTU rating and options)	14.0 to 16.0 Amps
Inverter (depending on wattage rating, brand, and model)	9.0 to 18.0 Amps
Converter with continuous 12 volt power supply (depending on amp rating and brand)	11 to 17 Amps
Refrigerator (residential compressor-type)	8.5 to 12.0
Amps	
RV Refrigerator (Absorption)	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 Battery Inspection, Safety, Care, and Maintenance, 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 Grand 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 Grand 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.

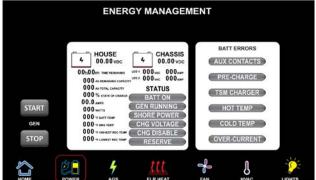
- 1. A charging source is defined as the generator running or the coach plugged into shore power with the Victron inverter/charger turned on to charge the system.
- 2. It is recommended to plug into 50A shore power or have the generator running when available to get the full amount of charge to the Lithium 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.

## **A** 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))

#### IMPORTANT

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 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 S2 PLUS Super C Chassis Battery Overview

This article provides an overview of the Freightliner (S2 PLUS) 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 by 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, open the driver's side bay just behind the front axle.

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 S2 PLUS Super C Chassis Battery Disconnect Overview

This article provides basic operation instructions for a Chassis Battery Disconnect on Freightliner S2 PLUS Super C coaches beginning with the 2026 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.

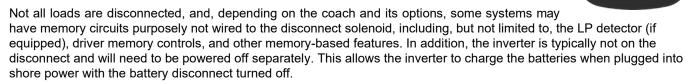
Source(s): Freightliner Business Class S2 PLUS Driver's Manual (STI-535, 9/4/2024)

# **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.



# 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

## **A** 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.

## 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.

### 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**

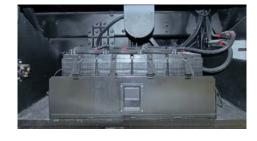
This article provides information about general battery location and replacement recommendations.

# **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

## **Shore Power Cord Overview**

This article provides a functional and operational overview of the shore power cord as part of the coach's 120 volt power system.

## 30 Amp or 50 Amp Service

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.



# **Operation**

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).

Pull out the power cord, and plug it into an appropriately rated electrical outlet. Make sure the power source is providing the correct voltage before plugging in the shore cord.

To store the cord, disconnect it from the power source outlet. Remove the cord from the channel in the compartment and roll it up as necessary.





# Southwire/TRC Shoreline Power Cord Reel Quick Start (Model: RH5)

This article provides brief operation instructions for a Southwire/TRC Shoreline Power Cord Reel (Model: RH5)

This unit is designed with a clutch type drive to allow direct engagement during retract and clutch disengagement to allow for free spooling during release. These features are controlled using the rocker switch assembly MH2021, RV2100, or equivalent previously installed.

To correctly operate the unit, follow the steps listed below. If the unit does not perform according to the instructions below, first recheck wiring for any issues.

# **Motor Operation**

1. Ensure power is being supplied by the 12 VDC source.



- 2. Locate the switch installed. If using Southwire switches, identify the label markings "RETRACT" located at the top switch position and "RELEASE" located at the bottom switch position.
- 3. To retract the cord back onto the reel, press and hold the switch in the top "RETRACT" position until the desired amount of cord is returned to the reel.
- 4. To release the cord from the reel, press the switch MOMENTARILY in the bottom "RELEASE" position. This unlocks the spool and allows for the cord to be manually pulled to a desired length. DO NOT attempt to pull cord from the reel without first pressing the switch momentarily in the bottom "RELEASE" position. Only a MOMENTARY press of the switch in the "RELEASE" position will be needed. DO NOT attempt to continuously hold the "RELEASE" switch position, doing so will cause the cord to unravel on the spool.

## **Cord Operation**

Use only approved applicable outlets. Cord connector has a built-in Easy-T-Pull handle for easy disconnect.

#### **User Maintenance**

This unit does not have any user serviceable parts. The user can perform periodic inspection of the cord to insure it is still in usable condition. DO NOT use if the cord is damaged.

Source(s): Southwire Shoreline Reels Operation Instructions Model #RH5

Product(s): TRC 50 Amp 34' Power Cord Reel w/Pigtail (Model: RH54331RM, Newmar Part Number: 132025)

# **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.

# Precision Circuits Power Control System Monitor Panel Quick Start (Model: 00-10019-050)

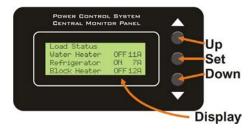
This article provides basic operation instructions for a Precision Circuits Power Control System Monitor Panel (Model: 00-10019-050).

#### **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 S2)

This article provides information and the location of the house and chassis fuse panels for Super C coaches built on a Freightliner S2RV chassis (2026 and newer Grand Star).

#### Inside the Coach

## **House Fuse Panel**

The house fuse panel, which controls most of the components and appliances inside the coach, is located in the bathroom, or inside the cabinet on rear wall.

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.



#### **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 in the cord compartment. which include but not limited to chassis and, tail and tow plug light fuses and house battery and disconnect fuses. Any other chassis related fuses are detailed in the Freightliner Manual.



# **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.

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.



#### 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.



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:

- 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.

## **A** 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.

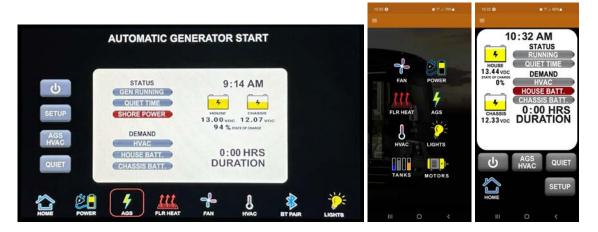
- HVAC requires AC voltage to operate.
- House or Chassis Battery is below set voltage and needs charged.



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 11.0 VDC, 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-II 2x120V Inverter Quick Start (Model: PMP-122200102)

This article provides basic operation instructions for a Victron MultiPlus-II 2x120V Inverter (Model: PMP-122200102). Victron inverters are blue in color and are typically located in a basement compartment near the batteries or in between the frame rails.

## **Operation**

## On/Off/Charger Only Switch

When switched to 'on', the inverter/charger is fully functional. The inverter will come into operation, and the LED 'inverter on' will light up.

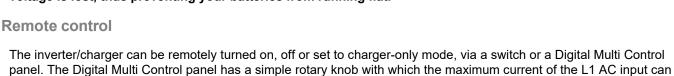
An AC voltage connected to the 'AC in' terminal will be switched through to the 'AC out' terminal, if within specifications. The inverter will switch off, the 'mains on' LED will light up, and the charger commences charging. The 'bulk', 'absorption' or 'float' LEDs will light up, depending on the charger 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 inverter/charger will operate (if mains voltage is present). The input voltage is also switched through to the 'AC out' terminal in this mode.

#### **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.



## Equalization and forced absorption

Traction batteries require regular additional charging. In the equalization mode, the inverter/charger will charge with increased voltage for one hour (1V above the absorption voltage for a 12V battery, 2V for a 24V battery and 4V for a 48V battery). The charging current is then limited to 1/4 of the set value.

be set. This does not affect the L2 AC input: see PowerControl section in the "other features" chapter.

When equalization mode is activated, the 'bulk' and 'absorption' LEDs flash intermittently.

## WARNING

Equalization mode supplies a higher charging voltage than most DC-consuming devices can cope with. These devices must be disconnected before additional charging takes place.

Forced absorption: Under certain circumstances, it can be desirable to charge the battery for a fixed time at the



absorption voltage level. In Forced Absorption mode, the MultiPlus-II will charge at the normal absorption voltage level during the set maximum absorption time. When Forced Absorption mode is active, the 'absorption' LED is illuminated.

Activating equalization or forced absorption: The inverter/charger can be put into both these states from the remote panel as well as with the front panel switch, provided that all switches (front, remote, and panel) are set to 'on' and no switches are set to 'charger only'. The procedure below should be followed to put the inverter/charger in this state. If the switch is not in the required position after following this procedure, it can be switched over quickly once. This will not change the charging state.

#### **A** NOTICE

Switching from 'on' to 'charger only' and back, as described below, must be done quickly. The switch must be toggled such that the intermediate position is 'skipped', as it were. If the switch remains in the 'off' position even for a short time, the device may be turned off. In that case, the procedure must be restarted at step 1. A certain degree of familiarisation is required when using the front switch on the Compact in particular. When using the remote panel, this is less critical.

#### Procedure:

Check whether all switches (i.e. front switch, remote switch or remote panel switch if present) are in the 'on' position. Activating equalization or forced absorption is only meaningful if the normal charging cycle is completed (charger is in 'Float').

#### To activate:

- Switch rapidly from 'on' to 'charger only' and leave the switch in this position for ½ to 2 seconds.
- Switch rapidly back from 'charger only' to 'on' and leave the switch in this position for ½ to 2 seconds.
- Switch once more rapidly from 'on' to 'charger only' and leave the switch in this position.

On the inverter/charger (and, if connected, on the MultiControl panel), the three LEDs 'Bulk', 'Absorption' and 'Float' will now flash 5 times. Subsequently, the LEDs 'Bulk', 'Absorption' and 'Float' will each light for 2 seconds. If the switch is set to 'on' while the 'Bulk' LED lights, the charger will switch to equalization. If the switch is set to 'on' while the 'Absorption' LED lights, the charger will switch to forced absorption. If the switch is set to 'on' after the three LED sequences have finished, the charger will switch to 'Float'. If the switch has not been moved, the MultiPlus-II will remain in 'charger only' mode and switch to 'Float'.

#### **LED Indications**

For the latest and most up-to-date information about the blink codes, please refer to the Victron Toolkit app.

# Shut down procedure

To switch the inverter/charger off, use the on/off/charger-only only switch located on the bottom left-hand underside of the case. The middle position of the switch is the OFF position.



To completely de-power the inverter/charger, disconnect the DC fuse or turn off the isolation switch, DC contactor or DC circuit breaker, located between the battery and the DC terminals of the unit. Note that dangerous residual voltages may still exist inside the product and at its terminals after shutdown. Never open the product casing, or touch bare terminals.

#### **Maintenance**

The inverter/charger does not require specific maintenance. It will suffice to check all connections once a year. Avoid moisture and oil/soot/vapours, and keep the device clean.

Source(s): MultiPlus-II 2x120V Operation

Note: Updated spelling of "equalisation" to "equalization" to match preferred American-English.

# Victron MultiPlus Inverter Digital Multi Control GX Panel Quick Start

This article provides brief operation instructions for a Victron MultiPlus Inverter Digital Multi Control GX Panel. Coaches equipped with the 2000W Victron inverter also have a remote panel installed inside the coach, which can be used to turn the inverter on or off or place it in the charger-only setting.

On the Victron Multi Control panel, under the left "Charger" column, indicator lights will illuminate if the charger is active (mains on), and if the current charge status is bulk, absorption, or float. Under the right "Inverter" column, indicator lights will illuminate if the inverter is on. If any fault is present, the red LED(s) will illuminate for overload, low battery, and/or temperature faults.





Newmar has set the control panel to default at 30 amps. The knob can be used to turn down the amount of amperage allowed by the inverter's charging system. If plugged in using a 50 amp power cord, there is no need to do anything with this knob. When plugged into 30 amps or less, turn the knob to lower the available amperage to the inverter to help avoid tripping the breaker on the shore power supply.

The inverter switch must be turned on for the remote switch to function. If it is off, or in the charger only, position the remote switch will not be able to control the inverter.

# **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

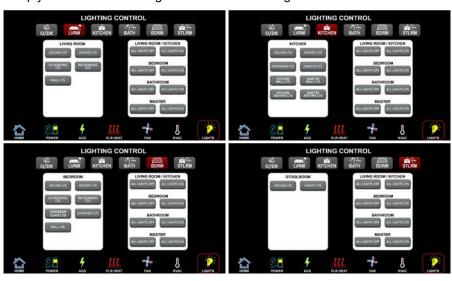
The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from 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.

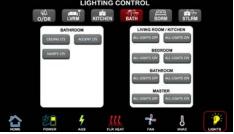
The following may appear:

- 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.







# RECEPTACLES AND ACCESSORY CHARGERS

## 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.

#### A IMPODIANT

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.

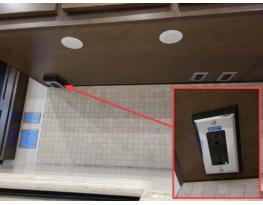
Coaches with the holding tank heat pad option will have an additional GFCI located in the basement area; however, the exact location varies.

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.

#### **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.

# **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.





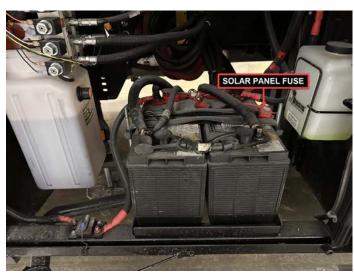
# **SOLAR POWER**

# Dometic GoPower! 10-Watt Solar Panel Quick Start for Grand Star Class C Coaches (Model: Flex-10-HB)

This article provides basic information about Dometic GoPower! 10-watt solar panels installed on 2026 and newer Grand Star coaches.

If installed, this 10-watt solar panel will trickle charge the chassis batteries when exposed to sunlight. 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

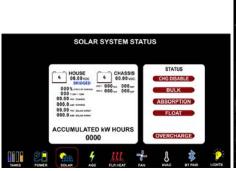
The Solar icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the Solar Management System information broadcasted from the Victron MMPT controller. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile device.

#### **A** IMPORTANT

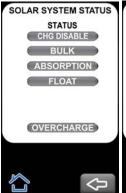
The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from 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.

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).

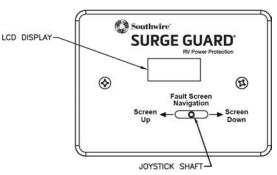
The optional Remote LCD Display is intended for use with Automatic Transfer Switch (ATS) unit 40350-RVC or 41390-RVC.

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 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

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)

#### 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

# 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:

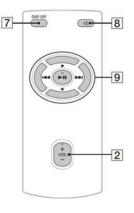
- Radio: Tune into a station automatically (SEEK+/SEEK-).
- USB/Bluetooth Audio: Fast-reverse/Fast-forward.
- (4) VOICE: Activates the voice command function for Apple CarPlay and Android Auto.
- (5) DISPLAY/TOUCHSCREEN
- **(6) CUSTOM KEY 1/2:** Registers functions (Mute, Disp. Off, Source Change, Home, 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:





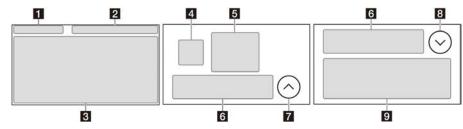
- Radio: Select a preset station.
- USB/Bluetooth Audio: Move to the previous/next content.
- Apple CarPlay/Android Auto: Move to the previous/next content.

#### 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.
- (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.

# **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.

**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.

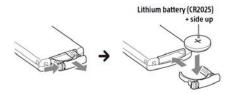


<b>=</b> (IIST)	lists differ depending on the source.	
2 Status indica	tion (right side)	
Clock	Displays the time which was set on the Date/Time setting.	
<b>※</b> (mute)	Lights up when the sound is muted.	
••• (option)	Opens the source option menu. The available items differ depending on the source.	
(device)	Displays the device's name to connect to the unit.	
(antenna)	Indicates the signal strength status of the connected mobile phone.	
🛍 (battery)	Indicates the remaining battery status of the connected mobile phone.	

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.



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

# 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.

# 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 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.

#### **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.

# 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.

**BT Pair**: 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.

# 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.

#### **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.

#### 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





<sup>\*\*</sup>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.

select coach models, which aids in warming the engine prior to starting, making it easier to start the coach in colder weather.

#### **Status Display**

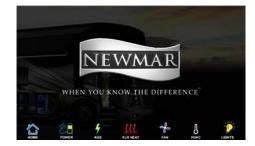
- TANK LEVEL STATUS: This area shows the different tank levels (0%-100% with 5% increments).
- BATTERY VOLTAGE/PERCENTAGE: This area provides battery and AC Power details (time remaining, state of charge, AC amperage).

# 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.

#### **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.



#### Sleep

While on the home page the LCD will go to sleep after two minutes of inactivity. Touching the sleeping LCD screen anywhere will wake it up.

# 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.

#### 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.

## **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.

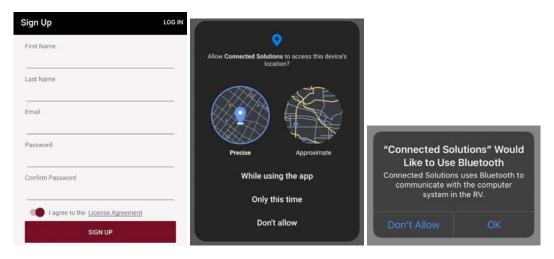
# ATC/KIB Newmar App Powered by Connected Solutions for Standard User Interface Quick Start

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.



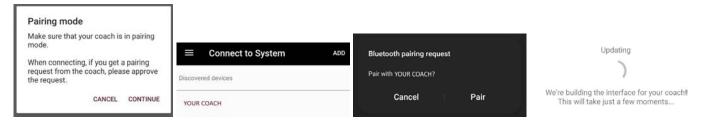
If prompted with the Paring mode notification, select "CONTINUE." Otherwise, select add at the top right of the screen. If your coach shows up, select it. Otherwise, ensure the ATCNET-BTOM is in pairing mode and select add at the top left

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.

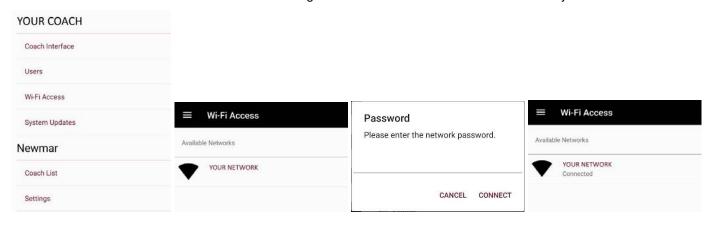


If your coach is equipped with the ATCNET (#158285) module, then you will need to set up the Wi-Fi connection. Begin by pressing the menu icon on the top left of the screen and select the "Wi-Fi Access" button. Select your Wi-Fi network from the list of available networks.

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).

# Poplar Spruce Aspen OUTDOOR ROUTER UNIT (ODU) Teton Denali ODU comes in Black or White

INDOOR ROUTER UNIT (IDU)

#### **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).

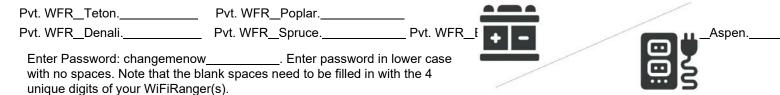
**Denali:** WiFiRanger Denali is a mid-performance outdoor router with 2.4GHz WiFi, 1.5mi range, a 100Mbps LAN port, and an integrated LTE modem (optional).

**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**

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**

Consumer: 888.333.6651Business: 888.444.4410att.wifiranger.com

#### **Carrier: VERIZON**

Not Officially Supported (Cannot guarantee Verizon data plans at this time.)

#### **Carrier: MILLENICOM**

Consumer: 800.996.1285Business: 800.996.1285millenicom.wifiranger.com

#### 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:

<sup>\*</sup>Identify modem model on Setup tab of Control Panel under Cellular settings.\*

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).

**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).

Pvt. WFR\_Denali.\_\_\_\_\_ Pvt. WFR\_Spruce.\_\_\_\_\_ Pvt. WFR\_I

Enter Password: changemenow\_\_\_\_\_\_. Enter password in lower case with no spaces. Note that the blank spaces need to be filled in with the 4 unique digits of your WiFiRanger(s).

Visit mywifiranger.com. This brings up the WiFiRanger Control Panel which can be bookmarked for tuture access.

MARTTPHONE VIEW MAC VIEW MA



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 not 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.

<u>Download for iOS</u> <u>Download for Android</u>

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

#### **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





- 1. 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**

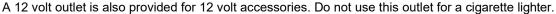
This article provides an overview of the antenna and cable system in the coach. Your coach may be equipped with an exterior antenna jack and interior antenna jacks or wiring at each television location.

#### **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.



# **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 BUTTON (ANTENNA & BOOSTER)

SEARCH LED

SEARCH BUTTON

READOUT DISPLAY

ROTATE BUTTONS

FRONT COAXIAL
TV CONNECTION

ON/OFF LED

WINEGARD

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.

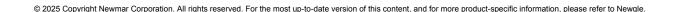
Rotate antenna until pointer on directional handle aligns with pointer on ceiling plate. Turn elevating crank (counter clockwise) in "DOWN" direction about 13 turns or until resistance is noted. Antenna is now locked in travel position.

#### 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.



# 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.

# SEARCH LED SEARCH BUTTON GREEN / RED POSITIONAL LEDS READOUT DISPLAY ROTATE BUTTONS

#### **A** 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).

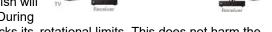
# Operating the RoadTrip® T4 Antenna

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.

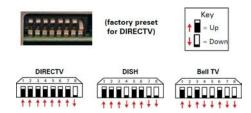
NOTE There are certain areas within the U.S. where the T4 antenna may experience limited or no coverage of the 129° satellite for HD programming. DISH home coverage has the same limitations. Problem areas include Washington, Oregon and California, but limited coverage may extend past these areas. Contact 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 <a href="https://www.winegard.com/support">www.winegard.com/support</a>.



**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.

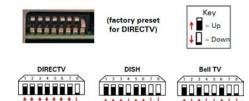
NOTE There are certain areas within the U.S. where the P4 antenna may experience limited or no coverage of the 129° satellite for HD programming. DISH home coverage has the same limitations. Problem areas include Washington, Oregon and California, but limited coverage may extend past these areas. Contact 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).

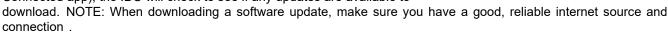
### **IDU Operation**

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



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)

# **AUDIO SYSTEMS**

Bose TV Speaker Quick Start (Model: 838309-1100)

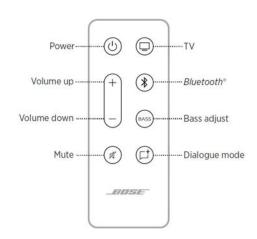
This article provides basic operation instructions for a Bose TV Speaker (Model: 838309-1100).

#### **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.

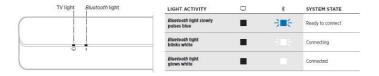
#### Reset the Bass

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)

# **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**).

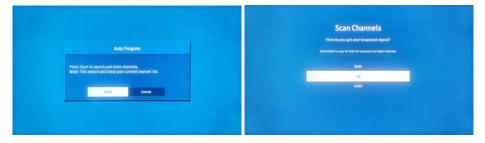


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Select Broadcasting, and then select Auto Program.



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)

# **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.





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# **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.

Single and dual air horns are available as options. The air horn is controlled by a wire lanyard hanging down just inboard on the driver's door. Pull downward on the lanyard to sound the air horn.

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.

## **Carefree Ascent Slideout Topper Maintenance**

This article provides care and maintenance recommendations for a Carefree Ascent Slideout Topper. Maintaining the Carefree Ascent is easy. Just follow these basic steps: Periodically check that the fasteners are tight. Tighten if necessary. Keep the awning fabric clean.

#### **Fabric Care**

#### **A** NOTICE

Do not use oil based cleaners or any caustic, granulated, or abrasive type cleaners on your Carefree product.

One of the best ways to keep the fabric looking good and to delay the need for deep or vigorous cleanings is to hose fabrics off on a monthly basis with clear water. This practice will help prevent dirt from becoming deeply embedded in the fabric. In most environments, a thorough cleaning is only required every two to three years.

When it's time for a thorough cleaning, the fabric can be cleaned while still on the coach.

- For Vinyl Fabric Use a soft brush and warm water with soap.
- For Acrylic Fabric Use a stiff brush and warm water with soap.

When cleaning the fabric, it is important to observe the following:

- Always use a natural soap, never detergent.
- Water should be cold to lukewarm, never more than 100°F.
- Air-dry only. Never apply heat to the fabric.
- Always allow the fabric to dry thoroughly before rolling up the awning.

#### Mildew

Mildew is a fungus growth that looks like dirt. Vinyl coated polyester fabrics are mildew resistant because of a chemical biocide in the vinyl coating. Under ordinary conditions, mildew will not appear. However, in areas where high temperature and humidity are common, mildew can be a problem and requires the material to be cleaned more often. Thoroughly rinse the fabric with clean water and allow to air dry completely before rolling up the fabric.

## **Pooling**

When water collects on the top of the fabric, this is known as "pooling". This can occur during inclement weather or if a running air conditioner discharges over the awning. The water is dumped when the awning is retracted. It is recommended that if water accumulates on the top; retract the awning in increments of 8"-12" to dump the water. This will help prevent the fabric from stretching or distorting.

#### **A** IMPORTANT

If the room must be closed during wet weather (rain), close the room in increments (approximately 8-12"). This is to allow water to run off while the room is closing and prevent sudden pooling.

Source(s): Ascent Owner Information

# Carefree Travel'r Patio Awning Operation via Bluetooth Wireless Control System (Model: BT12)

This article provides basic operation instructions for a Carefree Patio Awning via Bluetooth Wireless Control System (Model: BT12). The BT12 Wireless Awning Control System offers multiple methods of operating the awning, including standard switch operation, the Carefree Connects Mobile App, and the BT Remote.

#### Components

**Control Switches:** Illustrations show the standard Carefree switches. The switch(es) installed in the coach may vary by appearance and function.

**BT Motion Sensor:** The optional BT Motion sensor detects awning motion caused by windy conditions. The system gauges the motion of the awning's front edge (roller tube or lead rail). When the motion exceeds the preset threshold, the system retracts the awning. The factory default is set at "3" on a scale from 1 to 5. When using the mobile app, the sensitivity can be adjusted for personal preference.

**BT Remote:** The optional BT Remote provides the ability to operate the awning from any location. The remote has an operating range of approximately 30 feet.



## **Additional System Features**

#### **Ignition Lockout**

The BT12 Control System provides two options for transportation safety using ignition lockout.

Standard - The system disables the extend function while the vehicle ignition key is in the ON position.

**RTL** – The system fully retracts the awning and disables the extend function when the vehicle ignition key is in the ON position.

Functions will return to normal operation when the ignition key is turned OFF. Contact your vehicle dealer to find out if you have the ignition lockout option connected and which version is active in your vehicle.

#### LED'S

White (monotone) LEDs are a popular option providing lighting beneath the awning. Factory installed LEDs are located on the leading edge (roller tube or lead rail) or can be mounted at the awning rail when present.

The BT12 Control System provides controls to allow you to set the lights to match your preference with ON/OFF and dimming controls through the app and/or the BT Remote.

To operate the White LED lights, you must have the awning lights power switch ON. The factory default for the lights is full bright. When the light is adjusted with the BT Remote or the app, the system will remember the setting for the next time the lights are turned on.

# **Carefree Connects Mobile App**

The app communicates directly with the Control Module. Features include: Real-time extension and retraction at the click of a button, LED lighting control, Adjust the rollback feature for LED positioning when the awning is extended (not available with box awnings), Review awning status, Name the awning(s), and Adjust the motion sensitivity for wind retraction (when the optional BT Motion Sensor is installed).

#### **Download the App**

The Carefree Connects Mobile App is downloadable to any device that supports: Current iOS or Android operating systems and, Bluetooth low energy technology. The Carefree Connects Mobile App is free to download from the App Store for Apple products or on Google Play for Android devices. Download the app. When finished, close out of your app store. Locate the BT12 icon on your Home screen. Tap on the icon to launch the app.



#### **Pairing**

To begin controlling your awnings with the mobile app, you must first: Ensure Bluetooth is turned ON in the settings page for your mobile device. Open pairing mode on your awning. Pair to your awning with the mobile app.

#### **A** NOTICE

Do not attempt to pair to the awning directly through your mobile device. Pairing must be done through the app.

#### Set the System into Pairing Mode

To put the system into pairing mode for the mobile app and/or additional peripherals that may be added (i.e. additional remotes):

Turn power to the awning ON. Extend the awning. Note that the awning does not have to be opened completely. Retract the awning. When the awning is fully retracted, press and hold the retract switch for 3 seconds. The awning is now in pairing mode for 5 minutes. The BT12 control module will automatically pair to the device then go to working mode.

NOTES: The module will pair to the physically closest unpaired device first. Repeat the pairing steps for each additional device (the module remembers the devices that have been paired). Refer to the Carefree Connects Mobile App manual for setting up and pairing a smart device (such as a smart phone or tablet).

Multiple devices can be paired to the awning up to a maximum of 8 peripheral devices.

- Only one active BT Motion Sensor can be paired to the BT12 Control Module.
- Only one active BT Remote can be paired to the BT12 Control Module.
- Multiple mobile devices (smartphone or tablet) can be paired to the BT12 Module but only 1 can be active at a time.

#### Pair Your Mobile Device to Your Awning

NOTE: If you have multiple devices to pair to your awning but wish to pair your mobile device first, ensure your mobile device is positioned closest to the awning prior to completing the following steps:

Upon launching the app, you will land on the home screen. Tap on the grid icon on the top left of your screen to enter the Awning Management screen. Locate the awning you wish to claim in the Available Awnings section, and tap on its icon. Tap the Add to My Awnings button in the pop-up window. The selected awning will move into the My Awnings section of the screen.

Your paired awning should now be located at the top of your home screen. Tap on the icon from either the My Awnings area of the Awning Management page or from the top of your home page to connect to it. If you enabled the passcode but did not specify a personal pin, the default pin number is "1 2 3 4".

#### **Awning Operation via Connects Mobile App**

NOTE: When the passcode lockout is enabled, a screen will popup requesting your 4 digit pin before allowing you to use the app.

**Extending Your Awning:** Once your device(s) have been paired to your awning, you can begin to operate your awning. The awning can be extended using the physical



switch, the mobile app, or the BT Remote.

**Retracting Your Awning:** If you wish to retract your awning, you can do so using the physical switch, mobile app, or the BT Remote. Again, the physical switch must be in the ON position before the awning can operate.

#### **Controlling Your Awning LED Lights**

Turn the awning lighting switch "ON". NOTE: The physical switch must be in the ON position. If the lighting switch is off, a popup will appear on the home screen when you try to turn the lights on.

Turn the lights on or off by tapping the light bulb icon on the app or on the BT Remote, press the bottom button with the sun symbol.

The awning LED lights must be powered ON for the LED dimmer to function. Using the mobile app, you can slide the LED slider to the left to dim the LED lights, or to the right to brighten them.

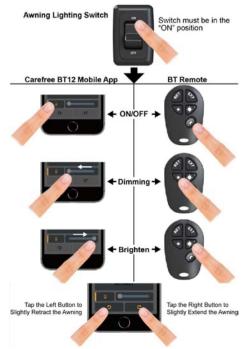
To dim the LED lights using the BT Remote, press the left button with the small star icon. To brighten the lights, press the right button with the large star icon.

#### Adjust the Position of Your LED Lights

Upon extending your awning, the LED lights will automatically position themselves at approximately a 45° angle toward your coach. If you wish to point them in a different direction or at a different angle, you can use the mobile app to reposition the roller tube.

Open your mobile app and extend your awning. Once the awning is fully extended and has settled into the default rollback position, press the rollback adjustment buttons at the bottom of the Home screen until you reach the desired position. Tapping the left button will slightly retract the awning, while tapping the right button will slightly extend it. Once you have found the position you like, retract the awning to save the position. Now, every future extension should roll out to your saved position.





#### **Navigation Buttons**

The Awning Management button icon on the home screen resembles a square grid and will take you to the Awning Management page when pressed. This is where you can claim the awnings you wish to control via the app. See the next section of this manual for additional information. Pressing the Carefree icon will take you to the Carefree website when you wish to add to your awning collection or to contact Carefree. Pressing the gear icon will provide access to the following pages:

**Settings Page:** If your awning is equipped with the BT Motion sensor, you can adjust the motion sensitivity level of the awning.

**Peripherals Page:** This page displays the status of the peripheral devices. The Notifications area offers status information about your awning.

**About Page:** This page displays your awning's firmware version, identification numbers, and ignition lockout status (if applicable).

Source(s): Carefree Connects Mobile App User's Guide

## **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.

#### **▲** 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.



# 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.



Kwikee® Electric Step Assembly - Various Options

### **▲** 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.

# RISK OF FALL OR SERIOUS INJURY RIESGO DE CAÍDA O DE LESIONES GRAVES RISQUE DE CHUTE OU DE BLESSURE GRAVE THIS VEHICLE IS EQUIPPED WITH A LIPPERT AUTOMATIC ELECTRIC STEP. THISINIST THE RINTION SWITCH TO THE "ON" "POSITION WHILE THE ENTRY DORD IS COSEO WILL CUBIS ET HE STEP TO RETRIACT. VISUALIY CONFRIM THAT THE STEP IS PULLY EXTENDED PRIOR TO EXTING THE VEHICLE. ESTE VEHICLO. CUENTA CON IN ESCALÓN ILE CETRICO. AUTOMATICO LIPPERT, SI GIAR AL INTERRUPTOR DE ENCENDIDO A LA POSICION "ON" (ENCENDIO) MIENTRES LA PUENTA DE ENTRADA ESTA CERRADA, EL ESTALON SE RETRAERA. CONFRIME DE FORMA VISUAL QUE EL ESCALÓN ESTÉ EURI- BETANDIO JAINTES O SALO RE L'EMPICAL. TOURIRE ILE COMMUNITATES O SALO RE L'EMPICAL. TOURIRE ILE COMMUNITATES O SALO RE L'ESCALIBRE SES DIEL EL COMMUNITATE DE TALLUMAGE À LA POSITION ON "A LORS OUE LA PORTIE D'ESTREE EST FERMÉE ENTRAINERA LA RETRACTION DEL ESCALIER. VISHTER SUBLILLEMENT QUE L'ESCALIBRE SES COMPLETEMENT DEPLOYÉ ANANT DE SORTIR DU VEHICULE.

### **A** 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.

### 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.

### 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!

### **A** 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.



### **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.

# **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.

# **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.

# 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.

NI-151

# 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.

NI-151

# 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.

NI-13

# Certain of our forest product suppliers have advised that urea-formaldehyde is used in the production of particle board, hardwood plywood or paneling which they supply us and which we utilize in our finish product. 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 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 ASTEMD OF VENTILATION SHOULD REDUCE THE RISK OF SUCH PROBLEMS. IF SYMPTOMS DEVELOP, CONSULT YOUR PHYSICIAN. Adorn, Inc. WARNING: 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. WARNING: ITHIS 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 YENTILATION SHOULD REDUCE THE RISK OF SUCH PROBLEMS. VENTILATED OF THE RISK OF SUCH PROBLEMS. Ventilation is important in maintaining a comfortable environment and we direct your attention to the discussion 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.



### **A** 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.

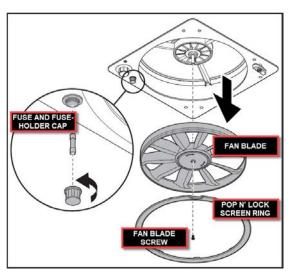




- 4. Clean the Pop N' Lock™ screen insert and fan blade with window cleaner or non-abrasive dish soap and warm water. You may also place the screen insert and fan blade in the top rack of an automatic dishwasher. (Optional: Once the screen and blade are clean and dry, wipe or spray a water-based (not 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>



# **FURNACES**

# **Furnace Operation and Maintenance Overview**

This article provides basic operation and maintenance instructions for a forced-air furnace. The furnace installed in your coach is a forced-air furnace fueled by propane gas and is controlled by the air conditioner wall thermostat or the KIB touchscreen panel. This thermostat controls both the heating and cooling of the coach. The heat is supplied throughout the coach via the ducts in the floor.

For more information about the thermostat and KIB touchscreen, refer to Newgle.

### WARNING

There are no owner-serviceable parts on the furnace. Never attempt to modify this furnace. Fire, explosion, asphyxiation, or carbon monoxide poisoning may occur. If the furnace malfunctions, consult a trained service technician.

Proceed with caution when storing items under the cabinets to prevent crushing or damaging the furnace ducting or blocking the cold air return.



The furnace will not operate properly if the air flow at the floor registers, or the air return to the furnace, is blocked by personal, storage items, or rugs.

# Operating the Furnace

To operate, set the thermostat to the desired temperature setting and turn the thermostat ON. Allow 60 seconds for the furnace to begin operating. To shut down the furnace, turn the thermostat OFF. After the furnace has been turned off, the fan will run for approximately 60 seconds to cool down.

### WARNING

For your safety, do not use gasoline or other flammable liquids near the furnace or any other appliance.

Smoke and fumes may be created as a result of the residual burn off of the manufacturing compounds that are sometimes present the first time the furnace is used.

This is normal; however, to minimize the smoke and fumes, the initial lighting of the furnace should be completed with the windows and doors open.

# OPEN VENT OR WINDOW ANYTIME VEHICLES, NOXIOUS FUMES OR OTHER HAZARDOUS ITEMS ARE IN THIS AREA.

### Water Compartment Heat via furnace

Coaches equipped with a forced-air furnace(s) have a designated heat duct for the water compartment in the basement to reduce the risk of freezing.

### **A** IMPORTANT

Heat output to the water compartment is only operational when the furnace is heating the interior of the coach.

### **Maintaining the Furnace**

Check the gas system for leaks at least once a year. On the exterior of the coach you will find a furnace cover. This cover should be removed by authorized service technicians only.

Clean the complete furnace and air tube passageways periodically to remove dust, lint, etc. The furnace should be thoroughly cleaned before the start of each heating season. Any debris in the system may restrict air flow for combustion, bind the combustion air impeller, or prevent the blower motor from running properly.

Also, check the burner pilot orifices for debris. Lint accumulations may cause the blower to become unbalanced, vibrate, and restrict the ability of the blower to move air. If lint is blown into the heat exchanger, it may cause odors or create a fire hazard. Contact an authorized service technician for annual cleaning.

### **A** WARNING

Use caution when washing the exterior of your vehicle. Water should not be sprayed directly into the furnace vent. If water is forced beyond the rain baffles into the furnace vent, rusting of the furnace could occur. This could also cause improper combustion.

# Suburban Furnace Quick Start (Model: SF and SFV Series)

This article provides basic operation instructions for a Suburban Furnace (Model: SF and SFV Series).

### **A WARNING**

Do not operate furnace while vehicle is in motion or being towed.

### **A** WARNING

If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not light the burner by hand. Before operating, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

### **A** DANGER

### WHAT TO DO IF YOU SMELL GAS:

- Extinguish any open flame.
- Evacuate all persons from the vehicle.
- Shut off the gas supply at the gas container or source.
- Do not touch any electric switch or use any phone or radio in the vehicle.
- Do not start the vehicle's engine or electric generator.
- Contact the nearest gas supplier or qualified service technician for repairs.
- If you cannot reach a gas supplier or qualified service technician, contact the nearest fire department.
- Do not turn on the gas supply until the gas leak(s) has been repaired.

Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

# **Operating Instructions**

- 1. STOP! Read Users Information Manual supplied with furnace.
- 2. Turn the manual valve (if so equipped) or the valve at the outside LP tank to the "OFF" position. Do not force.
- 3. Set thermostat above room temperature to begin blower operation. A slight delay will occur before the blower comes on. Allow blower to run for 5 minutes for combustion chamber purge cycle. If blower does not come on or stops

- before ignition cycle, go to shut down and contact your dealer or a local recreational vehicle service agency.
- 4. After 5 minutes, move thermostat lever below room temperature. Blower will remain on. Wait approximately 2 minutes for blower to go off.
- 5. Open manual shut-off valve (if so equipped) or the valve at the outside LP tank. Correct operating characteristics depend on the valve being positioned fully open. Never attempt to operate with a valve partially closed. Note: This furnace is equipped with a valve shut-off switch. With switch in OFF position, gas will not flow to burner nor will the furnace operate.
- 6. Set thermostat lever to desired setting. Note: Motor will not come on instantly. Allow approximately 30 seconds for motor operation gas flow and sparks.
- 7. Allow 30 seconds for main burner to light after blower comes on. This furnace Is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- 8. If burner does not light, repeat Steps 1 through 7.
- 9. If after three (3) attempts with no ignition, go to shut down and contact your dealer or a local recreational vehicle service agency. Do not continue to cycle furnace through thermostat in an attempt to get ignition. Note: If furnace should lock out, the blower will go off in 5 minutes and remain off until unit is reset by reactivating thermostat.

### **Maintenance and Cleaning**

You, as the owner/user, should inspect the furnace monthly during the heating season for presence of soot on vent. Operating the furnace under this condition could lead to serious property damage, personal injury or loss of life. If soot is observed on the vent, immediately shut furnace down and contact a qualified service agency.

Source(s): Suburban User's Information Manual for SF, SFV, SH, and SHD Models

# 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**

# NOTE FROM NEWMAR

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**

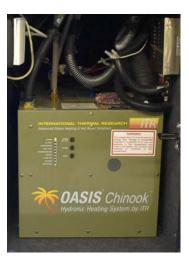
The Oasis® Chinook Control Panel contains three push buttons: Power ON/OFF, Bypass, and Reset. In addition, it contains nine LED's indicating Power, AC Heat, Compressor, Fuel Pump, Combustion Fan, Igniter, Flame Out, Voltage Fault and Low Water.

**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.

# NOTE FROM NEWMAR

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

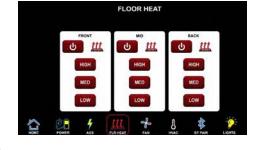
The Floor Heat icon on the 2026 KIB 10.1" and 5" Capacitive Touch LCD with Standard User Interface displays the floor heat controls and settings for floor heat in the front, mid, and rear zones of the coach. The same screens will also appear on the KIB Connected Solutions app once installed on a mobile 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.



OASIS



HEATING VENTILATION A/C

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**

0

Use "HR" & "MIN" buttons to set the time of day. Use "MM," "DD," and "YY" buttons to set the month, day, and year.

HEATING VENTILATION A/C

SETTINGS





### 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.

# NOTE FROM NEWMAR

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 -

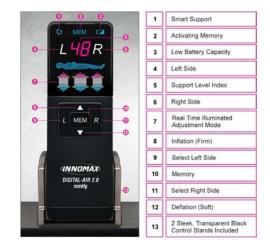
The remote allows the user to select the left or right side of bed and adjust the firmness setting using the up and down arrows: the higher the number, the firmer the support. The user is also able to program their favorite firmness setting number into memory.

### **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)





# Power Incline Retracting Bed Base Operation via Bed Lift Switch

This article provides brief operating instructions for a power incline retracting bed base via a Bed Lift wall switch. This style of bed base is only available on select coach models and floorplans.

The Bed Lift switch controls the incline for the head of the bed and can be used for upright reading or TV viewing. It can also help minimize conditions such as



snoring or acid reflux.

To raise the head of the bed, press and hold UP on the Bed Lift wall switch until it reaches the desired position.

To lower the head of the bed, press and hold DOWN on the Bed Lift wall switch until it reaches the desired position.

Once the head of the bed reaches the maximum incline position, continuing to press and hold UP on the Bed Lift wall switch will retract the top of the bed base to provide clearance for slideout retraction.

### **A** NOTICE

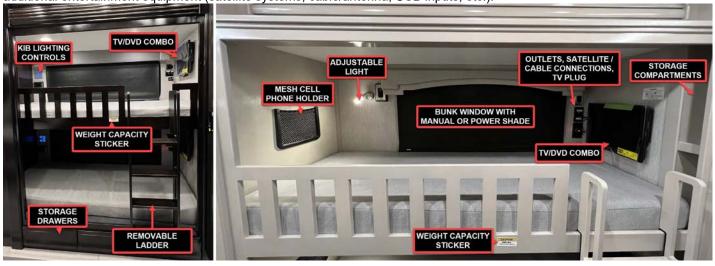
The bed base must be fully retracted to activate the safety switch for slideout operation.

### **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.





# **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.

### **▲ 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 in-house 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

# **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).

On select coaches, the switch for the interior step cover is located either on the side of the passenger console, on the dash console near the center, or near the mid-entry step well. 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



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 urea-formaldehyde is ur

reduct. These supplies here requested that we communicate this to our castemers.

For your information, we are reproducing samples of statements which have been provided to us by or suppliers.

MARINIO: THIS PRODUCT CONTAINS A UREA-FORMALDEHYDE RESIS AND IMPRELEASE COSMALDEHYDE (AND BE IRRITATING TO THYES AND UPPER RESISPRATORY STATEMED FESSED AND STATEMED TO THYE SAND UPPER RESISPRATORY STATEMED OF SEPECIALLY SUSCEPTIBLE PERSONS SUCH AS

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WARNING: THIS PRODUCT CONTAINS A UREA-FORMALDEHYDE MESIN AND MAY RELEASE FORMALDEHYDE WAPORS IN LOW CONCENTRATIONS, FORMALDEHYDE WAPON MAY. IN SOUL PEOPLE CAUSE READACHES, EYE, NOSE, AND THROM TRIBITATION AND AGGINATION OF REDUCE THE RISK OF SUCH PRODUCTURE, SUCH AS ASTHMA. PRIOPER VERTILLITION SHOULD REDUCE THE RISK OF SUCH PRODUCTURE.

WERESIGN IN IMPORTMENT IN IMPORTMENT IN THE PROPERTY WAS THE PROPERTY WAS THE PROPERTY WAS THE PROPERTY OF THE PROPERT 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.

### **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.

### **A** 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.

### **A 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.

### **▲ 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.

# **Ultrafabrics Cleaning Guidelines for Vinyl-Covered Furniture**

This article provides the care and maintenance guidelines for Ultrafabrics material.

One of the best ways to keep Ultrafabrics looking great is through proper maintenance and regular cleaning to prevent excessive dirt from accumulating. To help keep your quality fabrics looking their best, follow these guidelines to extend the life of the fabric:

- Wipe up spills as soon as they occur
- Clean with soap and water or alcohol based cleaners
- Sanitize using disinfectants such as (1:5) bleach/water solution
- For stubborn stains, wipe off with isopropyl alcohol as soon as possible
- Thoroughly rinse all solution residue with clean water
- Air dry

This information is not a guarantee. Please use all cleaning and disinfecting agents safely and as instructed. The use of other cleaning agents, disinfectants, conditioners or protectants is not recommended and can degrade fabric's performance and may void Ultrafabrics warranty.

**Ultraleather® | Pro note:** A variety of clothing and accessories may contain dyes that could transfer to lighter colors, depending upon variations in temperature and humidity. Dye transfer is difficult to control, not always fully preventable, and may be irreversible. Fabric may not protect against intentional stains or permanent inks.

Source(s): https://www.ultrafabricsinc.com/resource

# 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.

# Grand Star Sky Window, Bunk, and Cab Privacy Shade Overview

This article provides basic operation instructions for a Sky Window, Bunk, and Cab Privacy Shade installed in Grand Star coaches.

# **Sky Window Shade**

The Sky Window pleated shade is located above the front cab and bunk area 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 located in the bunk area. 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.





# **Bunk and Cab Privacy Shade**

The bunk privacy shade is a manually operated pull-down shade to provide privacy to the bunk area above the cab.

The cab privacy shade is a manually operated pull-down shade that provides separation between the cab and the living quarters of the coach for additional privacy. They can also be used to block out unwanted sunlight.





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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 Grand Star Water Compartment Overview

This article provides a general breakdown of the components installed in a 2026 Grand Star water compartment.

#### IMPORTANT

The following information is generic for the 2026 Grand 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.

#### **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.

#### A NOTICE

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.









# **Component Definitions**

#### (1) 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.

#### (2) 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.

#### (3) Winterizing and Antifreeze Inlet Valves (A and B) and Hose

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.

#### (4) 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.

#### (5) Water Pump with Filter

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. The water filter canister may be white or clear in color.

#### (6) 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, fills the fresh water tank to match the auto fill settings.

#### (7) 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.

#### (8) Sewage (Black) Tank Dump Gate Valve with T-Handle

In conjunction with the sewage holding tank, the sewage tank dump valve provides adequate and safe storage and/or controls the disposal of waste materials. Open the black tank gate valve all the way by pulling on the T-handle. The tank will start to drain to the macerator or drain outlet as soon as the T-handle is pulled. The 4" drain line or macerator hose should be used to direct waste to the dump station for proper disposal.

#### (9) 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.

#### (10) Fresh (City) Water Connection via Hose

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 water source via a potable hose and the city water connection.

#### (11) Sewer Hose Hatch (Access Port)

The sewer hose hatch is a removable cover that allows the sewer hose or the small macerator hose to exit through the compartment floor in order to connect to a proper dump station. This allows the compartment baggage door to close without hindrance from the hose. The cover may be threaded or clipped. Note: When routing the sewer or macerator hose through the hatch, do not place on or near the Oasis, generator, or engine exhaust pipes. Otherwise, damage may occur.

#### (12) Sewer 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.

#### (13) Sewage (Black) Tank

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) Fresh Water Hose Hatch

The hatch provides an opening in the compartment floor to insert the potable water hose to prevent the compartment door from crushing the hose when the door is closed.

#### (15) Waste (Gray) Water Tank

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) Waste (Gray) Water Tank Dump Gate Valve with T-Handle

In conjunction with the gray (waste) water holding tank, the gray (waste) tank dump valve provides adequate and safe storage and/or controls the disposal of waste water. Open the gray (waste) gate valve all the way by pulling on the T-handle. The tank will start to drain to the macerator or drain outlet as soon as the T-handle is pulled. The 4" drain line or macerator hose should be used to direct waste to the dump station for proper disposal. Newmar recommends dumping and flushing the gray (waste) water holding tank after the black (sewage) holding tank.

#### (17) Waste (Gray) Water Tank 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.

#### (18) Sewer Hose Hatch (Access Port)

The sewer hose hatch is a removable cover that allows the sewer hose or the small macerator hose to exit through the compartment floor in order to connect to a proper dump station. This allows the compartment baggage door to close without hindrance from the hose. The cover may be threaded or clipped. Note: When routing the sewer or macerator hose through the hatch, do not place on or near the Oasis, generator, or engine exhaust pipes. Otherwise, damage may occur.

#### (19) 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.

#### (20) Fresh Water Tank

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.

#### (21) LED Pancake Light

Some lights in the compartment have built-in switches on the light housing to turn the light on and off. Other lights are operated automatically via a plunger switch that activates the lights when the compartment door is opened.

#### (22) 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.

# Water Compartment Heating via a Forced-Air Furnace

This article provides an overview of the water compartment heating via a forced-air furnace.

Coaches equipped with a forced-air furnace have a designated heat duct for the water compartment in the basement to reduce the risk of freezing.

#### **A** IMPORTANT

Heat output to the water compartment is only operational when the furnace is heating the interior of the coach.







# 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 City Connection Overview**

This article provides a basic overview of the City Water Connection for coaches not equipped with a hose reel. Located in the water compartment, the city water connection is made using a potable water hose. In conjunction with the "Fresh Water Tank Fill Valve," this water source is used for several purposes, including pressurizing the plumbing in the coach and filling the fresh water tank.

For coaches not equipped with a hose reel, 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.

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.



Before connecting to the 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 the coach. 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.

#### WARNING

Potable water only. Sanitize, flush, and drain water tank before using. Failure to maintain tank can result in death or serious injury.

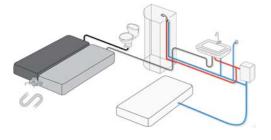
### Fresh Water Lines and Low Point Drains Overview

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.

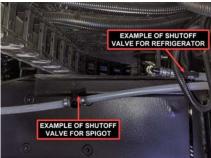
Some coaches may incorporate inline water valves on some water lines which may include the water spigot to the generator area or other non-heated compartment bays, ice maker water lines, and/or inline water filters. The valve(s) could be located various places depending on the coach year, model, and 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

#### **▲ 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 <a href="Fresh Water Valve Overview">Fresh Water Valve Overview</a> 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 Grand 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 Grand Star Super C coaches.



The exact system setup will vary by year, model, floorplan, and faucet style. The following information is based on 2026 Grand 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.

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**

#### 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.

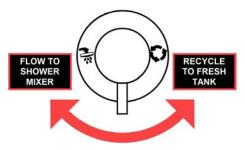
# **Aqua View and Dry Camping**

#### **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).

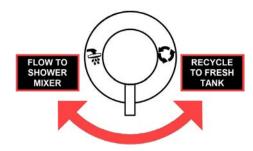




# Winterizing the Aqua View Fresh Water Reclamation System

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.

- 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

# Truma AquaGo® Comfort Plus LP Gas Instant Water Heater Quick Start (Model: DLE60CP)

This article provides basic operation instructions for a Truma AquaGo® Comfort Plus LP Gas Instant Water Heater (Model: DLE60CP).

#### **How It Works**

The appliance was developed exclusively for use in recreational vehicles (RVs). The appliance is connected between the vehicle's fresh water supply and its hot water plumbing system. It is powered by propane and a 12 V power supply. The ventilation grille on the access door allows combustion air to flow into the appliance and exhaust gas to flow out. When the appliance is switched on, the water will be heated on demand:





- A volume-flow sensor in the appliance detects when the hot water faucet has been opened and the volume flow is greater than approximately 0.4 gallons/min (1.5 liter/min). The burner then starts automatically.
- The burner control continuously adjusts the heater output based on volume flow and inlet water temperature, so that the temperature at the hot water outlet is approximately 120 °F (49 °C). A temperature stabilizer is also installed in the appliance to minimize fluctuations of the outlet temperature.
- After some time the maximum temperature at the faucet or in the shower is reached. The length of time will depend
  on the model (AquaGo basic, AquaGo Comfort and AquaGo Comfort plus) and variations in the water plumbing
  (length of pipes, insulation, circulation line, etc.). Like in a home shower, a comfortable water temperature at the
  shower head is reached by mixing in cold water.
- When the volume flow is less than approximately 0.4 gallons/min (1.5 liter/min) and the faucet is closed, the burner is automatically switched off.

The AquaGo Comfort and AquaGo Comfort plus models are equipped with a circulation pump. The circulation pump as well as the burner are switched on automatically by the control unit in order to keep the water temperature above 102 °F (39 °C) in "COMFORT" mode and 41 °F (5 °C) in "ECO" mode.

#### **A** NOTICE

Risk of damage in frost conditions.

#### **Pressure Relief Valve**

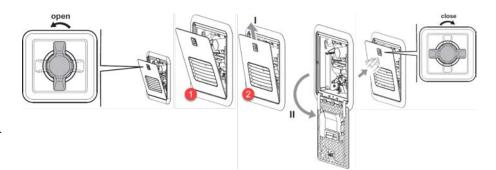
#### **WARNING**

Scalding injury from hot water and/or tampering with the pressure relief valve! Never actuate the pressure relief valve as long as the appliance is still hot. Do not place a plug or reducing coupling on the outlet part of the valve.

The pressure relief valve is a safety component and must not be removed for any reason other than replacement. The pressure relief valve is not serviceable; if defective, it must be replaced. It must be replaced by a Truma pressure relief valve rated for 100 psi (6.9 bar) that is CSA-certified and registered. It must be replaced by a Truma certified service technician. Tampering with the pressure relief valve will void the warranty. The appliance is equipped with a pressure relief valve that complies with the standard for Relief Valves for Hot Water Supply Systems, ANSI Z21.22

#### Access Door

Opening the Access Door: Turn the turn lock counterclockwise into the vertical position. The access door can be opened in two different positions: Position 1 is the maximum opening width for switching the appliance on or off. Position 2 is the starting position for removing the access door. Open the access door to Position 1.



#### **A** NOTICE

Damage to the hinge! Do not try to remove the access door in Position 1. Position 1 is the maximum opening width of the access door. Only remove the access door in Position 2.

Removing the Access Door: Open the access door to Position 2. Move the access door upwards to remove it.

Closing the Access Door: If removed, insert the access door into the cover plate. Make sure that the webbing is not pinched between the access door and the cover plate. Press the access door against the cover plate. Turn the turn lock clockwise into the horizontal position.

#### **A** NOTICE

Damage to the access door and the RV if the access door is not closed properly! Make sure that the access door is flush with the cover plate when closed.

#### A WARNING

Danger of over-temperature and toxic exhaust gases! Use with LP gas (propane) only. Butane or any mixtures containing more than 10 % butane must not be used. Keep the air inlet and exhaust gas outlet free of obstructions. Do not lean any objects against the water heater's access door or place any foreign objects within 2 feet (61 cm) of the access door.

#### **MARNING**

Danger of combustion, personal injury and damage to RV! Keep the area around the appliance free from combustible materials, gasoline, and other flammable vapors or liquids. Switch the gas supply and the appliance off: if anything seems to be out of the ordinary, if you smell gas, if you move the RV, before entering a gas station, before entering a tunnel.

#### **Inspections Before Each Use**

Check the appliance for the following points before each use.

1. Check for visible damage, e.g., on the cover plate or access door. In case of damage, contact an authorized Truma

service provider and do not operate the appliance.

- 2. Provide adequate quantities of propane gas and fresh water.
- 3. Switch ON and check 12 V power supply of your RV.
- 4. Check that the access door of the appliance is closed.
- 5. Keep the appliance free of foreign objects, e.g., leaves, animals, spiderwebs, and keep the area around free of snow and ice. The appliance will not function properly if the intake air or exhaust terminal is obstructed.

## **Operating Procedures**

#### **A** NOTICE

Risk of damage in frost conditions. In frost conditions, ambient temperatures below 39 °F (4 °C), there is a risk that water in pipes, faucets and appliances could freeze. This can cause considerable damage. Before you fill water into appliances and parts that transport water, you must heat the installation area sufficiently so that the water cannot freeze.

Proceed as follows to fill the appliance with water:

- 1. Close open bypass lines (if present). Insert the water inlet filter or heating cartridge if removed. 2, 7, 9 11.
- 2. Turn on fresh water supply or switch on water pump.
- 3. Fill the plumbing system. Open all water-release points, e.g., cold and hot water faucets, showers, toilets. It is important that you bleed the water system before starting the appliance. Once water flows, the plumbing system is vented. Close the water-release points.
- 4. Start the appliance as follows: Make sure that the LP gas supply is turned on. Switch on the 12 V power supply (RV). Open the access door. Switch on the appliance at the POWER switch.
- 5. Select the desired operating mode. Close the access door.

#### **A** WARNING

Scalding injuries caused by hot water! Water temperatures over 127°F (52°C) can cause severe burns or scalding and in extreme cases even death. Before using the hot water faucet or using the shower, allow the hot water to run until the water temperature no longer increases. Test the temperature of the water before placing a child in the bath or shower. Do not leave a child or an infirm person in the bath unsupervised.

There may be a variation between the temperature delivered from the appliance and the temperature at the faucet due to water conditions or the length of pipe from the appliance. The presence of a flow restrictor in the hot water line may limit the water flow. To obtain the desired water temperature at the faucet or in the shower, mix cold and hot water. Particularly when showering, wait until the water temperature has stabilized before entering or allowing other people or animals to enter the shower.

#### Switching ON the Appliance

Open the access door. To switch on the appliance, switch the POWER switch to one of the two "ON" positions.

- Both ON positions on the POWER switch have the same function.
   Choose your preferred position.
- When the green power ON LED 1 is lit, the appliance is switched on.
- If the red error code LED 2 is lit / flashes, there is a fault or warning.

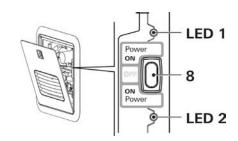
The appliance is now ready for using the control panel inside your vehicle.

# **Operating Modes (Control Panel)**

A control panel to select the operating mode. With the rotary switch you can choose between the following operating modes: ECO, COMFORT, OFF, ANTIFREEZE, and CLEAN.

#### ECO: The appliance is now running in energy-saving mode.

- Water temperature at the outlet is approximately 120 °F (49 °C).
- Prevention of freezing by using propane gas. The temperature in the appliance is automatically kept above 41 °F (5 °C).
- During operation, the yellow status LED 3 is lit.





#### COMFORT: The appliance is now running in a mode that provides rapid availability of hot water.

- Water temperature at the outlet is approximately 120 °F (49 °C).
- Stand-by heat. The temperature in the appliance is automatically kept above 102 °F (39 °C).
- During operation, the yellow status LED 3 is lit.

#### OFF: Stand-by. The appliance is not running in any operating mode.

The yellow status LED 3 is off. To switch off the POWER and gas supply, refer to "Switching OFF the appliance".

#### ANTIFREEZE: Prevention of freezing using 12 VDC electricity:

- Operating mode with installed electric antifreeze kit (available as an accessory) and appliance switched on. The temperature in the appliance is automatically kept above 41 °F (5 °C).
- During operation, the yellow status LED 3 is lit.

#### CLEAN: Decalcification. See "Decalcification" in Truma's documentation.

• For safety reasons, after 30 seconds the decalcification process cannot be stopped until the system has been rinsed in accordance with the instructions.

#### **Description of the Yellow Status LED 3**

- LED 3 is lit: Appliance is switched ON
- LED 3 is off: Appliance is switched OFF.
- Every 7 s, LED 3 is interrupted for 1 s: The appliance must be decalcified
- LED 3 flashes slowly 1 s on, 1 s off: Decalcification mode has been activated
- LED 3 flashes quickly: Before you use the water system you must rinse it.
- LED 3 flashes 2 x briefly after a break: There is a fault in the appliance. The exact fault diagnosis must be determined via error LED 2. Risk of freezing if the temperature in the appliance is below 37.4 °F (3 °C).

#### Switching OFF the Appliance

- 1. Set the control panel to "Off".
- 2. Open the access door.
- 3. Switch off the appliance at the POWER switch. The green Power-ON LED 1 extinguishes.
- 4. Close the access door.
- 5. If the appliance is not needed, turn off the gas supply to the appliance. If you intend to put the RV into storage or turn off the appliance during freezing temperatures.

# **Operation in Frost Conditions**

(Ambient temperatures below 39 °F (4 °C))

#### **A** NOTICE

Risk of damage in frost conditions. In frost conditions, ambient temperatures below 39 °F (4 °C), there is a risk that water in pipes, faucets and appliances could freeze. This can cause considerable damage. If the appliance is not to be used in frost conditions, you must winterize the appliance. Winter operation will not protect the RV's entire water system. Water lines, faucets, water tanks and the external water valves and the vehicle must be heated separately. The RV must be designed for winter use/freezing conditions. The water pipes in the RV must be ice-free to operate the AquaGo Comfort / AquaGo Comfort plus in winter. Otherwise, there is no water flow and the appliance does not start.

When the vehicle is standing, to -4 °F (-20 °C): The appliance has a built-in thermostat that will start the burner and the circulation pump whenever the temperature in the appliance falls below 41 °F (+5 °C). The burner will automatically shut off when it senses a temperature above 111 °F (44 °C).

#### **A** NOTICE

For the appliance to operate properly, you must ensure a constant supply of power (12 V), propane gas, sufficient water in the system. You must leave the appliance powered "ON". The operating mode must be "ECO" or "COMFORT". The water system must be bled so that the circulation pump works.

#### **A** NOTICE

If the vehicle is standing and ambient temperatures are below -4 °F (-20 °C), the appliance must not be operated and must be winterized.

While driving (or if there is no gas supply), to -4 °F (-20 °C)

#### **A** NOTICE

Gas must not be used for heating while the vehicle is in motion. Ask your dealer / vehicle manufacturer about options for heating your RV while driving.

An electric antifreeze kit is available as an accessory (ask your dealer). With this kit, the appliance can be kept frost-free while you are driving or if there is no gas supply (to ambient temperatures of -4 °F (-20 °C)). The electric antifreeze kit includes detailed instructions.

#### **A** NOTICE

While the vehicle is in motion and at ambient temperatures below -4 °F (-20 °C) the appliance must not be operated and must be winterized.

## Winterizing

#### **A** NOTICE

Severe damage to the water system components and the appliance! Any damage caused by freezing or an unsuitable winterizing fluid will not be covered by warranty. Follow the recommendations below if the appliance will be stored under freezing conditions or for an extended period of time. Winterize the appliance at the start of the winter season or before traveling to a location where freezing conditions are likely.

If your RV is equipped with a bypass around the appliance, separate the appliance from the water system with the bypass.

Winterizing the RV with a Winterizing Fluid: Winterizing the RV with a winterizing fluid is only possible with an installed bypass kit (not in scope of delivery). Refer to "Connection diagrams" for all letters referred to in the following description.

#### Winterizing the Appliance

To winterize the appliance, you must drain all water from the appliance. To do this we advise the following steps: Remove the water inlet filter or heating cartridge. Let water completely drain from the appliance. This can take several minutes. Do not insert the water inlet filter or heating cartridge into the appliance during winter – if the appliance is not used.

#### **A** CAUTION

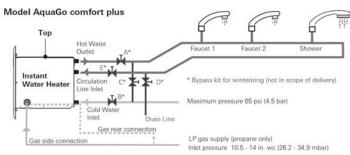
Danger of crushing/pinching of fingers when the Easy Drain Lever is closed! Never put fingers between the Easy Drain Lever and latch.

Close the Easy Drain Lever and the access door. Once the water has been drained, the appliance is protected against freezing conditions.

# NOTE FROM NEWMAR

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.

- 1. Close valves A, B and E.
- Make sure that valve D remains in the closed position.
- 3. Open valve C.
- 4. Drain the appliance.
- Flush the RV's water system with a suitable winterizing fluid according to the supplier's or RV manufacturer's guidelines.
- 6. Close all faucets (if open).
- 7. Open valve D.
- 8. Wait until winterizing fluid has drained. Collect escaping fluid in a suitable vessel.
- 9. Close valve D.



To de-winterize, simply reverse the winterizing steps.

Source(s): Installation and Operating Instructions Truma AquaGo Basic / Comfort / Comfort Plus Product(s): Truma AquaGo Comfort Plus Water Heater (Model: DLE60CP, Newmar Part Number: 144933)

# Water Heater 2-Valve Bypass System Overview

This article provides a brief overview of a Water Heater 2-Valve Bypass System. The 2-valve bypass system is located near the water heater.

Using the bypass valve(s) while winterizing your coach will prevent anti-freeze from reaching the water heater. Draining the water heater during winterizing is required. On some coaches, this consists of two valves: one at the inlet and one at the outlet of the water heater.

By closing the inlet and outlet valves, it opens the bypass hose between the inlet and outlet lines allowing the hot water lines to be blown out and RV winterization antifreeze to flow through, bypassing the water heater.





# **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**

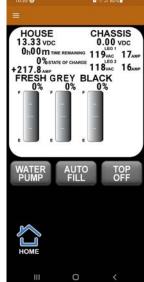
The Central Monitor Capacitive Touch Panel is customized by KIB and Newmar based on the model and year of coach, as well as the available standard and optional equipment. Based on the configuration of the coach, the location of icons, settings, or statuses and corresponding descriptions may vary from 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.

# **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.

## Overview<sup>1</sup>

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**

Most water filter manufacturers recommend that you replace your water filters every six months. These guidelines are based more on average household size and average consumption rates rather than your specific coach. The frequency of filter changes depends upon your water usage and the quality of water you are using. As you travel and hook up to different water sources some may contain more sediment, metals, sulfur, and other impurities, which affect the filter life, as well as the taste and smell of your water. Other factors are how often it is used and how long it has been stored.

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.

# <sup>1</sup>Winterizing Instructions

#### **A** IMPORTANT

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): <sup>1</sup>Water 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.

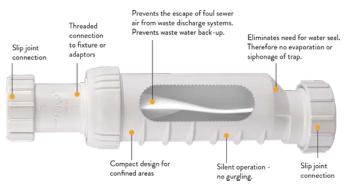
NOTICE

Remove the waterless trap before

using mechanical drain-cleaning devices. Waterless trap can be damaged.

#### **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.



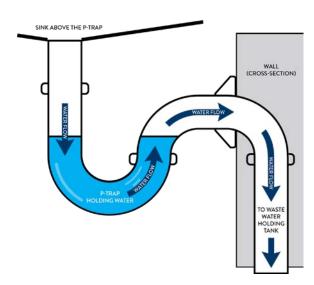


# Traditional P-Traps

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.



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.

The pump starts automatically as soon as the bath, the shower, or the sink begins to drain. It shuts down when the water has been drained. 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)

# **Waste Water Holding Tanks Overview**

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.

#### 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.



#### **A** 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.

# SANICON MACERATOR HOSE SHUT OFF VALVE

#### **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).
- 19. 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









RV SANI-CON

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.

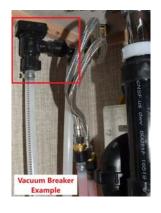
#### **Black Tank Rinse**

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.





# A CAUTION 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.

AD-125

#### **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.

#### **▲ 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 Standard Gravity-Discharge Toilets with Flush Pedal Quick Start (Models: 300, 310, and 320 Series)

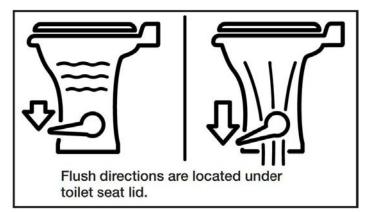
This article provides basic operation instructions for a Dometic Standard Gravity-Discharge Toilet with Flush Pedal (Models: 300, 310, and 320 Series). Dometic 300, 310, and 320 series toilets are lightweight, residential-size toilets for installation directly above a holding tank.

### Adding Water to the Toilet Bowl

To add water to the toilet, press the flush pedal part of the way down. Water flows into the bowl while the flush ball remains closed. If the flush ball moves, let up on the pedal slightly. Adding water to an empty bowl helps prevent holding tank odors from entering the living space. Adding water is recommended prior to flushing solids and toilet paper.

# **Flushing the Toilet**

To flush, press the pedal down until it contacts the floor. Release the pedal after the complete flush.



- When flushing liquids, press the pedal for 1-2 seconds.
- When flushing solids, press the pedal until contents are rinsed from bowl. Flushing longer than necessary will cause holding tank to fill too quickly.

A small amount of water will collect in the bowl after a flush to create an airtight seal.

Source(s): Dometic 310 and 320 Series Gravity-Flush Toilet Instruction Manual

# Dometic Macerator-Style Toilets with Flush Pedal Quick Start (Model: 7600 Series)

This article provides basic operation instructions for a Dometic Macerator-Style Toilet with Flush Pedal (Model: 7600 Series).

The Dometic MasterFlush 7600 series electric-flush toilet macerates waste and pumps it to a holding tank or other effluent storage or disposal system. Operated by a flush pedal, the toilet allows the user to add water to the bowl (before using or flushing) and to flush the toilet.

#### Adding Water to the Toilet Bowl

To add water to the toilet, press the flush pedal slightly. To avoid possible overflow, water flow will stop automatically if the pedal is pressed too long. More water is usually added only when flushing solids.





#### Flushing the Toilet

To flush, press the pedal down completely, then release it. This activates a powerful macerator pump that siphons water and waste from the toilet bowl, macerates and propels the effluent to the holding tank.

#### **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 water valve.

## **Changing Flush Modes**

MasterFlush 7600 series toilets offer two flush settings to help manage water consumption:

- 1. Normal Flush: Uses 0.83 gallons per flush and adds water to the bowl after every flush.
- 2. Dry Bowl Flush: Uses 0.21 gallons per flush and does not add water to bowl after flush.
- 3. To change from Normal to Dry Bowl flush setting, press "Flush" pedal for about 10 seconds. Flush mode has been changed to Dry Bowl setting. Change mode to Normal flush by following the same procedure.

Source(s): Dometic 7600 Series MasterFlush Toilet Instruction Manual

# **SLIDEOUTS**

This chapter provides information about electric flat floor, bedroom, kitchen, wardrobe, and full wall slideouts, as well as hydraulic slideouts.

#### **A** IMPORTANT

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 Diseal coach side-out: Park Brake must be engaged before operating the slide-out rooms will not operate when the Park Brake is released. 2) On Gas coach slide-out: Park Brake must be engaged before operating the slide-out some will not operate when the Park Brake is released. 2) On Gas coach slide-out: Signed on key must be untered for in accessories position before operating the slide-outs. The slide-outs rooms will not operate when the lightion key is in the lightion for your science. 1) Slide-out environment before moving room. 2) Look to and remove any obstructions before moving room. 3) CAUTION ON MOTORHOMES. Move driver seal forward before moving room. 4) If somes are equipped with Manual Look-Auth, be sure to release arms before running room out. 5) Priess and hold the appropriate slide-out switch until the side-out is fully extended and stops moving. 6) Release the switch. Note: The slide-out on movement can be stoped at any time by releasing the switch. 7) Slide-out end various must be shut before moving room. 8) CAUTION ON MOTORHOMES. Move driver seal forward before moving room. 9) CautiON ON MOTORHOMES and the propriete slide-out switch until the slide-out can be subported any size of the seal of the subject of the slide-out come when the slide cout can be purposed slide-out switch until the slide-out come in white the released from located position prior to extended from motor of the sougher both smurtable released from located position prior to extended from motor of the sougher both smurtable released from located position prior to extended from motor of the sougher both smurtable released from located position prior to extended from motor of the sougher both smurtable released from located position prior to extended from motor of the sougher both smurtable released from located position prior to extended from motor of the sougher both smurtable released from located position prior to extended from motor of the sougher both smurtable released from located p

#### **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

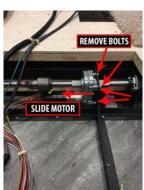
If the slideout is stuck in the extended position and option 1 is unavailable or fails:

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.
- 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. 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**

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.





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.

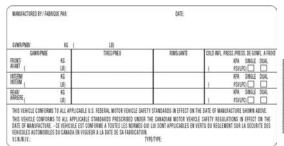
**Gross Vehicle Weight Rating (GVWR):** The maximum permissible weight of the fully-loaded motorhome. The GVWR is equal to or greater than the sum of the UVW plus the CCC. (GVWR UVW + CCC)

**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.

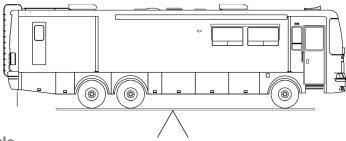
The unit has been built to comply with the component suppliers' recommended limits to provide you with a realistic CCC. When loading the unit, distribute the items so that not all of the weight is added to one area of the unit.

#### **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.

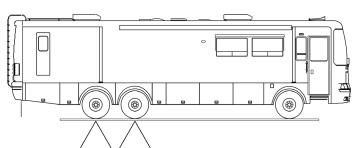
To find the total weight of the unit, pull the unit onto the scales so that all of the wheels are on the scale as shown. Record the weight. This is the GVW and should not exceed the GVWR supplied by Newmar for the unit.



#### **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.

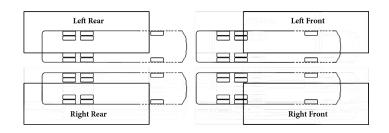
This weight should not exceed the total rating of the axles remaining on the scales. The front axle weight is determined by subtracting this weight from the GVW that was obtained in step one. This amount should not exceed the listed front axle weight rating.



#### **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:

- 1. 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.

#### 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.

#### 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.

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.

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.

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

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## 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