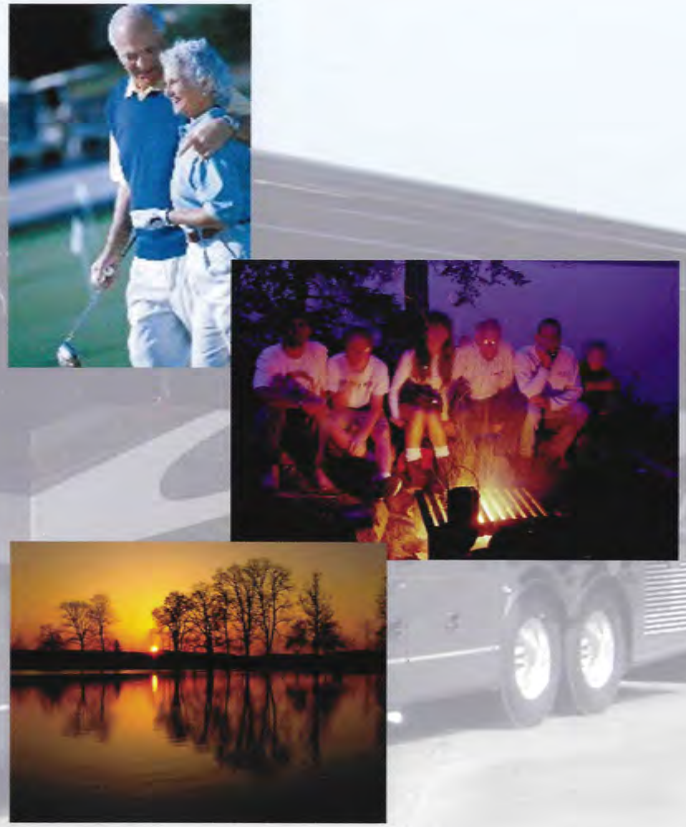

# 2007 London Aire Diesel Bus

# *Welcome to London Aire...*

Welcome to the world of London Aire. A world of luxury and indulgence; a world of comfort and safety; a place to escape to, and in...

As a London Aire owner, you are a very special member of the Newmar family, and the rewards are many. Your taste for the finer things has led you to a part of the RV lifestyle that most only dream of... and Newmar will be there with you every step of the way.

This Owner's Guide, and the accompanying CD-Rom, are designed to help you enjoy your London Aire to its fullest. Take the time to read the information contained here, and understand your unit and its accessories before you hit the open road. Be sure to review the Warranty information supplied with your unit, as well as the information provided by the different accessory and equipment manufacturers. The limited warranties provided by the chassis and component manufacturers require periodic service and maintenance. To be sure your London Aire maintains its warranty status, be sure to read and follow all the maintenance directions. Also, be sure to send in all the registration cards that are provided with your unit to be sure the component manufacturer warranties are initiated.




We thank you for your choice in Newmar and your new London Aire. We share your excitment, and with you look forward to many years and miles of trouble free travels.

# GENERAL INFORMATION

Welcome to the world of London Aire. A legacy of luxury, a heritage of innovation. Your London Aire is a very special vehicle. Beyond an existence as just another RV, your London Aire is more than a home on wheels. It is a statement. It is an image.

It is a lifestyle.

The London Aire is a proud addition to the Newmar line of luxury motor coaches blending cutting edge technology with an old world eye for detail, and a commitment to unrelenting craftsmanship. The Newmar heritage is one of innovation and creativity. From its inception, the London Aire was designed to set the standard by which all other luxury motorcoaches are judged.

## Taking Delivery of your new London Aire

The day you take delivery of your London Aire is a special time. It is when your dealer will walk you around the unit, familiarizing you with the different components and their operation. Because of the size and complexity of the London Aire, it is a process that can seem overwhelming, even if you have a great deal of experienced RV'ing.

Throughout the manufacturing process your vehicle has been inspected by our 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 is also available to assist you in understanding the limited warranties and completing any necessary forms to activate the warranties for the various appliances and accessories installed in your unit.

## 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. This is done to familiarize the customer with the vehicle, its systems and components, and their 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's manufacturers within the prescribed time limit.

5. Providing the customer with information regarding warranty and non-warranty work on the vehicle and its separately warranted components whether the customer is in or out of the area.

## Customer Responsibilities

The customer is responsible for regular and proper maintenance of the vehicle. Properly maintaining your vehicle will prevent conditions arising from neglect that are not covered by your Newmar limited warranty. The maintenance guidelines in this manual and any other applicable manual should be followed. It is your responsibility and obligation to return the vehicle to an authorized dealer for repairs and service.

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.
2. Inspect the vehicle. Do not accept delivery until you have gone through the unit with the dealer. Newmar has provided a check list 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 done this.

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

3. Ask questions about anything that you do not understand concerning your recreational vehicle.
4. When taking delivery, set an appointment for adjustments. This appointment should be approximately two (2) weeks after you accept delivery.
5. Responsible Use. Your vehicle is designed to be used for recreational or temporary living purposes. It is not designed to be used as a full-time residence or for commercial use. Commercial use means using as a business asset such as a mobile office or using the vehicle for lease/rental purposes.

## Owner's Information Package

Included in this package are valuable documents about your vehicle and its components and systems. The Newmar Owner's Guide does not cover every possible detail of the equipment, standard and/or optional, installed on or in your vehicle. Consulting the booklets and instruction manuals in this package will help you safely operate, maintain, and troubleshoot these items. 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.

## The Newmar Warranty on your new London Aire

The Newmar Corporation Limited Warranty was provided to you by your selling dealer prior to purchase. Please refer to this document when inquiring about the Newmar Warranty. To receive an additional copy, please write to:

Newmar Corporation,
Warranty Department
P.O. Box 30,
Nappanee, IN 46550-0030.

## Warranty Service Deadline

Warranty service required needs to be completed during the

term of the warranty. Service work scheduled or performed after the expiration of the Newmar two (2) year, unlimited mile warranty WILL NOT be covered.

## Customer Relations

If you wish to schedule maintenance work, schedule service work, or order parts you should notify your local authorized Newmar Service Center to set up an appointment. If you are unsure of the location of the closest authorized Service Center, see the listing in this manual. You may also write to:

Newmar Corporation
Warranty Department
72185 C.R. 3
P.O. Box 30
Nappanee, IN 46550-0030

## Reporting Safety Defects

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

To contact NHTSA, you may either call the Auto Safety Hotline toll free at 1-888-327-4236 (TTY #1-800-424-9153) or write to:

HTSA,
400 Seventh Street, S.W.,
Washington, DC 20590.

NHTSA also has established a website where you can contact them: http://www.safecar.gov

## Owners Guide & CD ROM Information

This guide, along with the accompanying CD ROM, has been provided by Newmar Corporation solely for the purpose of providing instructions about the operation and maintenance of this vehicle and its components. Nothing in this manual creates any warranty, either expressed or implied. The only warranty offered by Newmar Corporation is set forth in the written limited warranty that applies to this vehicle.

Instructions are included in this manual for operating some of the components that are standard on this vehicle. Instructions are also given for components that are options and may not appear on all vehicles. For more detailed information on components refer to the individual manufacturer's operating instructions contained in the Owner's Information Package.

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. The owner should review the Newmar Corporation Limited Warranty and other manufacturers limited warranties on all components applicable to this vehicle. To activate the warranties on the components within your Newmar recreational vehicle, be sure to file the appropriate registration card with the component manufacturer as described with the individual instruction booklet.

Newmar Corporation has compiled the most current information available at the time of publication. If the components in your unit vary significantly from what is described within this manual, then consult the instructions provided by the component manufacturer found in the

Owner's Information Package. Throughout this guide, reference is made to the following terms: **Warning**, **Caution,** and **Important.** These terms indicate important information that must be understood and followed. The definitions of these terms are:

**WARNING**

Emphasizes an area in which personal injury or even death could result from failure to follow instructions properly. Mechanical damage may also occur.

**IMPORTANT**

Provides additional information to make a step easier or more clear.

**CAUTION**

Failure to observe a caution can cause damage to the equipment or unit. Personal injury is unlikely.

## Placards and Labels

You will find a variety of placards and labels located throughout your London Aire. These are installed to aid in the operation of a component, or to warn of potential dangers while operating a specific appliance, accessory, or system. These will include warnings regarding the electrical system, Propane gas system, fueling the RV, and so on. It is important to read these placards and warnings to insure the safety and proper operation of the item. An example of such a label is given below, this label is affixed to your unit on or adjacent to your Propane tank:

**WARNING**

DO NOT FILL CONTAINER(S) TO MORE THAN 80 PERCENT OF CAPACITY. Overfilling the Propane gas container can result in uncontrolled gas flow, which can cause fire or explosion. A properly filled container will contain approximately 80 percent of its volume as liquid Propane gas.

NOTE: Reading, understanding, and heeding all such labels and placards is critical to the safe, efficient use of your motorcoach.

If you have questions regarding a warning label or placard for a component or appliance in your new unit, please contact your dealer or Newmar Corporation directly for assistance.

## Information Sheet/Appliance Data Label

Newmar has enclosed an Information sheet for your convenience. This sheet contains important information about your coach. This label can be found in the largest wardrobe in the unit, usually either in the bedroom or bathroom area. Listed on this sheet is the six digit Newmar Serial Number. This number is needed whenever making an appointment for service or ordering parts through your Newmar Dealer or Service Center. Also listed is the vehicle identification Number (VIN). The VIN is the legal identification of the complete vehicle and is used by the state for vehicle registration. Both of these numbers are also listed on the Customer Care card Newmar issues upon receipt of registration.

To the bottom is a sample of the information sheet.

1. Serial number of your unit
2. Vehicle Identification Number (VIN)
3. Year/Brand/Type/Floorplan
4. Manufacturer, model and serial number of factory installed equipment.

NOTE: The manufacturer, model, and serial number of the appliances and accessories installed at the factory in your unit are listed on this label for convenience. It is important that the

label remain in the coach for identification puposes. Do not remove or relocate this label.

***THANK YOU FOR PURCHASING A QUALITY NEWMAR PRODUCT! FOR YOUR CONVIENCE, WE HAVE ENCLOSED A SERIAL NUMBER LIST OF IMPORTANT EQUIPMENT INSTALLED IN YOUR 2005XXXX#### THE SERIAL NUMBER FOR YOUR UNIT IS ######.***

VIN # XXXXXXXXXXXXXXXXX DECOR # XX5-### WOODCOLOR CHERRY

| CLIMATE SYSTEM | | SERIAL # |
|---|---|---|
| FRONT A/C | 030515.321 | 33087 |
| CENTER A/C | 030515.321 | 33088 |
| REAR A/C | | |
| DASH A/C | RV290875 | 6534 |
| FRONT FURN | 9F42 | 06950 |
| REAR FURN | | |
| AUX.HEATER | | |

| ENERGY MANAGEMENT SYSTEM | | |
|---|---|---|
| INVERTER | RV2012M | 00820172 |
| CONVERTER | | |
| GENERATOR | 042702 | 20570 |

| AUDIO/VIDEO/NAVIGATION | | |
|---|---|---|
| FRONT TV | 24PV300 | 60575 |
| REAR TV | 20F6100 | 72234 |
| TV #3 | | |
| EXT. TV | 4361270 | |

| AWNING | | |
|---|---|---|
| AWNING | 81SCP21 | 96064 |
| AWNING HOW | 8561001 | 351 |
| DOOR | 40368888 | 356 |
| WINDOW 1 | | |
| WINDOW 2 | | |
| WINDOW 3 | | |
| WINDOW 4 | | |
| WINDOW 5 | | |
| WINDOW 6 | | |

APPLIANCES

## Weighing the Unit

The following definitions are given to help in communication of issues of weight and your unit.

**GAWR:** Gross Axle Weight Rating is the maximum permissible weight for an axle.

**GCWR:** Gross Combination Weight Rating is the value specified by the manufacturer of the vehicle as the maximum allowable loaded weight of this motorhome and any towed trailer or towed vehicle.

**GVWR:** Gross Vehicle Weight Rating is the maximum permissible weight of this fully loaded motorhome. The GVWR is equal to or greater than the sum of the unloaded vehicle weight plus the cargo carrying capacity.

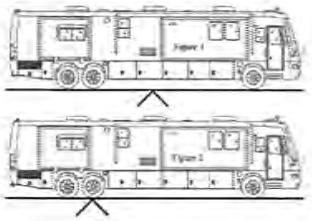
**UVW:** Unloaded Vehicle Weight is the weight of this motorhome as built at the factory with full fuel, engine oil, and coolants. The UVW does not include cargo, fresh water, propane gas, or dealer installed accessories.

**CCC:** Cargo Carrying Capacity is equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full Propane-Gas weight and SCWR.

**GVW:** Gross Vehicle Weight is the weight of the unit with all items and supplies that are loaded into the unit at any point in time.

**SCWR:** Sleeping Capacity Weight Rating is the manufacturer's designated number of sleeping positions multiplied by 154 pounds (70 kilograms).

NOTE: The sales literature may give approximates or standards. Each individual unit may weigh differently based on the factory and/or dealer options added. To assure the accuracy of your weights be sure the unit is always level during weighing. The unit has been built to comply with the component suppliers recommended limits and give you 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.



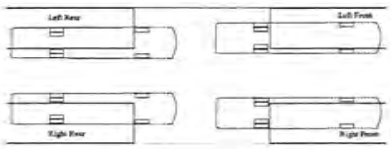
If you have questions as to what the weigh of the unit is after it has been loaded, take the unit to a drive-on scale or use individual wheel scales and verify that the weights are within the limits of those specified for the unit. When weighing the unit, follow these instructions. Failure to follow these instructions may give an erroneous weight reading.

1. Pull the unit onto the scales shown in Fig.1. This is the total weight of the unit. To do this, pull the unit onto the scales so that all of the wheels are on the scale. Record the weigh. This is the GVW and should not exceed the GVWR supplied by Newmar for the unit.

2. Move the unit so that the front wheels are off the scales as shown in Fig.2. Record the weight. This is the total weight of the unit except for the front axle. 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 (1). This amount should not exceed the listed front axle weight rating.

3. Move the unit so that the front wheels are off the scales as shown in Fig. 2. Record the weight. This is the total weight of the unit except for the front axle. This weight should not exceed the total rating of the axles remaining on the scales. The front axle weight is determined by subrtracting this weight from the GVW that was obtained in Step One (1). This amount should not exceed the listed front axle weight rating. The recommended procedure to weigh a motorhome accurately is on individual scales.

Since these are not always available, at right is a diagram of how to weigh a motorhome on a typical truck scale.



NOTE: 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 of weights.

## Weight Information

Below is a sample of a weight information label which may appear in your unit.

**MOTORHOME WEIGHT INFORMATION**

Newmar Serial Number XXXXXX VIN # XXXXXXXXXXXXXXXXX

GVWR (Gross Vehicle Weight Rating) is the maximum permissible weight of this fully loaded motorhome.

UVW (Unloaded Vehicle Weight) is the weight of this motorhome as built at the factory with full fuel, engine oil, and coolants.

SCWR (Sleeping Capacity Weight Rating) is the manufacturer's designated number of sleeping positions multiplied by 154 pounds (70 kilograms).

CCC (Cargo Carrying Capacity) is equal to GVWR minus each of the following: UVW, full fresh (potable) water weight (including water heater), full LP-Gas weight and SCWR.

**CARGO CARRYING CAPACITY (CCC) COMPUTATION**

| | pounds (kilograms) |
|---|---|
| GVWR | XXXXX (XXXX) |
| minus UVW | XXXXX (XXXX) |
| minus fresh water of 85 gallons @ 8.3 lb/gal | XXX (XXX) |
| minus LP-Gas weight of 32 gallons @4.2 lb/gal | XXX (XX) |
| minus SCWR of 2 persons @ 154 lb / person | XXX (XXX) |
| CCC for this motorhome* | XXX (XX) |

*Dealer installed equipment and towed vehicle tongue weight will reduce CCC

WARNING: CONSULT OWNER MANUAL(S) FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES INCLUDING AUXILIARY BRAKE REQUIREMENTS FOR ANY TOWED TRAILER OR TOWED VEHICLE.

# GENERAL TIRE INFORMATION

## Tire Nomenclature

It is important to locate and read all the information located on the sidewall of your tires to insure proper use and long, safe life. The two primary areas of concern are the tire size information, and the operation/inflation information.

## Tire inflation information

The sidewall of the tire also contains an information block that contains more detailed construction information (number of plys, etc.), and inflation and carrying capacity information. Failure to follow and monitor tire pressure guidelines closely can result in premature tire failure.

## Tire Size

The tire size is given in the following markings:

1. This tire size is 315/80R 22.5. From the size, we can determine the physical dimensions of the tire, as well as its basic construction. The tire size breaks down like this:

   - The first number, (315), is the section width of the tire in millimeters. Section width is the measurement of the tire from outside sidewalls to outside sidewall.
   - The second number is the height of the sidewall, expressed as a percentage of the section width. In this case, the number is (80), so the sidewall height is 80% of the section width of the tire.
   - 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 in the size designation is (225), which is the rim size the tire was designed to fit. This tire fits a 22.5" diameter wheel.

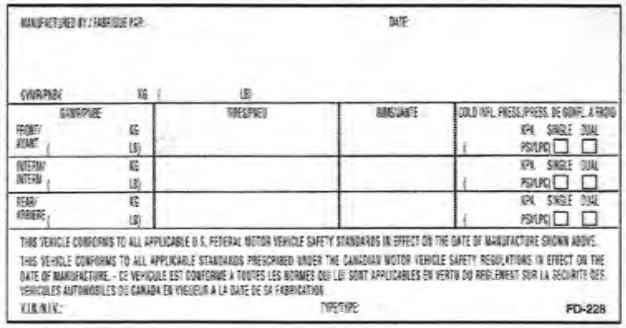
   The sidewall of the tire also contains other information that is important to know to insure proper use of the tire, as well as to maintain long life. Take the time to become familiar with the size, load rating, and pressure information noted on the sidewalls of the tires, and note that these readings can change depending on whether they are used in single tire or "dual" tire situations.

# Important RV tire information

READ AND UNDERSTAND THE FOLLOWING INFORMATION BEFORE TAKING YOUR FIRST TRIP IN YOUR RV!

## WARNING

Routine maintenance on your RV is important, but it cannot be overstated just how critical proper tire maintenance is to the safety, operation, and durability of your new unit. To insure your tires are operating safely, regular inspection of your tires, and checking of tire pressures is absolutely mandatory. FAILURE TO FOLLOW PROPER INFLATION GUIDELINES MAY RESULT IN TIRE FAILURE, WHICH, UNDER CERTAIN CIRCUMSTANCE CAN CAUSE LOSS OF VEHICLE CONTROL OR ACCIDENTS THAT MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, AND / OR DEATH. 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 that is affixed to the interior wall just behind the driver's seat in motorhomes, and to the lower front corner of the road side sidewall on fifth wheel trailers. Below is a sample of the Federal ID Tag you will find with your RV. IT IS PARAMOUNT TO THE SAFE OPERATION OF THE VEHICLE TO MAINTAIN PROPER TIRE PRESSURES. TIRE PRESSURES SHOULD BE CHECKED AND ADJUSTED BEFORE AND AFTER EACH TRIP, AND SHOULD ALWAYS BE CHECKED AND ADJUSTED WITH THE TIRES COLD. NEVER ADD OR RELEASE PRESSURE FROM THE TIRES WHEN THEY ARE HOT (AFTER HAVING DRIVEN A MILE OR MORE).



MANUFACTURED BY / FABRIQUE PAR: DATE:

GVWR/PNBV: KG ( LB)

| GAWR/PNBE | | TIRES/PNEU | RIMS/JANTE | COLD INFL. PRESS./PRESS. DE GONFL. A FROID |
|---|---|---|---|---|
| FRONT/ AVANT | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |
| INTERIM/ INTERM | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |
| REAR/ ARRIERE | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE. - CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION.

K.I.N./N.I.V.: TYPE/TYPE: FD-228

For additional information on your tires, contact Newmar Corporation.

Chapter 2

# GENERAL & SAFETY INFORMATION

# DRIVING AND SAFETY INFORMATION

**WARNING**

Prior to driving your vehicle, be sure you have read this entire owner's guide and that you understand your vehicle's equipment completely and how to use the equipment safely.

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 motorhome. Listed below are some safety precautions that must be adhered to while your motorhome 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.

## Before Driving Away

The following is a brief list of procedures that will aid in your driving safety and extend your equipment's life.

1. Windows, mirrors, and light lenses are to be clean and unobstructed.
2. Tires should be checked for proper cold inflation pressure.
3. Wheel lug nuts should be checked for proper tightness.
4. Fluid levels, including engine oil, transmission fluid, coolant, power steering fluid, and windshield washer solvent, should be checked and filled if necessary.
5. Disconnect the unit and store the sewer and water supply hoses as well as shoreline power cords.
6. Secure all cargo in the storage compartments in the event of a sudden stop.
7. Verify that the entrance step has retracted prior to engine ignition.

## Driving

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 rear view mirrors.

The dashboard may contain several gauges and controls you have not previously used. Become familiar with all of these devices and their operation before starting out.

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.

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.

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. 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. Please refer to your chassis manual for related information.

## DASH INSTRUMENTATION AND CONTROLS

The dash in your new London Aire is designed to be ergonomically efficient as well as aesthetically pleasing. It features instrumentation that allows you to monitor the engine, chassis, and power train as you drive. Warning and status lights alert you to conditions that require your attention, and switches, buttons, and accessories are positioned at your fingertips. All dash gauges are "back-lit" for enhanced visibility during night driving. The gauges are arranged as follows:


### Left Cluster

**Voltage:** Displays DC voltage at the chassis battery terminals. Note that some variation in the readings on this gauge is normal. With the ignition key in the "run" position, but the engine shut off, it will read chassis battery voltage. If the engine is running, the voltage displayed reflects the DC voltage being supplied by the engine alternator as measured at the chassis batteries.

**Fuel:** Displays the approximate level of fuel left as a fraction of a tank ("Full", "3/4", "1/2", "1/4", and "Empty"). Note that accuracy of this gauge is greatly influenced by motion of the unit, or sloped terrain. The readings are an approximation of the remaining fuel in the tank.

**Front Air Tank:** Displays the air pressure in the front air tank. The normal operating range for this air system is 90 – 125 PSI. Air from the engine mounted compressor fills the tank when the engine is running. The air is used to inflate air suspension bags, and to operate the air brakes on your Essex, as well as any other air powered accessories.

**Rear Air Tank:** Displays the air pressure in the rear air tank. The normal operating range for this air system is 90 – 125 PSI. Air from the engine mounted compressor fills the tank when the engine is running. The air is used to inflate air suspension bags, and to operate the air brakes on your Essex, as well as any other air powered accessories.

### Center Cluster

**Speedometer:** Reads vehicle speed in miles per hour / kilometers per hour.

**Odometer:** Cumulative miles on your London Aire are displayed on the screen located at the bottom of the speedometer. This electronic digital display allows for easy reading. The odometer also incorporates two separate "trip" odometers, which can be reset to "0" using the button at the bottom of the display. This feature is useful for reference mileages when measuring fuel economy or trip distances.

## Right Cluster

**Tachometer:** Displays engine RPM's (Revolutions Per Minute) when running.

**Oil Pressure:** Displays engine oil pressure in PSI (Pounds per Square Inch). Oil pressure will vary widely with engine temperature and engine operating RPM's.

**Temperature:** Displays engine operating temperature. Normal operating temperatures are 180 – 220 degrees, depending on how the coach is being used. Towing heavy loads, or operating in the mountains will cause the engine temperature to run higher.

## Jacks Down Warning Light

This light, located under the speedometer, illuminates when the ignition switch is on and the hydraulic leveling jacks are in the "down" position. This light, and the accompanying warning alarm, serve as a reminder to raise and store the jacks prior to departure. The light and alarm will continue until all of the jacks have returned to their "stored" position or unit air system has been replenished.

## Chassis Warning Lights

The Spartan Chassis Information is located below the main instrument clusters. Through the electronic display, and a series of warning and indicator lights, it provides information critical to the driver regarding the operating status of the power train and chassis.

Indicators are color coded to aid the driver in quick diagnosis of a given situation. **Green** lights indicate a normal operation

| Indicator | Meaning | Action To Take |
|---|---|---|
| Left Turn | Left turn signals are flashing. | |
| Park Brake | The parking brake is applied. | |
| Cruise Control | The cruise control is engaged. | |
| High Beam | The high beams are on. | |
| Auxiliary Brake | The auxiliary brake is applied. | |
| Seat Belt Reminder | Buckle Up! | |
| Low Fuel | Fuel level is below 1/8 tank. | |
| Right Turn | Right turn signals are flashing. | |
| Check Transmission | Unknown transmission problem has been detected. | Service the vehicle. |
| Transmission Temperature | The transmission has overheated. | Pull over and stop engine as soon as it is safe. |
| Anti-Skid Brake | Problem detected in ABS | Service the vehicle. |
| Water In Fuel | The fuel/water separator is full. | Service the vehicle. |
| Wait to Start | Wait to start engine. | Do not start engine while this telltale is on. |
| Maintenance | Scheduled maintenance is due. | Service the vehicle. |
| Check Engine | An unknown engine problem has been detected. | Service the vehicle as soon as possible |
| Stop Engine | A potentially serious engine problem has been detected. | Pull over and stop the engine as soon as it is safe. |

(turn signal indicators, or cruise control indicator for example). These are status lights, and do not require attention to a problem. Rather, they indicate monitored system or feature is currently operating or in use.

**Yellow** lights are indications of an abnormal condition or occurrence that requires your attention. It is not indicative of an emergency, or eminent failure. Rather, it means something the system monitors is outside it's normal operating parameters, and should be inspected or repaired soon.

**Red** lights require immediate attention, and the vehicle should not be operated until the condition is corrected.

## Spartan Chassis Information Center

Below the dash instrument cluster is the Spartan Chassis Information Center. This display provides additional operating, convenience, and diagnostic information regarding the operation of your unit. It includes the vehicle mileage odometer, as well as two re-settable "trip" odometers, a trip computer featuring MPG readings and "distance to empty" range assessments. In addition, the display will also indicate any active fault codes or warnings in the system. The arrow buttons are used to scroll through the screens and functions of the system. Trouble codes and faults may occur on occasion. Should these occur, have your unit serviced promptly by an authorized Spartan Service Center

## Antennae Up Warning Light

This light will illuminate when the television antennae (NOT the DSS satellite dish) is in the extended position. It will turn off when the TV antennae is retracted completely into the "travel" position. There is no accompanying alarm with this warning light.

## Spartan Smart Wheel (w/Power Pedal controls)

The Spartan "Smart Wheel" offers a touch pad switch panel that allows you to operate a number of different driver related functions without ever having to take your hands off of the steering wheel. It offers fingertip control of wipers, washers, headlamps.

On the sides of the Smart Wheel hub are four paddle style switches (indicated by arrows on photo). These switches control the tilt and telescope position of the steering column, and the position of the brake and throttle pedals. The first switch (upper left) tilts the steering column up and down to allow for easy access to the driver's seat, while still allowing the driver to position the wheel for comfort and an excellent view of the instruments. The lower left switch has no function.

The upper right paddle switch allows the driver to telescope the steering wheel position in or out, again to provide for greater comfort and an unimpaired view of the gauges.

The lower right paddle switch moves the brake and throttle pedals under the dash. This allows for greater flexibility in seating position, as well as improved individual access to the pedals.

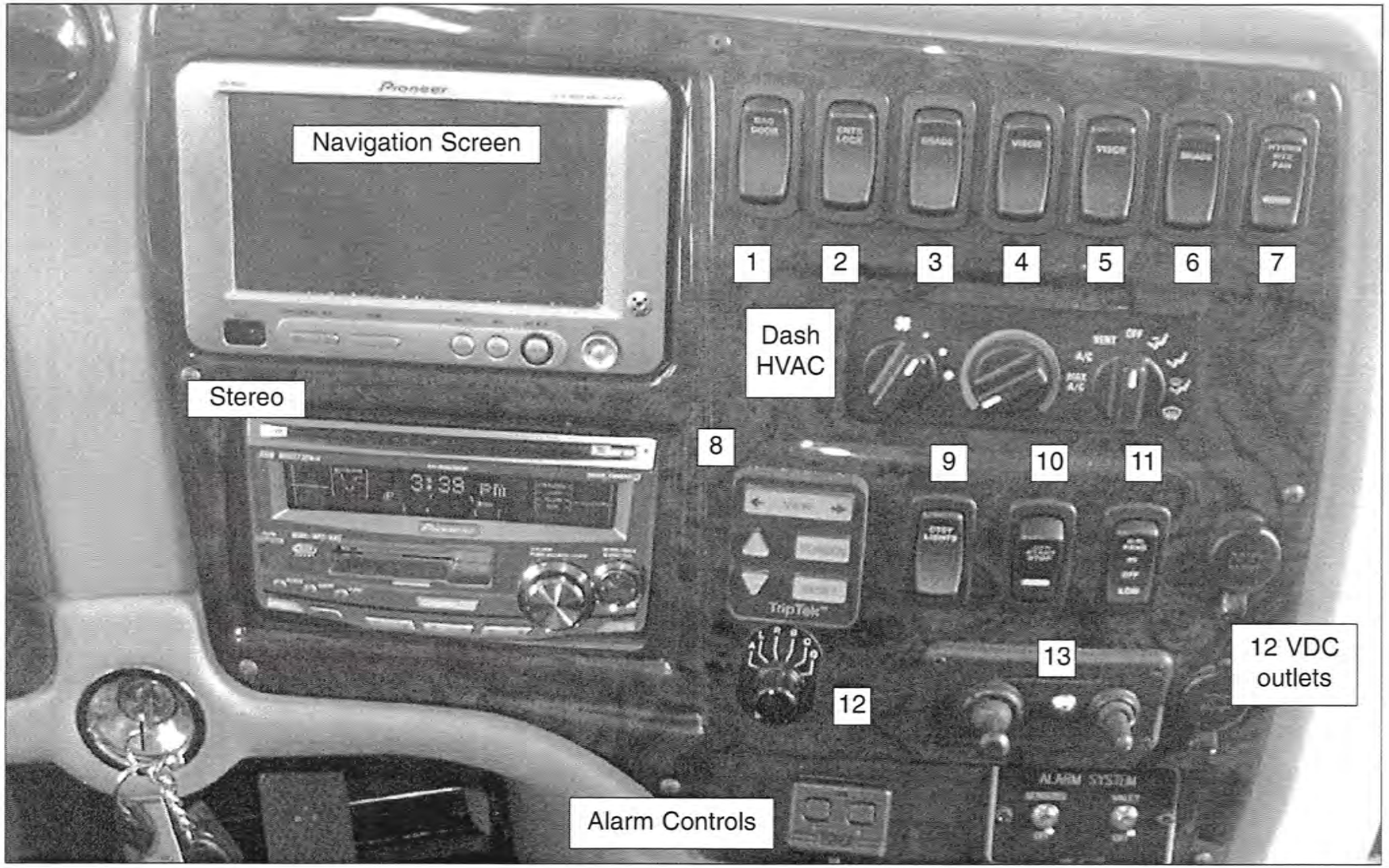
## DASH SWITCHES

To ease operation of the various accessories and systems used during travel, the "cockpit" area has been designed to put controls and switches within easy reach of the driver. The following is a description of the switches and their functions.

### Right Side Switch Panel

**Navigation Screen:** Displays navigation information provided by the on-board Pioneer navigation system.

1. Baggage Doors (operates the locks on all exterior baggage doors).
2. Entr(ance) Lock (locks and unlocks the entrance door).
3. Shade (raises and lowers the drivers side window shade).
4. Visor (operates the driver side windshield sun visor).
5. Visor (operates passenger side windshield sun visor).
6. Shade (operates passenger side window sun shade).
7. Hydrn. Htr. Fan (operates the fan for the dash heater when using the hydronic heating system in the LADB).
8. Trip Tek Control Panel (controls the Trip Tek engine monitoring system. This system is used for engine monitoring and diagnosis of certain problems. The Trip Tek monitoring system displays on the "pop-up" rear vision monitor located on top of the dash).
9. CTSY Lights (Operates the courtesy lights that are distributed throughout the unit. The courtesy lights are located close to the floor throughout the unitswitch)
10. Start / Stop (pre-heats, starts, and stops the genset).
11. OH Fans Hi/Off/Low (operates the fans in the fans in the front overhead cabinet to circulate air across the windshield).
12. Camera Selector (allows you to manually select which camera you want displayed on the rear vision system).
13. Spotlight Control Panel (swivels, tilts, and operates the roof mounted spotlight for improved night time vision).
14. Alarm Controls operate the different features of the alarm system. The left set consists of two push buttons that control. The switch panel on the right allows you to arm and disarm the interior sensors, and to put the alarm system in "Valet" mode.




**Right Side Switch Panel**

## Left Side Switch Panel

1. Eaton Vorad "Smart Cruise" control panel operates the Eaton Vorad "Smart Cruise" system; left knob adjusts the volume of the tones. Right knob adjusts following distance to the vehicle in front of you.Detailed operation instructions are located in the Eaton Vorad Owners Guide, as well as on any accompanying video for this guide.

2. Exterior Rear View Mirror / Seat Memory control panel contains the controls to remotely position the exterior rear view mirrors for optimum viewing. The red rocker switch also turns on heat for the exterior rear view mirrors for operation in adverse weather conditions. The "memory" functions allow you to program the mirrors positions, drivers seat positions, seat pedal positions, and the steering wheel tilt and telescope positions for up to three individual drivers. To store a group of settings in the memory, press the "SET" button, followed by the numbered button you desire to use for that setting. When activated, the seat, pedals, steering wheel, and mirrors will return to the desired settings.

3. Switch "Blank" blank switch for accessory installation.

4. Docking Lights operates exterior "docking" lights to aid in seeing all around the perimeter of the unit while parking at night.

5. Air Horn selects between the roof mounted air horns and the conventional automotive style horns mounted behind the front cap.

6. Battery Boost Switch temporarily ties the house and chassis batteries together when pressed to allow for more voltage and amperage when trying to start the vehicle.

7. Fog Lights operates the factory installed fog lamps in the front of the unit.

8. Headlamp Switch operates the headlamps and clearance lamps.

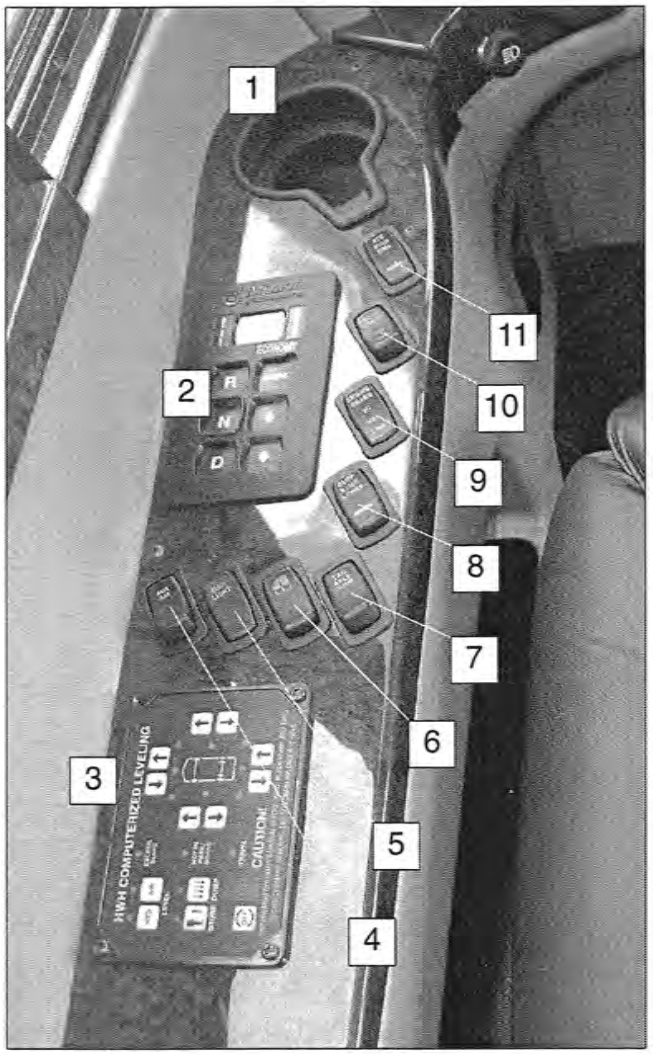
9. Dash Light Dimmer adjusts the brightness of the dash and instrumentation lighting.

10. Parking Brake Release is used to set and release the parking brake system on the RV. Drivers Side Console Switches.


**Left Side Switch Panel**

## Driver Side Console Switch

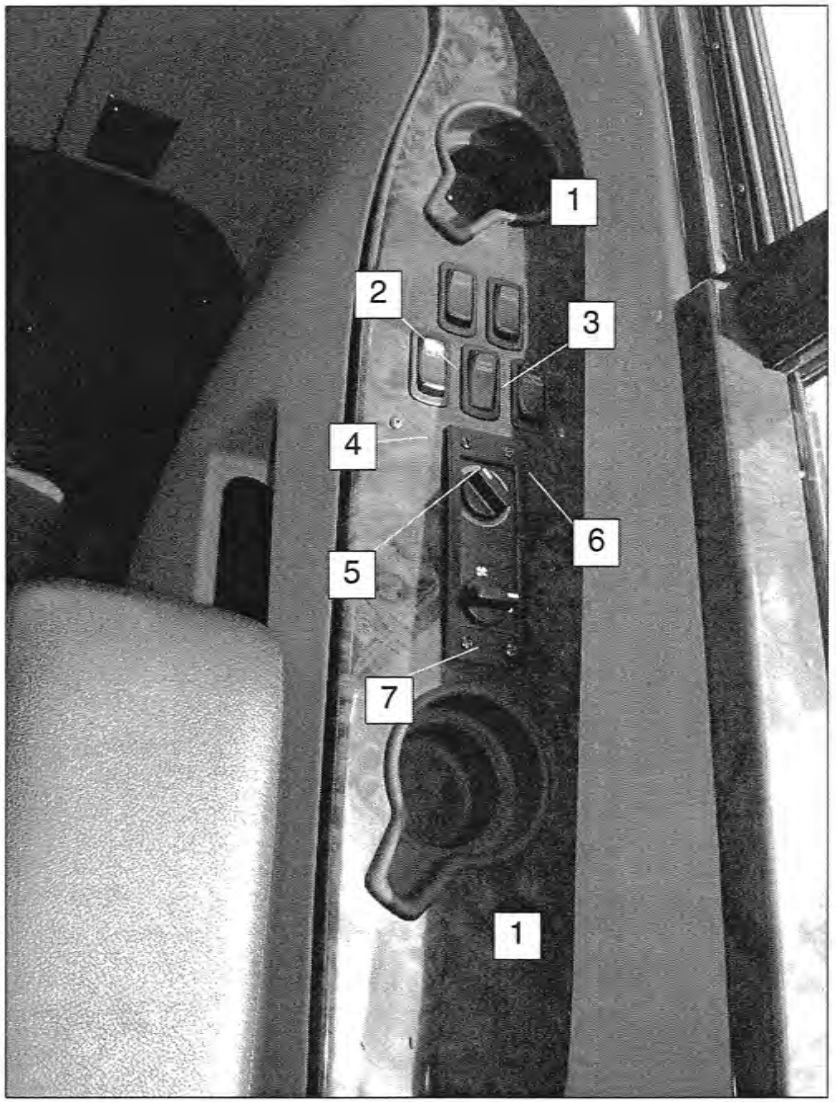
1. Cup Holder
2. Allison Transmission Touch Pad (additional information provided elsewhere in this chapter).
3. HWH Level System Control Pad operates the hydraulic and air leveling systems.
4. Aux Air Switch operates the auxiliary compressor used for inflating seals, air suspension, as well as other pneumatic accessories.
5. Map Light Switch activates drivers side overhead map light.
6. Drivers Power Window Switch (operates drivers side power window).
7. Tag Axle Dump (bleeds the air out of the tag axle suspension to place more weight on the drive axle tires for improved traction in slippery conditions).
8. Suspension Raise/Lower Switch (may be deleted on units with Hadley air leveling system).
9. Engine Brake selects the level of engine braking desired; Low, Medium, or High modes.
10. Engine Brake turns the engine braking system on and off.
11. ATC (Automatic Traction Control) Overide disengage switch.




**Driver Side Console Switch**

## Passenger Side Console Switch

1. Cupholders
2. Power Visor operates passenger side front sun visor.
3. Power Shade operates passenger side power sun shade.
4. Passenger Side Power Window raises and lowers passenger side window.
5. Map Light (operates passenger side map light).
6. Work Station switch raises and lowers the work station located in the passenger side front dash.
7. Passenger Side HVAC Control Panel allows passenger to tailor the dash HVAC to their comfort.




**Passenger Side Console Switch**

## Seat Memory

Your London Aire is equipped with a "Seat Memory" package that allows you to set and store up three different combinations of seat, steering wheel, pedal, and exterior rear view mirror positions for up to three different drivers.

To program a driving position, position the seat, the pedals, steering wheel and exterior rear view mirrors so they are set for travel. Press and hold "Set", then press and release either the #1, #2, or #3 button. The position of each of those components is now stored in the memory. Any time you turn the ignition on and press the number button chosen, the seat, pedals, steering wheel, and exterior rear view mirrors will return to this preset position.

The "Memory" feature is integrated into the exterior mirror control panel on the left side of the instrument cluster.

## Power Seat Operation

The driver and passenger front seats are mounted on power pedestals that offers a wide range of adjustments. The center "joystick" switch moves the seat horizontally and vertically. The front rocker switch tilts the front of the seat up and down. The first rocker switch aft of the "joystick" switch controls the tilt of the rear of the seat base.

Additional switches control the recline angle of the seat back, and the inflatable "lumbar" support in the lower back region of the seat back.

A release lever allows the seats to rotate on the pedestal, allowing the seats to face into the living area.

## Rear Vision System

Your London Aire is equipped with a standard Rear Vision system. This closed circuit television system features a camera mounted on the top of the rear cap that is connected to the Pioneer 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. 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 and Side View Cameras

The rear vision system in your unit is 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 unit. If the rear vision monitor is turned on manually, you can toggle through the cameras by using the "source" button, allowing you to stay on any given camera that you chose.

A variety of other cameras are included in this system on the London Aire, including one at the entrance door, in the front living area of the unit (just below the TV, facing backward), and high mounted on the sides of the unit. All of these cameras combine to give you an unprecedented level of security and safety by providing thorough coverage of the interior and exterior of your unit.

The cameras are tied together and can be viewed from a variety of sources. The dash mounted rear vision monitor / Trip Tek display is the first location for viewing these cameras. You can select between the cameras for the view you desire by using the "Camera Select" knob on the right side drivers switch panel. They can also be monitored on the "E-Plex" display. The cameras will be shown in sets, and you can select one to view by simply touching the screen on the view you desire. Touch the screen again to return to the multi screen view.

## Trip Tek Monitoring System

Available as an option on your London Aire is the Trip Tek Monitoring system. This system uses the rear vision monitor panel to display information regarding engine and power train use and maintenance, generator use and maintenance, and trip information. By using the Trip Tek control panel (located above the in dash radio), you can scroll through the various menus on the rear vision monitor screen to select the information you seek, and to program and reset service interval reminders.

For detailed operating instructions, please refer to the Trip Tek operators guide supplied with your new London Aire.

## Pioneer In-Dash Stereo

Your London Aire features a Pioneer AM/FM/CD in-dash stereo. This stereo plays through separate speakers from the other audio – video equipment in your coach. This radio features up to 18 radio presets, a variety of tone controls, and a CD player. It is also XM satellite radio capable, and also controls the standard 6 CD changer (stereo picture on page 2:9).

To operate the stereo, press the "Source" button in the upper left hand corner of the radio face. Pressing the source button once turns the stereo on playing the last mode selected (AM, FM, CD, etc.). Use the "Source" button to alternate between music sources.

For detailed operating instructions on your Pioneer stereo, please refer to the manufacturer's information provided with your unit. XM satellite radio is available by contacting the XM provider directly. A monthly fee is involved to subscribe.

## CD Changer

A six disc CD changer is standard in the London Aire. It is designed to work with your factory mounted Pioneer in dash stereo. Use the "Source" button on the face of the Pioneer stereo to select the CD changer, then use the controls and display on the face of the stereo to select the disc and song you want to hear.

## Pioneer Navigation System

Your London Aire is equipped with the Pioneer GPS based Navigation system. This system uses a DVD ROM drive and GPS technology to guide you through maps and information for traveling assistance. It features voice prompts, and touch screen technology to make scrolling through the menus and getting information incredibly easy.

To begin operation, simply turn on the system and follow the simple commands that appear on the screen. Detailed manufacturers instructions are included with your London Aire literature.

## DC Power Point Receptacles

At the bottom of the center section of the dash are a pair of DC "Power Point" receptacles. These allow you to plug in a variety of 12 volt DC accessories, including cell phone battery chargers, camera battery chargers, and so on. These are fused at 20 amps.

## Solar Panel Indicator

Your London Aire is equipped with a solar panel which charges the chassis batteries when exposed to sunlight. On the dash is a red LED charge indicator to show when the system is charging the batteries. It is important to note that the system may not indicate a charge any time it is exposed to sunlight. The built in "regulator" will only allow the system to charge the chassis batteries when their voltage is low. The system will charge at the following rate:
For example, if the chassis batteries are above 12.7 VDC the solar panel indicator will not glow to indicate the system is charging.

## Transmission Shift Selector

The Allison Transmission control pad is located to the left of the driver on the switch panel. The shift selector allows you to shift the transmission into any one of six forward gears, or reverse. Additionally, it allows you to select an operating mode based on your particular driving style, or driving conditions.

When the transmission has reached normal operating temperature, (above 180 degrees) the transmission shift selector can be used to check the transmission fluid level. Press the up and down arrows simultaneously, and the display will either say "Trans OK", or it will display a number. The number displayed is the amount of quarts that need to be added to the transmission.

The Allison Transmission features an "Economy" mode selection which reprograms the transmission shift points to a lower RPM, saving fuel by revving the engine less.

## SAFETY PRECAUTIONS

Seats equipped with seat belts are the only ones to be used while the vehicle is in motion. While the vehicle is in motion, all seats should be locked in the forward facing position. Passengers should never be allowed to stand or kneel on seats in a moving vehicle. All passengers must have seat belts fastened in a low and snug position so that the force exerted by the belt in a collision will be spread across the hip area. Pregnant women should wear the lap-shoulder belt, with the lap belt portion worn low and snug.

**WARNING**

Portable fuel-burning equipment, including wood and charcoal grills and stoves, shall not be used inside the recreational vehicle. The use of this equipment inside the recreational vehicle may cause fires and/or asphyxiation.

The fire extinguisher should be inspected monthly for proper charge and operating condition. The smoke alarm should also be tested on a regular basis. The label on the detector should be removed when preparing the unit for the first trip. In addition to the recommended inspection, these should also be checked prior to a vacation or extended trip.

Sleeping facilities are not to be used while the vehicle is in motion. Become familiar with the operation of the escape window, but use this window strictly as an emergency exit.

## Event Data Recorder

Your London Aire includes a device known as an "Event Data Recorder". The Eaton Vorad Smart Cruise System, supplied by Eaton, is represented to Newmar that it's system is capable of recording the following:

1. Speed
2. Turn signal input
3. Brake input
4. Vehicle yaw rate
5. Traffic data up to 500 feet in front
6. Traffic data up to 12 feet each side

## Emergency Exit Window

In the bedroom of you unit, there is an emergency exit (egress) window. This window is designed to be used as an additional exit in emergency situations. It can be easily identified by the red color of the handle and the red "EXIT" label. To open the egress window, lift the handle and push outward on the window. The window can be closed by pulling the window closed and lowering the handle to the down or locked position.

# FIRE SAFETY

The possibility of fire exists in all areas of life, and the recreational life-style is no exception. Recreational vehicles are complex machines. They are made up of many materials, some of which are flammable. Like most hazards, the possibility of fire can be minimized, if not totally eliminated. This is done 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.

## Fire Extinguisher

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. 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.

Fire extinguishers are mechanical, pressurized devices. Care must be exercised when they are handled. They must be maintained as the operator's manual instructs for proper and safe operation. 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. Doing this will cause a loss of pressure.

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.

**IMPORTANT**

NEVER spray any type of aerosol or cleaner directly onto or into the Propane, CO, and Smoke detectors. Spraying any type of material into the opening on any of these detectors can render them useless, and would not be covered by the manufacturers warranty.

## CO Detector

Carbon Monoxide is a colorless, odorless gas that is manufactured during the burning of fossil fuels. The CO detector is located on the ceiling of your unit. It is operated with a 9 volt DC battery, and alarms any time carbon monoxide levels beyond the normal range are detected. It should be tested before every trip, and any time the coach has been in storage. If the alarm sounds, open windows and vents to allow any carbon monoxide that has built up to dissipate, and evacuate the vehicle until the alarm has stopped. The CO detector can be cleaned by vacuuming the openings in the side of the case.

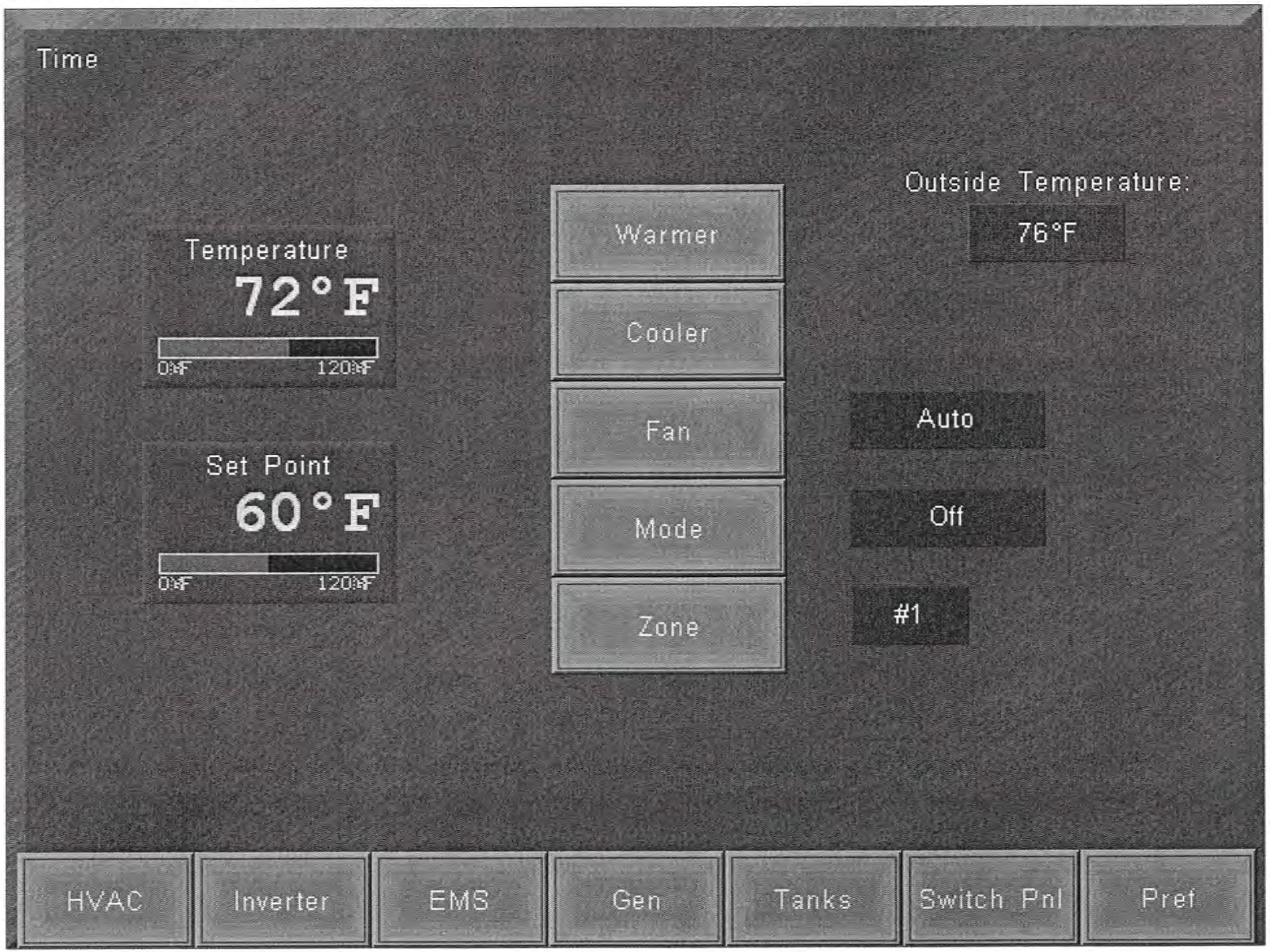
## Smoke Detector

The battery powered 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. Test the smoke detector after the unit has been in storage, before each trip, and at least once a week during use. 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. The battery should be replaced once a year or when the low battery signal sounds.

Chapter 3

# HVAC, APPLIANCES & ACCESSORIES

## LONDON AIRE MULTIPLEX CONTROL



# LONDON AIRE MULTIPLEX CONTROL USERS MANUAL

## Introduction

The Multiplex control system consists of one major component and many sub-components. The major component is known as the "Clock". It houses the micro-processor control, a touch screen operator interface with alpha-numeric display, and the multiplexing communications bus.

The clock microprocessor control along with the program memory performs the actual command and control processes for the system.

The remainder of the Multiplex control system consists of control, monitoring, display, and combination modules that are connected to the multiplexing bus. These modules execute the control commands from the clock and report their status back to the clock, as well as to the other modules on the network.

The **control modules** are used to turn on and off various devices, like water pumps, lights, etc.

The **monitoring modules** are used to report the status of environmental and mechanical conditions such as air temperature, tank levels, electrical loads, on or off statuses, etc.

The **display modules** are the various touch screen displays that are available with the Multiplex system.

The combination modules are just as the name implies. They combine certain functions of the various modules into a single module. There are combination modules such as the dual relay input module that combines two relay outputs for on / off control with four inputs for status monitoring. There are also combination modules that are made up of touch screen push button control with a small display window such as the tank bay display panel.

## Normal Operation

During normal operation the user will be operating either the system clock or one of the touch screen display modules.

The clock and touch screen controls have many different operations screens which can be selected by pressing the various buttons surrounding the display window on the clock or on the touch screen display. The clock screens are made up of six main categories. The categories include Inverter Control, Energy Management, Tank Status, Climate Control, Auto Generator Control, and Screen Lighting as shown on the clock face overlay. *See the following example of the system clock face:*

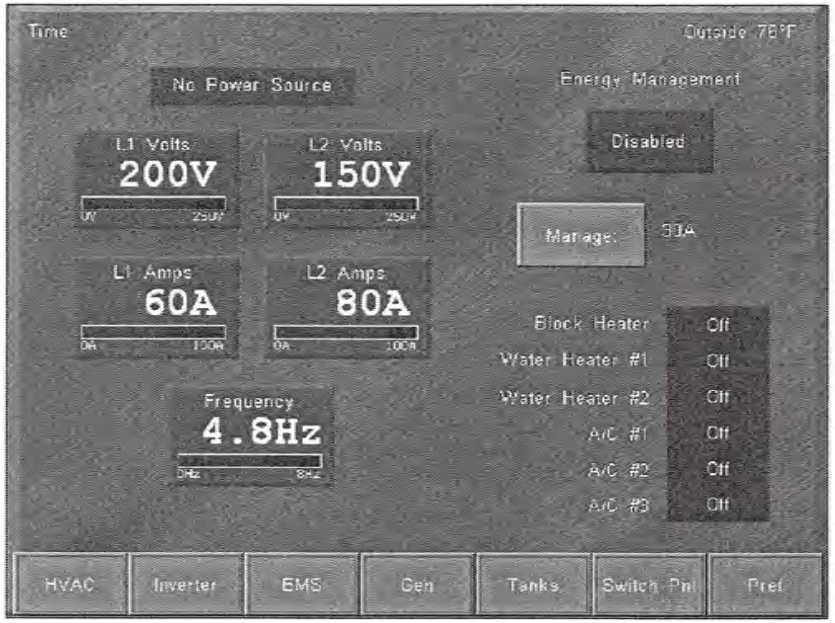
## Clock Face


The clock face consists of two sections, the "Display" section and the "Button" section. The "Display" section displays the status of the control functions, and the "Button" section which surrounds the "Display" section contains the buttons that select the settings for the control functions.

Notice that the "Button" section has the buttons grouped into the six previously mentioned control categories. All of the user controlled system functions can be accessed from the "Button" section.

## TOUCH SCREEN CONTROL FUNCTIONS

### Typical Control Screen

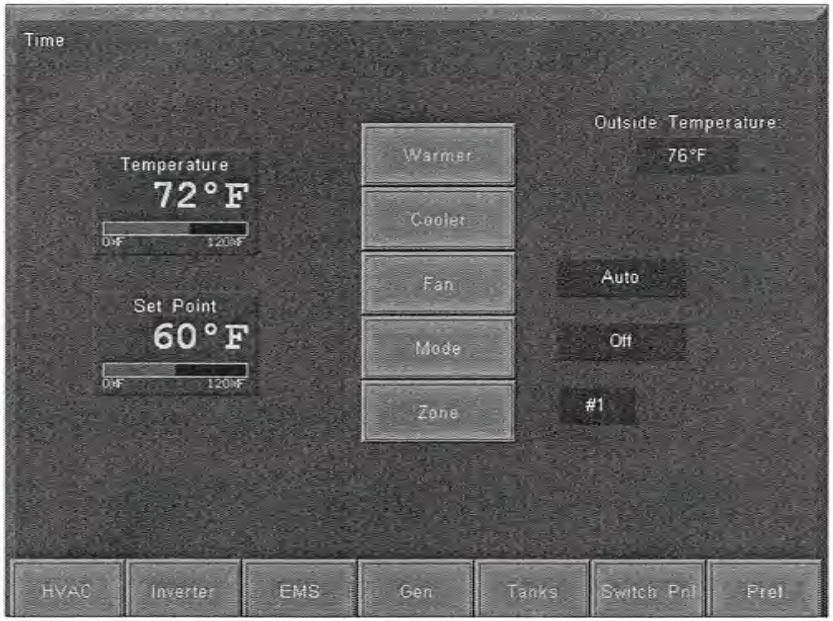



The "Touch Screen" control screen is exactly as the name implies. It is capable of controlling the Multiplex system via the several screens that can be selected by touching the various buttons located directly across the bottom of the screen.

There are seven major screens, also referred to as pages that represent the grouped functions. These pages are "HVAC" (Climate Control), "Inverter" (Inverter Control), "EMS" (Energy Management System), "Gen" (Generator Control), "Tanks" (Tanks Status), "Switch Pnl" (Switch Panel) and "Pref" (User Screen Preferences), and can be selected by pressing the labeled buttons across the bottom of the screen.

All of the pages display the system date, time, and outside temperature across the top of the screen.

### Climate Control (HVAC Screen)




The "HVAC" page functions the same as the previously described clock "Climate Control" page. It is comprised of temperature status displays and seven grouped buttons that allow user control of the HVAC functions.

## All On

If the Zones are set to the All Zones Off condition, pressing the "All On" button turns "All Zones On" and returns the Mode settings to their previous state.

## All Off

Pressing the "All Off" button will turn All Zones Off.

## Warmer

Pressing the "WARMER" button will increment the temperature set point up one degree at a time for the currently selected Zone. The Temperature settings are written to non-volatile (Flash) memory twenty seconds after selection.

***User Selectable Settings***

WARMER: - Increases the Zone temperature set point.

## Cooler

Pressing the "COOLER" button will decrement the temperature set point down one degree at a time for the currently selected Zone. The Temperature settings are written to non-volatile (Flash) memory twenty seconds after selection.

***User Selectable Settings***

COOLER: - Decreases the Zone temperature set point.

## Fan

Pressing the "FAN" button will toggle between the Fan settings for the currently selected Zone. The Fan settings are written to non-volatile (Flash) memory twenty seconds after selection.

***User Selectable Settings***

FAN: AUTO, LOW, or HIGH

## Mode

Pressing the "MODE" button will toggle through the Mode settings for the currently selected Zone. Not all Modes are available for every Zone. The Mode settings are written to non-volatile (Flash) memory twenty seconds after selection.

***User Selectable Settings***

MODE: OFF, FAN ONLY, COOL, HEAT PUMP, or FURNACE.

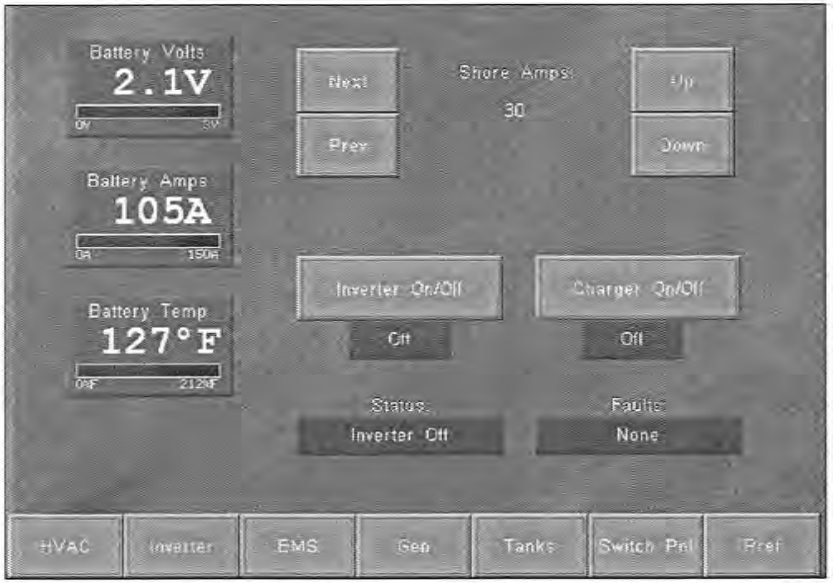
## Zone

Pressing the "Zone" button will toggle through the available HVAC Zones.

***User Selectable Settings***

ZONE: 1-4 (Not all Zones may be available depending on the number of AC units).

## Inverter Control (Inverter Screen)




The "Inverter" page functions similar to the clock "Inverter Control" grouped functions. It is comprised of battery and inverter/converter status and faults displays and the control buttons for the inverter/converter and the battery charger functions.

### Inverter Off/On

Pressing the screen button labeled "Inverter Off / On" will toggle inverter control functions on and off.

***User Selectable Settings***

INVERTER ON/OFF: Controls the inverter-charger that "inverts" the 12VDC coach battery power to 120VAC. This 120VAC power can be used to power various appliances throughout the coach.

### Charger Off/On

Pressing the screen button labeled "Charger Off / On" will toggle the charger control functions on and off.

***User Selectable Settings***

CHARGER ON/OFF: Controls the battery charger function that "charges" the 12VDC coach batteries.

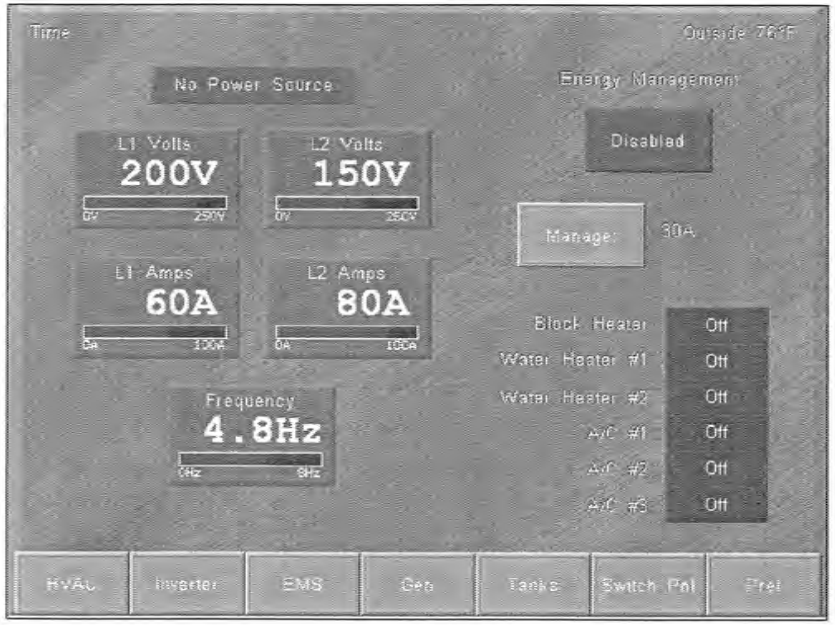
### Next / Prev Up/Down

Pressing the screen buttons labeled "Next" and "Prev" will toggle between the Shore Amp capacity, Search Watts, Battery Type, Battery Size (AH), Charge Amps %, Battery Cutoff (V), VAC Cutoff (V), Equalize, and Battery Low Level settings. The "Up" and "Down" buttons will toggle through the various settings for each of the previously mentioned functions.

***User Selectable Settings***

SHORE AMPS: 50, 30, 20, 15, and 5 Amp Service
SEARCH WATTS: 50, 30, 20, 15, and 5 Watts Capacity
BATTERY TYPE: 1 (Lead Acid), 2 (Gel Cell), and 3 (AGM)
BATTERY SIZE: 200, 400, 600, 800, or 1000 AH
CHARGE AMPS: 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100%
BATTERY CUTOFF: Minimum Voltage level that will keep the DC battery power active.
VAC CUTOFF: Minimum Voltage level that will keep the AC power active.
EQUALIZER: Battery Equalization mode.
BATTERY LOW LEVEL: Set point at which the battery voltage level will initiate automatic generator start in order to recharge the batteries.

## EMS (Energy Management System Screen)




The "EMS" page displays the status of many of the various 120VAC electrical loads and Shore or Generator Power. This page displays the source of the 120VAC power (shore / generator) as well as the voltage and current draw on each power leg. It will also display the frequency of the AC power. This page will also display the status of the Load Shedding as determined by the Load Management function if the function is enabled.

### Load Management Function

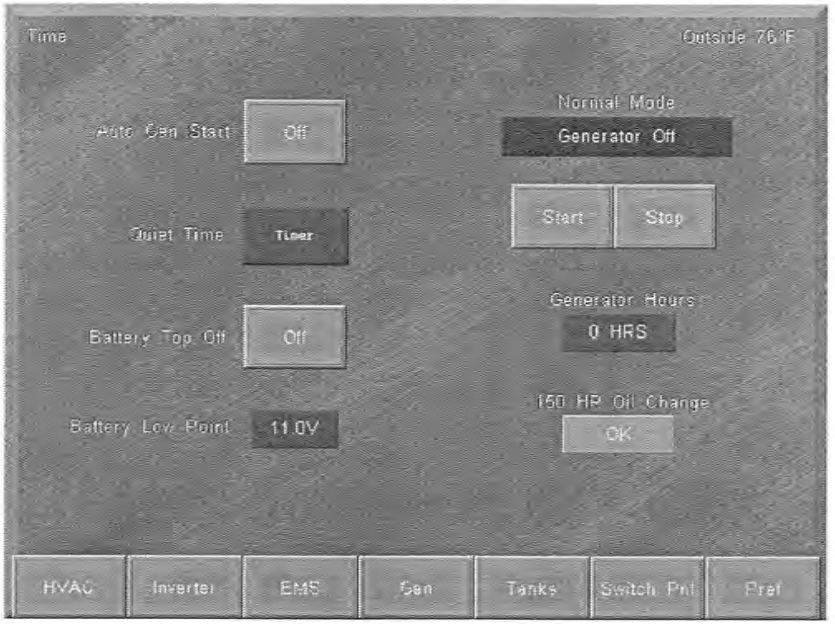
When enabled this function will monitor the current loads on both AC power legs and shed the listed loads as needed to maintain the Shore Power amp setting. This function only works with Shore Power, as the generator is capable of producing the maximum amperage that the unit can handle. The function is "Enabled / Disabled" by pressing the button located below the Energy Management status display.

#### *User Selectable Settings*

ENABLE/DISABLE: Toggles the Energy Management Function On and Off.

MANAGE: Toggles through the amperage settings. (50, 30, 20, 15, and 5 Amps)

## GEN (Generator Control Page)



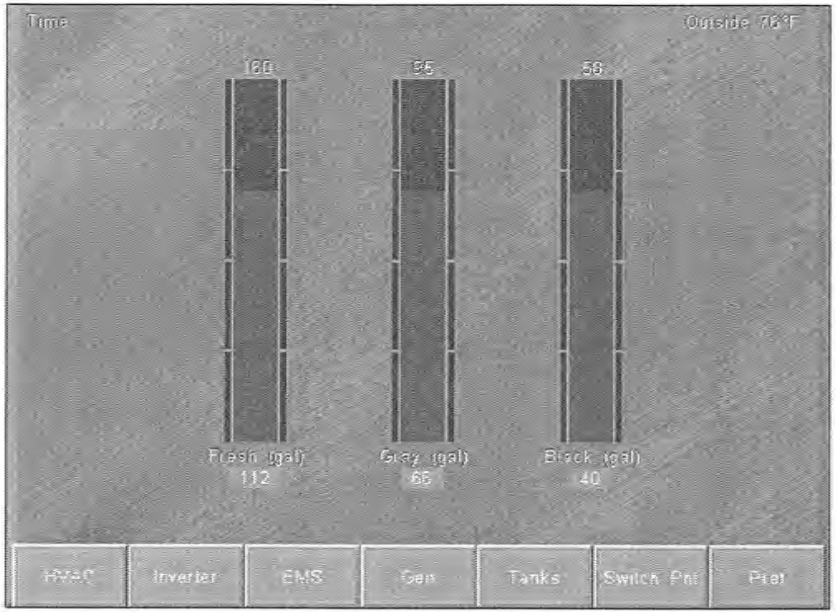

The "Gen" page displays the status of the generator running condition, the Battery Low Point auto generator start set point, the number of hours that the generator has run, when the generator is due for a scheduled oil change. This page also

allows the user to turn the Auto Gen Start function "ON / OFF" by pressing the appropriate labeled button. Additionally, this page allows the user to manually start and top the generator by pressing the generator "Start / Stop" buttons.

***User Selectable Settings***

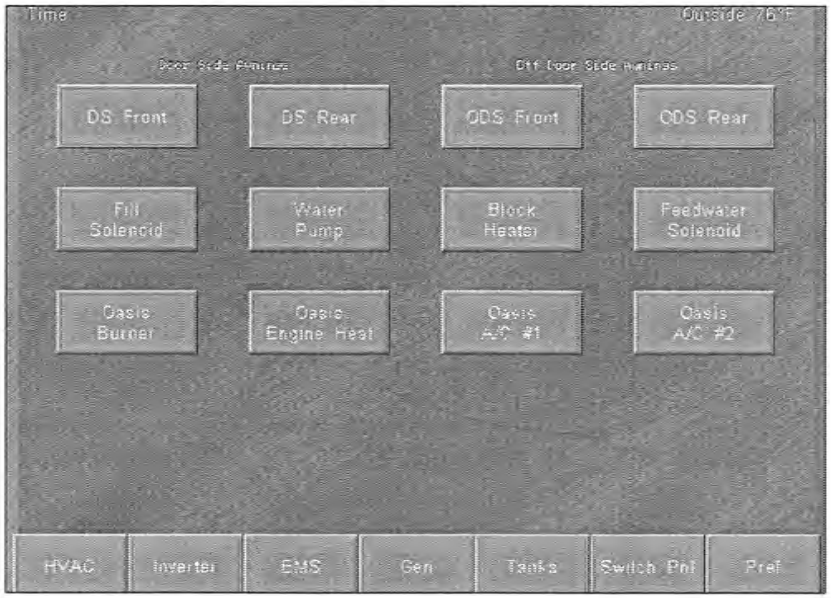
AUTO GEN START: ON/OFF (Generator will automatically start for Low Battery Charging and HVAC operating power)
GENERATOR: ON/OFF (Generator Status)
START / STOP: Manual generator control.
BATTERY TOP OFF: ON / OFF Turns the Battery Top Off function on and off.

## TANKS (Tank Status Screen)




The "Tanks" control page displays the fill status for the three water tanks (Fresh, Gray, and Black). This page also displays the current Date, Time and Outside Temperature across the top of the screen.

## Switch Pnl (Switch Panel)




The "Switch Pnl" control page displays the Awning, Oasis (Heating), Fresh Water, and Water Pump control buttons. There are four Awning Control Buttons across the top of the page that deploy and retract the associated awnings as labeled.

1. The "Fill Solenoid" and "Feedwater Solenoid" buttons are manual overrides for water fill functions that are controlled automatically by the multiplex control.
2. The "Water Pump" button toggles the water pump on and off.
3. The "Block Heater" button toggles the engine block heater on and off.

The bottom row of buttons controls the Oasis Heater functions.

1. The "Oasis Burner" button toggles the burner on and off.
2. The "Oasis Engine Heat" button when activated allows the Oasis Heating System to capture and use the waste heat generated by the diesel engine.
3. The last two buttons, "Oasis A/C #1" and "Oasis A/C #2" will toggle their respective 120VAC Heating Element on and off.

***User Selectable Settings***

DS Front: Extend and Retract Front Door Side Awning.
DS Rear: Extend and Retract Rear Door Side Awing.
ODS Front: Extend and Retract Front Off-Door Side Awning.
ODS Rear: Extend and Retract Rear Off-Door Side Awning.
Fill Solenoid: Override Automatic Water Fill Function.
Water Pump: Turn Water Pump On / Off.
Block Heater: Turn Engine Block Heater On / Off.
Feedwater Solenoid: Override Automatic Feedwater Solenoid Function.
Oasis Burner: Turn Oasis Heating System Diesel Burner On / Off.
Oasis Engine Heat: Turn Engine Capture Function On / Off.
Oasis A/C #1: Turn 120VAC Heating Element #1 On / Off.Oasis A/C #2: Turn 120VAC Heating Element #2 On / Off.

## Pref (User Preferences Screen)

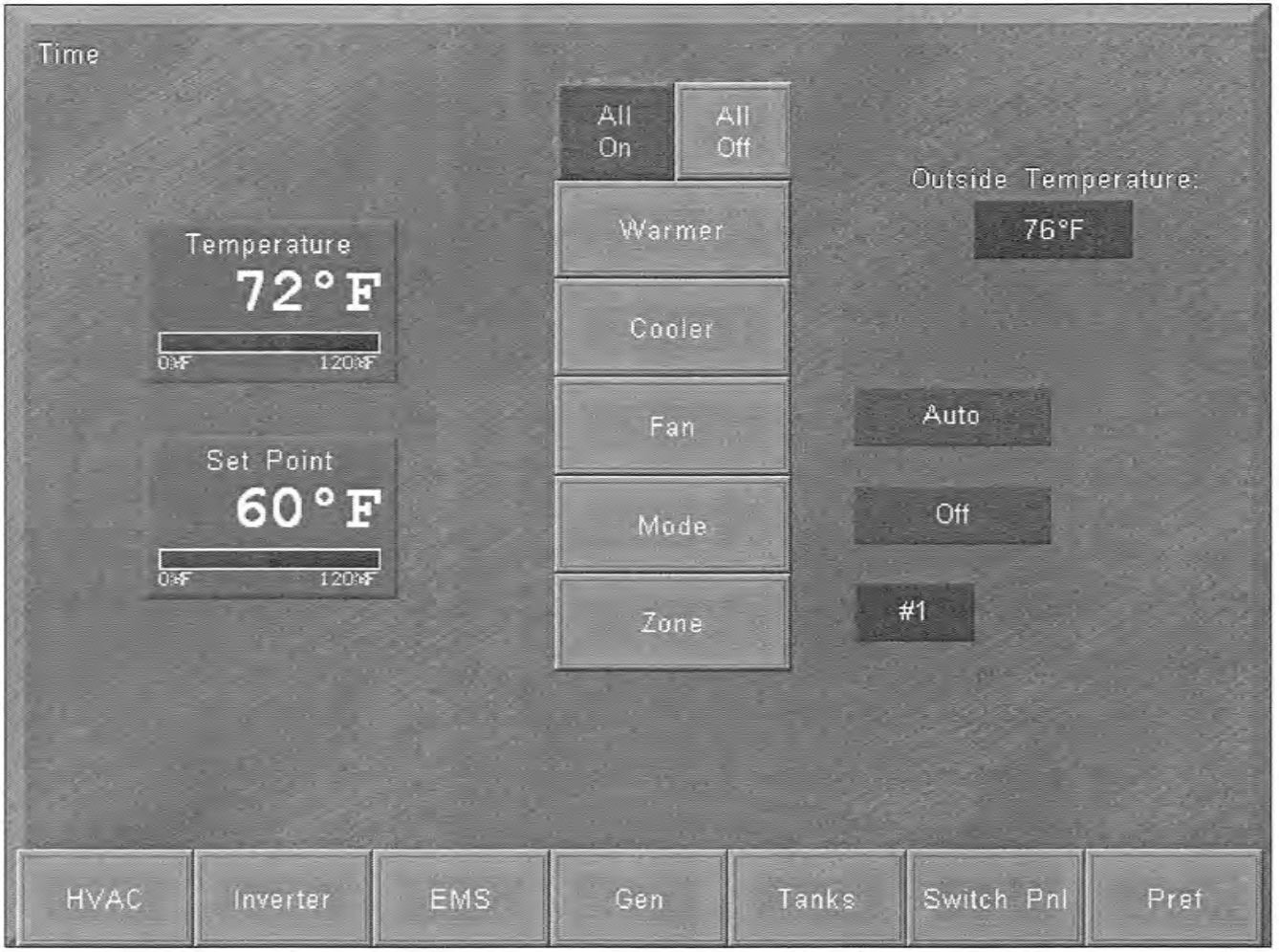

This page allows the user to control several Screen Preference settings as well as some other miscellaneous functions.

The Screen Preference settings consist of "Set Clock" (Set the current time), "Night Mode" (Dim the screens and mute the button beeper), and "Screen Saver" (Turn the Screen Saver On / Off). This page will also allow the user to "Reset" both the Generator Hours and Generator Oil Change hours displayed on the "Gen" page. The surveillance camera video feeds can be displayed as well.

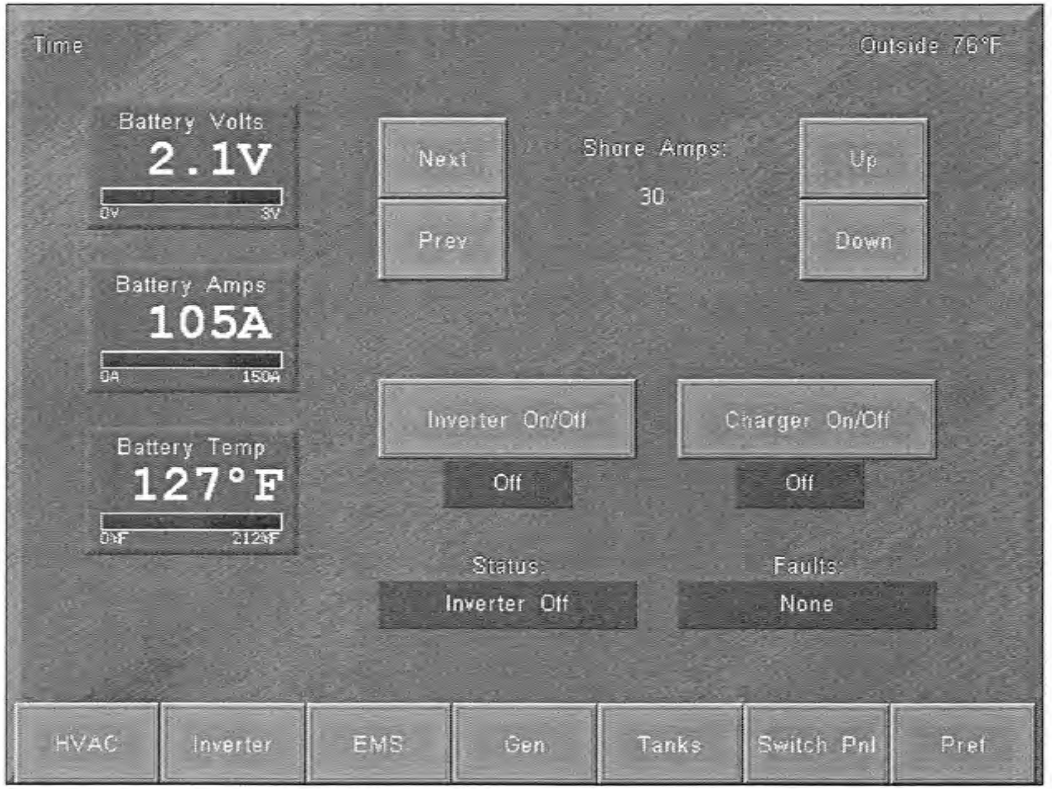
***User Selectable Settings***

RESET: Reset Generator Hours (run hours from "GEN" page).
RESET: Reset Generator Oil Change (hours from "GEN" page).
SET CLOCK: Set system time.

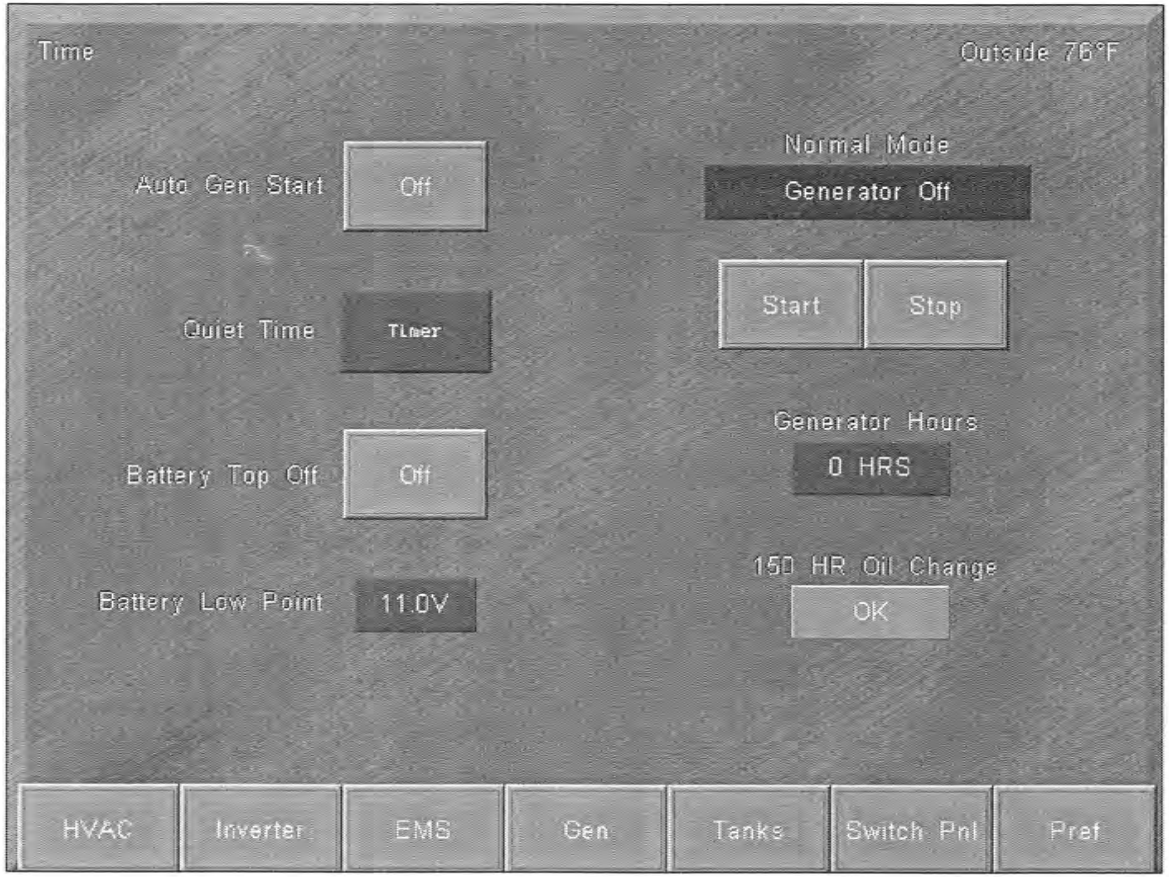
NIGHT MODE: Dim screen displays and mute button beeper.
SCREEN SAVER ON /OFF: Toggle the Screen Saver Mode on and off.
CAMERAS #1 - #4: Display video feed from cameras #1 - #4.
CAMERAS #5 - #8: Display video feed from cameras #5 - #8.




**Multiplex Control**




**Inverter Page**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Off
Normal Mode
Generator Off
Start
Stop
Quiet Time
Timer
Generator Hours
0 HRS
Battery Top Off
Off
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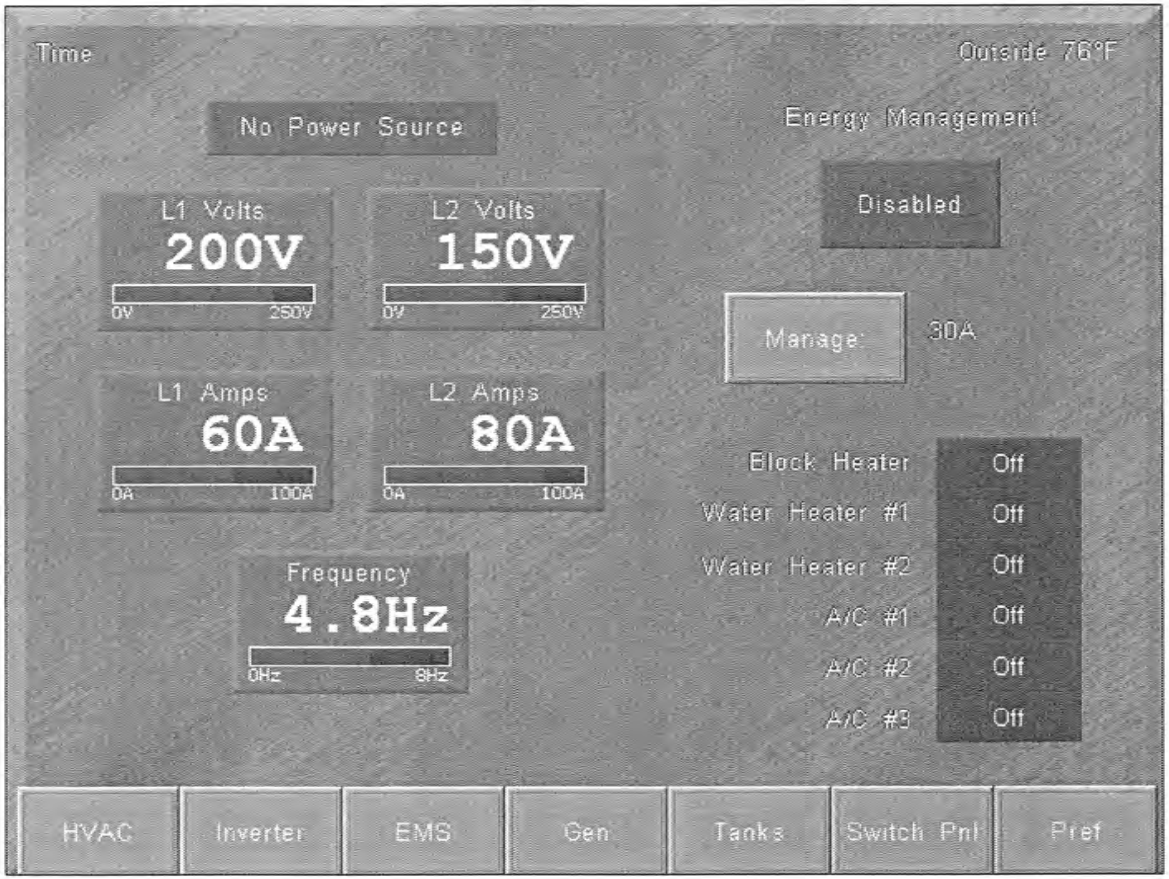
OK
Battery Low Point
11.0V
HVAC
Inverter
EMS
Gen
Tanks
Switch Pnl
Pref

**EMS Page**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Outside 76°F
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Energy Management
Disabled
L1 Volts
200V
0V
250V
L2 Volts
150V
0V
250V
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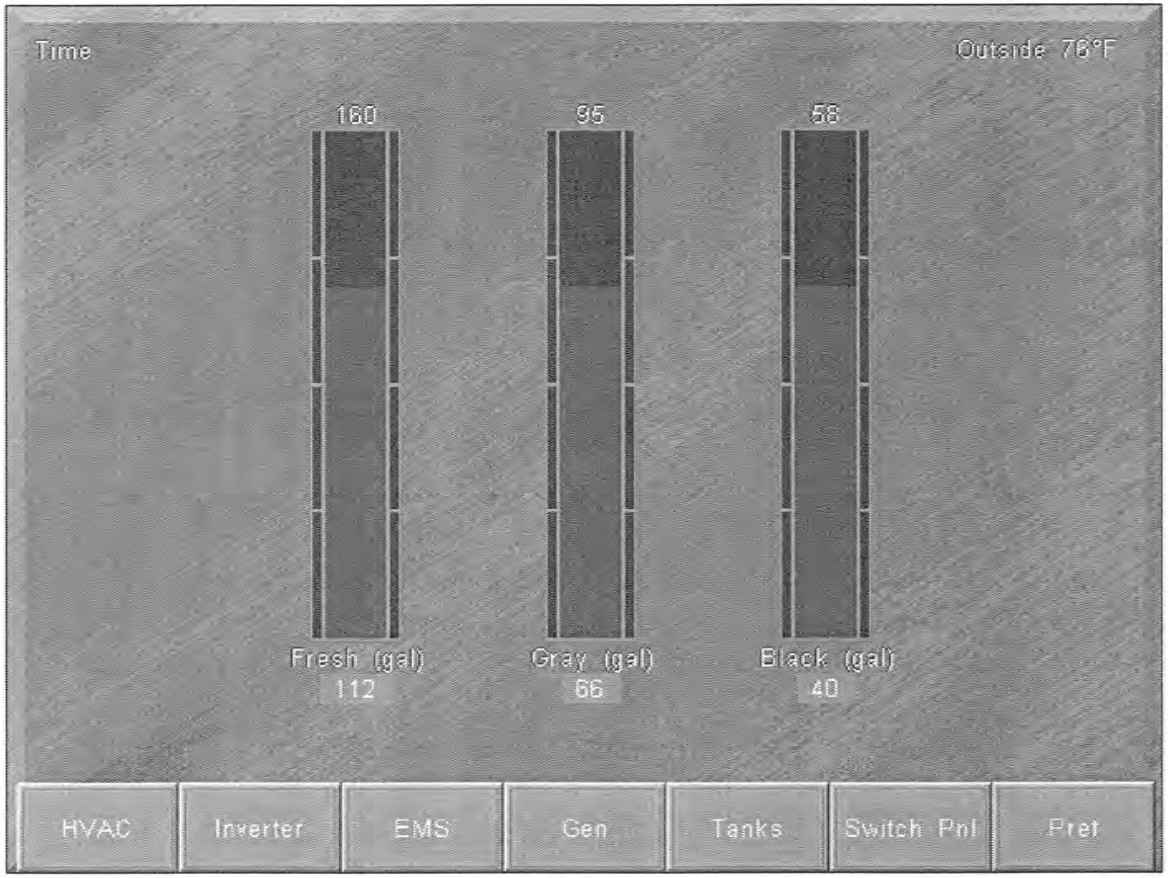
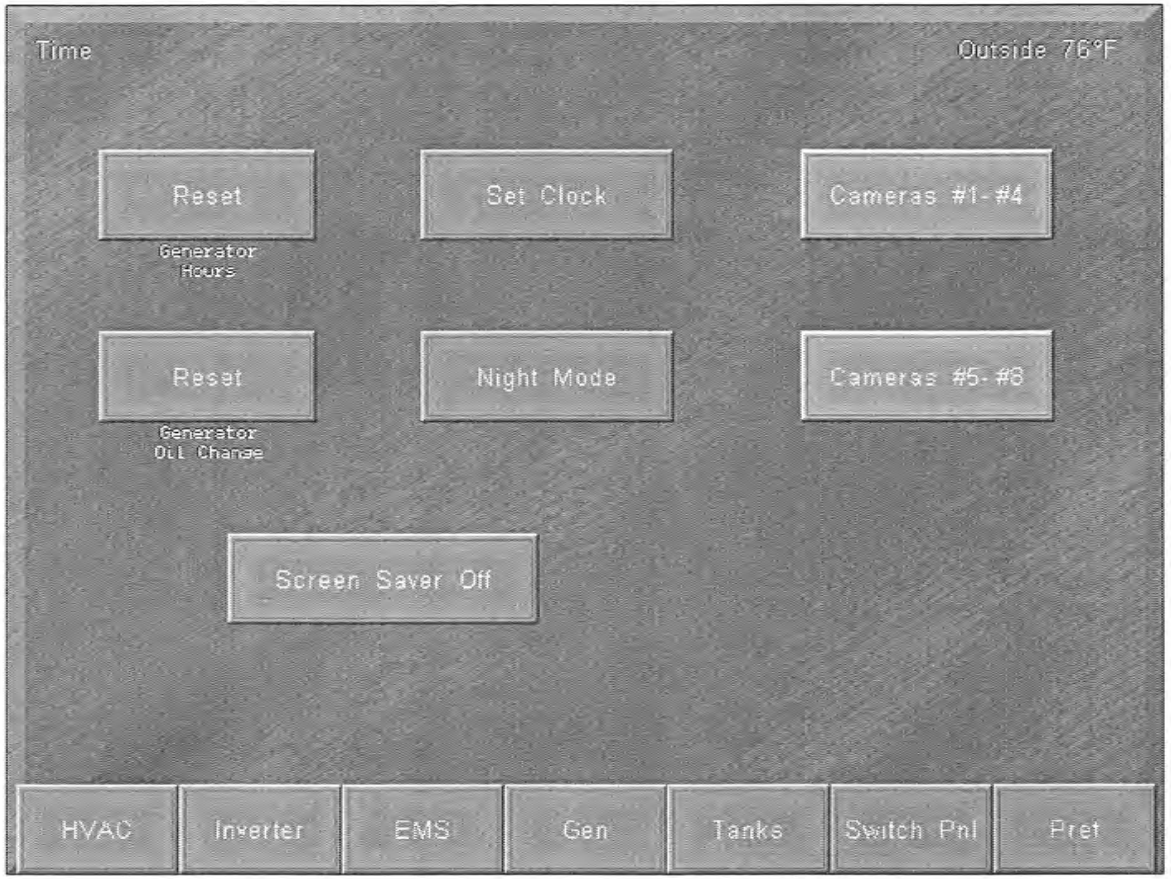
30A
L1 Amps
60A
0A
100A
L2 Amps
80A
0A
100A
Block Heater
Off
Water Heater #1
Off
Water Heater #2
Off
A/C #1
Off
A/C #2
Off
A/C #3
Off
Frequency
4.8Hz
0Hz
8Hz
HVAC
Inverter
EMS
Gen
Tanks
Switch Pnl
Pref

**Tanks Page**




**Tanks Screen**




**Preference Screen**


**Switch Screen**

# APPLIANCES

## Dishwasher

Your London Aire is equipped with a Fisher / Paykel dishwasher. The appliance is mounted in the kitchen cabinetry below the range, and features a wood paneled front to blend in with the décor. The dishwasher operates on 110 volts AC. For detailed directions on loading dishes, adding soap and cleaning agents, and total operation, refer to the manufacturers directions and video. As with any appliance, maintenance is the key to keeping your dishwasher in top working order. Detailed instructions for cleaning and maintenance are included in the manufacturers owners manual and accompanying video.

**IMPORTANT**

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 and without warning, potentially damaging the dishwasher, its contents, the cabinetry, and anyone standing near it.

## Washer / Dryer

Your London Aire is equipped with a standard national brand washer/ dryer. Depending on your floorplan, your coach may be equipped with separate, stackable washer and dryer units. The washer/dryer will be located in a cabinet either in the bathroom, bedroom, or walk - in closet of your unit.
For detailed instruction on operating the washer/dryer, refer to the manufacturers information that is supplied in your literature bag. This literature provides detailed direction on operation, care, and maintenance of your new appliance.

## GE Profile Side by Side Refrigerator

The standard refrigerator in the London Aire is a GE Profile residential side-by-side. The unique design integrates water and ice availability in the freezer door, and access to the milk or soda storage shelf in the refrigerator door.

The control panel for the refrigerator is located inside the right hand door, at the top of the cabinet. The two window display allows you to set the refer cabinet temperatures to the desired levels, then allows you to monitor them with the digital read out. The GE Profile refrigerator also features a water filtration system for cleaner, purer drinking water. The filter is conveniently located at the rear of the refrigerator interior.

Additional operational details and maintenance requirements are outlined in the GE manufacturers owners guide.

## Waco Freezer

Located in the passenger side basement you will find a Newmar installed Waco freezer. This freezer operates on 12 volt DC current, or 110 AC current as available. The side mounted thermostat can be used to adjust the freezer cabinet to the desired temperature. Latches secure the lid for a tight seal, and for traveling. For ease of access, the freezer is mounted on a slide tray.

## Princess Electric Cook Top

Your London Aire features the Princess Electric Cook Top. Complete operating directions are included with the users manual in the Literature Bag provided with your coach.

To operate the electric range, press and turn a burner control. The associated burner will heat proportionally to the range the burner is turned. Use caution as the cook surface is hot.

## GE Advantium Microwave / Convection Oven

Standard in your London Aire is a GE Advantium Microwave / Convection oven. It boasts a number of standard features that will make cooking quick and convenient.

To set the clock, press the "Clock" button on the control panel. Using the rotary knob in the center of the control panel, rotate it first to set the correct hour. Once the correct hour is displayed, press the knob to lock your selection in. Repeat the procedure to set the correct minutes, and again press the knob in to lock the minutes into the display. Using the same knob, select AM or PM on the display, and press the knob again to lock the setting in. If the time displayed is correct, press the knob one final time to initiate operation of the clock.

The GE "Advantium" microwave / convection oven is an available option in your new London Aire. Using GE's "SpeedCooking" technology, it boasts amazingly fast food preparation times. It uses a combination of lights, microwaves, and convection heat to cook entire meals in a fraction of the time it takes in a conventional oven, even browning meats as the cooking process progresses.

For detailed operating and programming directions please refer to the GE Advantium Microwave / Convection Oven Operators Guide, or the CD ROM that was included with your Owners Packet.

# HYDRAULIC LEVELING JACKS

**WARNING**

It is recommended that the leveling and stabilizing procedure is complete before operating any room extension. Note: The slide out can be operated without utilizing the leveling system, but it is recommended to have the unit as level as possible.

**IMPORTANT**

It is recommended that you read the detailed operating directions in the "HWH Operators Guide" prior to operating the leveling systems on your new London Aire. The Operators Guide was provided in the literature bags with your unit at the time of delivery.

Your London Aire is equipped with a combination of air and hydraulic leveling jacks. There are four hydraulic jacks, and they always operate in pairs: front, right side, left side, and rear. Before extending, the engine must be off, the ignition switch must be in the "ACC" position, and the transmission must be in park. The parking brake needs to be set and the tires blocked securely.

**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 when pressed on 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.

## "Air" Leveling

The "Air" leveling system is designed to be used for minor, temporary leveling of the unit (when overnight camping in a parking lot, for example) for basic comfort and convenience. Please note that while this will bring the unit to a "relatively" level stance while on slightly sloped surfaces, it does not deploy the hydraulic leveling jacks to raise the unit significantly or stabilize the unit on the ground. As a result, you may still experience some movement of the coach when walking through it. To level your unit using the "air" system, be sure the unit is parked securely and the parking brake is set. Then:

1. Turn the ignition key to the "ACC" position, and press the "AIR" button to enter the "Air" leveling mode ("Leveling System Active" light will glow steadily, and the 4 red "Warning" lights will come on to indicate the ride height valves have been locked out. NEVER move the vehicle when these red lights are on!)

2. Press the "Air" button again, and the Leveling System Active" light will begin to flash to indicate that leveling has begun. The system will attempt to level the unit by dumping air individually from the suspension air bags. The yellow "Level Sensing" lights will go out gradually as the unit becomes level. When all the yellow "Level Sensing" lights are out, leveling is complete. The "Leveling System Active" light will begin to pulsate dimly to indicate the system is in "Sleep" mode. In this mode, though no lights are visible on the control panel, the system is active, and will re-check the coaches state of "level" every half hour, re-leveling it as necessary.

3. The system will remain in "Sleep Mode" until, -1- the ignition is turned on, -2- the parking brake is released, or -3- the "Emergency Stop" button is pressed. The system will only return to the "Travel" mode when the "Store" button is depressed, or the parking brake is released. In either situation, the ignition key must be in the "ON" position.

## "Hydraulic" Leveling

The hydraulic portion of the leveling system uses four hydraulic jacks to level the unit. Because the weight of the unit is on the jacks, and they are in physical contact with the ground, the unit is much more stable and does not shake or move when walking inside it. Additionally, the hydraulic system has a greater range of leveling, allowing it to provide greater leveling capability should you encounter camp sites with substantial slope.

1. Make sure the motorhome is securely parked, and set the parking brake.

2. With the ignition key in the "ACC" position, press the "LEVEL" button. The light will come on and glow steadily.

3. Once you are certain the leveling area beneath the unit is clear of obstructions, press the "LEVEL" button a second time to begin the automatic hydraulic leveling process. The light will begin flashing and the leveling cycle will begin. The system will dump the air out of the air bags and deploy the jacks to level the unit.

4. To retract the jacks, start the engine and press the "STORE" button. Allow the system to completely raise the jacks and turn itself off.

**CAUTION**

Do not lift the wheels off the ground when leveling. The unit can roll forward or backward when tires are lifted off the ground. If the "Excess Slope" light is on, the system is sensing that the site is too sloped to allow the leveling jacks to bring the unit to a comfortable state of level. Great care must be taken when trying to level in a sloped site to make sure a tire (or tires) is not lifted off the ground. Also, the leveling jacks and support system should be cycled once a month or whenever the vehicle is used to keep the system in operating condition.

**IMPORTANT**

It is important to allow the HWH leveling system to run the complete cycle and turn itself off when operating in the "store" mode. The system will completely retract the jacks and turn itself off. If the system is turned off prior to the automatic shut off, there is the potential that the jacks have not fully retracted. Also, be sure to visually inspect the jacks prior to departure to insure that they have fully retracted and the underside of your unit is ready for travel.

## Hadley Air Leveling System

If your London Aire is equipped with the Hadley Air Leveling System, the HWH system will be hydraulic only. The Hadley Air Leveling System is a stand alone unit not incorporated into the existing hydraulic leveling system. It features it's own control panel, which is used and uses the air system on the coach to allow you to perform a variety of leveling, raising, and lowering functions for added ground or overhead clearance or general comfort.. For detailed operating instructions, please refer to the Hadley supplied manual that came with your unit.

## Hadley Touch Pad

**RAISE Button**

**Press once to raise the rear of the vehicle for increased bumper clearance. (The Raise light flashes) [Speed < 20 MPH]**

**or**

**Press and hold button until raise light remains "on" to raise entire vehicle for increased ground clearance. [Speed < 10 MPH]**

**Press "LOWER" switch once or "STD RIDE" switch once to return vehicle to normal height. (Raise light off)**

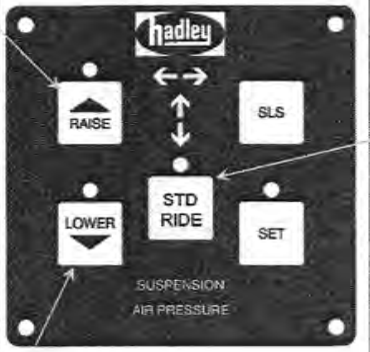
**LOWER Button**

**Press once to partially lower the vehicle to decrease overall height. [Speed < 10 MPH] *(The Lower light flashes)***

**or**

**Press and hold button until the lower light remains "on" to lower the vehicle to lowest overall height. [Speed < 5 MPH]**

**Press "RAISE" switch once or press "STD RIDE" switch once to return to normal height *(Lower light off)***




**STD RIDE Button**

**Press this button to return the vehicle to the "standard ride height", irregardless of mode operation.**

**The STD Ride light will come "on" whenever the STD Ride button is depressed or whenever an auxiliary control returns the system to the *standard ride mode*.**

**or**

**The STD Ride light will "flash" while the system is returning to the Standard Ride height from any mode of operation. Once the Standard Ride height is reached, the light will come "on" steady for about 15 seconds and it will then go "off".**

**or**

**When power is applied to the system and the vehicle is in the STD Ride mode and the vehicle is at the standard ride height, the light will come "on" steady for about 15 seconds and it will then go "off".**

**or**

**When power is applied to the system and the vehicle is in the STD Ride mode, but the vehicle is not at the Standard Ride height, the light will "flash" while the system makes the necessary adjustments to return to the Standard Ride height. Once the Standard Ride height is reached, the light will come "on" steady for about 15 seconds and then it will go "off".**

**Note: If the vehicle is equipped with a hydraulic leveling system, the hydraulic operation will take precedence over the air system. It will control the air system operation as required in order to provide the desired hydraulic leveling action.**

## SECURITY SYSTEM

Your London Aire is equipped with a security system. This system uses a variety of sensors and switches to guard your unit and it's contents.

When armed, the system protects the entry door, the battery compartment, and the front generator area. There is also an impact sensor under-dash that will feel an impact in the front cab area. There are (2) motion sensors, one in the kitchen, and one in the bedroom. These sensors can be defeated if you want to arm your system while the coach is occupied. The switch is located on a labeled plate in the cab area, along with the valet switch. Consult your manual for all features of the valet switch. To arm the system, press the button w/ the lock symbol on it. You will hear one siren chirp, and the entry door will lock (if equipped). To disarm the system, press the button w/ the un-lock symbol. You should hear two siren chirps. If you hear more than two, your system was set off in your absence. The system also includes a pager that alerts you up to 2 miles away if the alarm is engaged. You can also remote page via the pager buttons on the dash. Any technical questions can be directed to Nagy FleetNet at 800/ 232/ 4479.

## Keyless Entry

For your convenience, your London Aire has a keyless entry system installed. It is operated by the standard key fob remote control, or by the key pad at the entrance door. This system allows you to access the entry door and basement doors by simply pushing the button on the key fob, or by entering your personal code on the optional keypad. Using the touch key pad, the system is operated and programmed as follows:

**Unlock Entrance Door:**
Enter 3 to 8 digit personal code. (entrance door will unlock)

**Lock Entrance Door:**
Enter lock code 559. (entrance door will lock)

**Unlock Baggage Doors:**
Enter 3 to 8 digit personal code, within 5 seconds press 7/8 key. (entrance door will unlock then baggage doors will unlock after pressing 7/8 key)

**Lock Baggage Doors:**
Enter lock code 559. (entrance and baggage doors will lock)

**Change 3 to 8 digit Personal Code:**

1. Press and release the keyless entry programming switch. (Four rapid beeps will sound)
2. Enter 1119 on the keypad. (Three rapid beeps will sound)
3. Within 5 seconds enter new 3 to 8 digit personal code.
4. Wait 5 seconds and listen for two rapid beeps. (Programming is finished)

All systems are shipped from the factory with a master personal code of 13579. The keypad has 5 keys. Each key represents 2 digits. For example the first key can be used as either or both the numeral 1 and the numeral 2.

**NOTE:** Your 3 to 8 digit personal code cannot start with numerals 5 or 6.
**FORGOTTEN PASSWORD:** If you forget your password, unlock the door using your key to gain access to the program switch and program in a new password.

Chapter 4

# CABINETS, FURNITURE & INTERIOR FEATURES

# INTERIOR FEATURES

## Cabinets

The cabinets in this unit are constructed on site at the Newmar production facility. Hardwood raised panel cabinet doors are standard throughout the unit. Brass or brushed nickel polished door and drawer hardware give the interior an added touch of elegance. A variety of finishes are available for the hardwood cabinetry. All of the finishes are as durable as they are beautiful.

For all their durability, however, the nature of hard woods is that they can (and frequently do) change color, or darken when exposed to sunlight. Because of this, 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 used in your London Aire.

Storage is an important factor to all RV owners. Keeping this in mind, the cabinetry is structured to provide as much storage as possible. Your unit may include features such as adjustable pull out pantry boxes in the kitchen or the silverware drawer may have a molded silverware divider tray for added storage. In the bedroom, the bed platform lifts to provide an additional, convenient storage area. A strap is provided to help raise the bed. Once the bed platform is lifted, it is held open by pressurized struts to allow hands-free access.

A countertop with a color coordinated edge is installed in the kitchen. To clean, wipe with a damp cloth and for "dried on" spots or rings, wipe with a damp cloth and a mild liquid soap. Strong chemicals and solvents may damage the surface and should be wiped up immediately, then rinse the surface with water.

Avoid cutting directly on the countertop surface, avoid excessive heat, and keep harmful chemicals away to avoid countertop surface damage.

On most floor plans, the "drawer" directly in front of the kitchen and lavatory sink does not pull out, but rather flips down. This provides a storage tray for dish cloths, scouring pads, washcloths, etc.

Metal drawer guides may be equipped on all of the drawers in your unit. These guides provide a smooth opening and closing of the drawers. To open a drawer, lift up slightly and pull open. The way this mechanism works will prevent the drawers from unintended opening while traveling.

All of the cabinetry can be easily cleaned with any commercial furniture cleaner or polish. 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.

# FURNITURE

## Kitchen / Dinette Area

A standard feature in the kitchen area is the hidden leaf dinette table. This table allows you to add more room to your table top when desired. Two fixed chairs and two folding chairs

accompany this table. The chair seats are designed with a coordinating upholstery fabric to match your décor.

Depending on the floorplan of your unit, a built-in "booth" style dinette may be an option.

## Booth Dinette

If your unit is equipped with the "Booth" style dinette, the booth is a fixed piece of furniture, while the table rides on a power pedestal, allowing adjustment of the table height and distance from the booth for ease of egress and comfort while eating.

The table pedestal is operated by switches located under the overhead cabinets in the dining booth area. Use the switches appropriately to move the table in and out, and up and down to acquire the position that best suits your dining or entertaining needs.

Additional egress space can be gained by manually sliding the table outward on a track built into the table platform. Stand facing the dinette booth, grip the table firmly and pull it toward you. The positive catch mechanism will release, and the table will slide outward, allowing better access to the booth seating area. To return it to the dining position, simply push the table inward toward the booth seating until the catch mechanism engages.

## Living Room Furniture

Covered in coordinating fabrics and accented with pillows, the sofa will fold flat to provide additional sleeping space. To fold the sofa out to the sleeping position, lift and pull on the front of the sofa seat cushion. The seat cushions will swing out and the seat back will slide down to form the sleeping surface.

Depending on the floorplan and options, a variety of living room furniture is available in the London Aire. Options may include a free standing leather/vinyl recliner, a leather/vinyl push back recliner with an ottoman, a leather/vinyl swivel rocker recliner, or a leather/vinyl "L"-lounge.

The driver and passenger seats in the London Aire are covered in leather, and feature six-way power position adjustment, lumbar support, and a passenger footrest. The base moves the chairs forward and backward, as well as up, down, and forward and reverse tilt. The seats also have a three point seat belt and swivel and recline features. When the unit is not in motion, they can be swiveled to face the living room of the unit. To turn the chairs, first extend the slide out room. Tilt the steering wheel up and toward the dash. Reposition the seat to provide enough clearance for the steering wheel. Once this is done, the chairs will swivel without interference. The power lumbar control switch is located on the left-hand side in front of the power base controls. Pushing the switch forward will inflate the support while pushing back will deflate it.

Additionally, the seats offer heat and massage functions via the wired remote control located in the armrest of the seat. This control allows you to program a variety of massaging modes in the seat back and base, as well as offering the option of heating the back and lower cushions.

## Bedroom Area

A "king size" bed is standard in your London Aire. A decor coordinating quilted bedspread with a reverse sham and accent pillow(s) may be included as part of this unit's standard bedroom package. For best results, it is recommended that the bedspread be DRY CLEANED ONLY.

For your convenience, lights have been added in the closets and wardrobes.

## Bedspread

A decor matching Duvet with coordinated pillow shams and an accent pillows are part of the standard package for this unit. The recommended cleaning instructions for this spread are DRY CLEANED ONLY. The materials that make up the spread may have been treated, and dry cleaning will preserve this treatment.

## Flooring

Your London Aire offers a variety of floor coverings throughout the unit.

In areas covered with Granite Floor Tiles, the sub-floor features heating elements that will warm the floor tiles for greater comfort and enjoyment. The heating is "zone" controlled, and is regulated by way of two individual thermostat controllers. For the livingroom / kitchen area, the controller is located in the left front overhead cabinet above and beside the drivers seat. For the bathroom area, the controller is located in the base lavatory cabinetry in the bathroom area. Simply turn the system on, and select the desired temperature. The system will warm the floor to the selected temperature, and will maintain that temperature until turned off. Please note that this is supplemental heat and will not warm the interior of the unit.

Maintenance for the Granite surface is as easy as regular sweeping / vacuuming. Damp mopping with WATER ONLY can be done, but DO NOT SATURATE THE FLOOR WITH WATER; this could damage the flooring. Abrasive cleansers and scouring pads can scratch and damage the surface also. Dry mopping is an excellent alternative, but avoid using harsh cleaning chemicals as discoloration or damage to the grout may occur.

Other areas in your unit are covered in nylon tufted cut loop carpeting. In the Owner's Information Package you will find literature supplied by the carpet manufacturer. This information will be helpful in maintaining and extending the life of the carpet. Please refer to this information for the carpet care and cleaning instructions.

Areas covered in polished porcelain / ceramic tiles can be maintained by simply vacuuming to remove loose dirt and debris. Mop occasionally, using a minimal amount of water.

For more thorough cleaning, mop with a mixture of soap-free household cleaner and water (vinegar and ammonia both work well). DO NOT SATURATE THE FLOOR WITH WATER; this could damage the flooring. Abrasive cleansers and scouring pads can scratch and damage the surface also.

## Ceiling

The ceiling in this unit is covered with a soft "microfiber" type material. This material is cleaned by wiping gently with a soft cloth and a mild detergent. DO NOT saturate the material, and wipe it dry when finished cleaning with a soft, dry cloth. Also note that the nap of the material is such that contact with it can leave marks as the nap changes direction. This is not a defect, and can be combed out using a soft brush, or often even the palm or edge of your hand.

## Window Treatment

The windows throughout your unit are covered with hardwood and fabric lambrequins. These elegant window treatments house power operating pivoting shades that allow excellent light filtration with the option of a higher degree of privacy over conventional "day / night" shades.

Controls for the shades are located throughout the unit; allowing you to open and close them per room as needed. To operate the shades, simply select the button for the appropriate shade, and raise or lower it as desired. Note also that at the end of the travel (when lowering), the shade pauses momentarily, then tilts completely to allow the shade to tilt shut for additional privacy.

The "power" operation of the living area shades also falls under a combination operation labeled "MOVIE" (see Chapter 9 for complete details of the "MOVIE" functions). When activated, the "MOVIE" function will close all the living area blinds and shades, rendering this space darker for increased movie viewing pleasure, as well as improved privacy.

Keep in mind that when drawn and closed, very little to no light passes through the shades and blinds. They are generally used in the evening or when more privacy is desired, though under certain light conditions, it can display shadows and silhouettes.

For curtains installed in this unit, cleaning instructions are DRY CLEAN ONLY. Water-based products are not recommended for cleaning fabrics. Water-based products may cause excessive shrinkage or fading.

## Safe

Located under the bed base is a built in fire resistant "safe box / file cabinet". This is accessed by raising the bed base / mattress platform. The key for the lock is included with your unit at the time of delivery.

## Interior Feature Switching

As part of the comfort and convenience features on your London Aire, most interior functions are controlled by touch button control.

Each room has it's own set of buttons for such features as pocket door operation, shade and blind operation, and lighting controls. Press and hold

the button for shade operation, or press and release the button for pneumatic door operation, or press the buttons for lighting several times to brighten or dim the lights in a given area.

As a special feature, in the living room is a button labeled "Movie". When pressed, this button will prepare the London Air for the movie viewing experience by lowering the Sony TV from the ceiling, turning on all the necessary components to watch the movie, and closing all the blinds and shades in the front half of the unit to darken it, enhancing the experience.

Chapter 5

# SLIDE OUT FEATURES

## SLIDE OUT FEATURES

**WARNING**

Read the following slide out room instructions before activating the switch.
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.

Your unit is equipped with up to four power slide out rooms. It is important that you read and understand ALL directions, both in this Owners Guide, and on ALL the labels affixed inside your unit PRIOR to operating your slide out room(s).

**CAUTION**

It is recommended that the leveling jacks be extended and the unit level before operating the slide out. Note: This slide out can be operated without utilizing the leveling system, but is recommended to have the unit as level as possible.

Located throughout your unit are important instructional labels with operating and safety information. Regardless of lock type, there are a number of precautions that MUST be observed every time the rooms will either be extended or retracted. For your personal safety, and to prevent potential damage to the slide out mechanism and room, it is paramount that these directions be followed completely. Slide out operation has changed for all 2006 and newer RV's, and it is important that you understand the operation procedure completely and observe all safety precautions to insure safe, proper operation.

All Slide Out labels contain the following warning:

**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.

## General Instructions

**IMPORTANT**

The slide out room should be inspected for alignment every six (6) months. If alignment is necessary, have the room adjusted.
The slide out room can be stopped at any time by releasing the slide out switch. If the slide out room stops before reaching the full "OUT" or "IN" position, the slide out controller may need adjustment. To adjust the slide out controller, turn the adjustment screw clockwise to increase the power and counter-clockwise to decrease the power. Move the adjustment screw in small increments. Try moving the slide out room again. Use caution. There is a potential for component or structural damage if the screw is adjusted too high. This screw does not adjust the slide out room speed. It sets the amount of power required to move the room against the mechanical stops.

## Operating the Slide Out Room

The London Aire is equipped with a unique slide out system. As with others, it allows for the expansion of interior living space while parked, but the design is such that it allows for a smooth, clean, facia-less exterior. It features pneumatic seals that inflate and deflate automatically with the rooms operation, and Power Locking Arms for even greater convenience. Designed specifically for this application, these mechanisms automatically work in combination to lock and seal the slide out rooms to the sidewalls of the RV when the room is fully retracted, securing the room in place.

The operation of these mechanisms is totally automatic, and begins when you press the button to extend or retract the slide out room.

> **WARNING**
>
> Before extending the slide out, make certain that there is a minimum of five (5) feet of clear space on the slide out side of the unit. Prior to extending the room, be sure to unlock the slide out locking arms. Make sure there are no obstructions either inside or outside the unit that may interfere with the slide out extension. Tree branches, bushes or telephone poles can cause extensive damage to the exterior of the unit.

To begin the process of extending the room, press the slide out button. The voice modulator will activate and say, "The slide out seals are deflating, and your lock arms are unlocking. Please be certain all seats, chairs, and other obstacles are clear of the slide out area". There will be a slight audible "hiss" sound as the seals deflate, and the power lock arms will retract into their housings. Once this step has been accomplished, the voice modulator will tell you to "Press and hold the button to extend the slide out room". A few seconds later, the room will begin to extend. It will continue to run until it reaches the end of its travel, or until you release the slide out switch. When the room has reached the end of it's travel, the pneumatic seals will again automatically inflate, sealing the room to the sidewall of the unit.

To retract the room, press the slide out button as described above. As with extending, when retracting the room, there will be a brief delay as the seals automatically deflate (note that the lock arms will not perform any function during this time). When the seals have completely deflated, the voice modulator will advise you to press and hold the button to retract the room. As with any time you operate a slide out, be certain nothing is in the travel path of the room. Press and hold the slide out button; the room will retract, and at the end of its travel the slide out motor will stop; the Power Locking Arms will deploy, and the seals will re-inflate, securing the room to the sidewall of the unit. Please note that you must hold the slide out button down during this entire cycle.

The power locks require a minimum of 9 volts DC to operate. In the event of a loss of power, or if the voltage dips below the minimum requirements, the locks will not extend or retract automatically. For proper operation of the room and locks battery voltage must be maintained above the minimum requirements. Also please note that there is a safety "lock out" system incorporated in the slide out electronics that prevents the room from operating when the ignition key is "on". The automatic locking arms require no maintenance, and should be serviced as necessary only by a qualified technician.

## Manual Extension and Retraction

### Shaft end-mounted motors

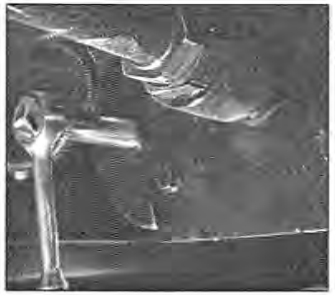
If the motor is mounted on the ends of the slide out shaft, use the following directions:

1. Access must be gained to the TRANS-TORQUE bushing coupling at the end of the slide out gear motor.
2. Using a 1/2" drive – 11/2" open end wrench and a 1/2" drive ratchet wrench, loosen the 11/2" nut. This will require approximately 11/2 turns. The nut is a standard right hand thread. After the initial release, the nut will turn for a partial turn, and then will release again as you turn the wrench. This second release is required to loosen the TRANS-TORQUE bushing from the shaft.

### Shaft center-mounted motors

If the unit is equipped with the K-900 slide out motor which is mounted near the center of the slide out room, use the following directions:

1. Access must be gained to the slide out motor located in the center of the slide out room.
2. The manual extension or retraction requires only a 5/8" socket and ratchet wrench. By placing the socket on the 5/8" hex nut located on the gear box of the K-900 motor, the slide out can be moved in either direction by turning the hex nut.



3. If the slide out does not move by using the hex nut, the room can also be extended or retracted by using the procedure described for the shaft end-mounted motors. If the room is moved using this method, the correct torque on the 11/2" trans-torque nut is 125 foot pounds maximum.

**IMPORTANT**

The TRANS-TORQUE bushing must be re-tightened to re-couple the slide out gear motor before moving the coach. This will hold the slide out room in place. The correct torque on the 11/2

Chapter 6

# EXTERIOR FEATURES

# EXTERIOR FEATURES

## Hitch

Installed on your London Aire is a class five, 15,000 pound car towing hitch. This is installed for towing passenger cars to be used when the vehicle is parked. The wire connector installed with this hitch is a standard seven-pin connector.

## Exterior Sides

The sides of this unit are constructed of gel-coated fiberglass. To add to this feature, the end caps are also gel-coated fiberglass. Clean the fiberglass material with a mild cleanser and warm water. Use only soft cloths. Using stiff bristle brushes may cause scratches in the fiberglass surface. Please note, Newmar is not responsible for weathering/oxidation of gel-coated surfaces.

Lighted storage compartments are located on the exterior sides of your unit. These compartments provide additional space for your belongings while you are traveling.

## Security Lights

Standard on this unit are exterior security lights. One is installed on each side of the coach. These lights help to light the side of the unit for added protection. The lights are activated by rocker switches located in the front overhead cabinet, labeled "Security Lights".

## Electric Steps

This unit may be equipped with electric double entrance door steps. If so, the switch to operate these steps may be located in an overhead cabinet above the entrance door. When the power switch for the steps is in the on position, simply open the door and the steps will open. Detailed operation for the electrical entrance door steps is as follows:

1. Turn the step power switch on.
2. Close the door. The step should retract and lock into the up position.
3. Open the door. The step should extend and lock into the down position.
4. Turn the step power switch off. The step should remain in the extended position when the door is closed. Turning off the power with the step retracted will hold the step in a retracted position as well.
5. With the step extended, turn the step power switch off and close the entrance door. Turn the vehicle ignition on. The ignition override system will go into effect, and the step will automatically retract.

**CAUTION**

If the door is opened and closed without allowing the step to fully extend and lock in the 'DOWN' position, the step will retract and lock in the 'UP' position. When the door is reopened, the step will not extend. The power switch must be turned on for the step to extend. This feature is only operative the first time that door is opened after the vehicle ignition is turned off. When the ignition is on, the step will always activate with the door movement, regardless of the step power switch position.

**CAUTION**

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 vehicle.

6. Turn the vehicle ignition off and open the door. The step will extend and lock in the down position.

## Mirrors

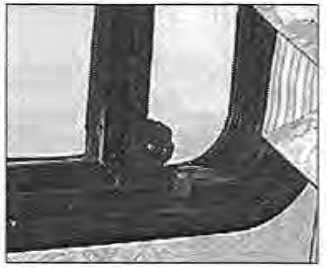
This vehicle is equipped with convex remote controlled defrosting exterior rear view mirrors. Always adjust the mirrors for maximum rear visibility prior to driving. Make sure the seat is positioned for proper vehicle control.

These mirrors are adjusted by using the multiple directional switch located on the drivers side dash panel. The switch panel allows you to adjust both the upper and lower mirror glasses. Select the mirror you wish to adjust, and press the arrow buttons to move the glass to the desired position. These mirrors also contain heating elements to defog or de-ice the mirror glass during cold weather operation. The ON/OFF switch for this feature is located by the adjustment control.

**IMPORTANT**

Objects viewed in convex mirrors appear smaller and farther away than they actually are.

## Windows



The windows installed in this unit may be the radius torque style double pane tinted safety glass. These windows are also referred to as jalousie windows. They open with the simple turn of a crank. A power window is available on the driver's side as an option. Sun shades may be standard on the driver and passenger side windows.

In the bedroom of the unit, one window will be marked "EXIT." This window is an emergency escape, or egress, window. To open in case of an emergency, lift the red handles at the bottom of the window and push out.

## Vents

A 12 volt vent may be installed in the kitchen. This vent is equipped with a rain sensor on the roof hood. Anytime the vent is open and it senses rain, it will automatically close. The vent is controlled by the wall switch.

Do not leave the fan in active mode while the unit is in storage or unattended for long periods of time. High winds or other unusual conditions or obstructions may prevent the vent from closing resulting in leakage, which could cause serious damage.

The vent installed in the bathroom is also powered by 12 volt electricity. This vent is identical similar to the one installed in the kitchen, and provides positive power ventilation to quickly clear the air in the bathroom area of your London Aire.

For improved lighting and headroom, a skylight is installed in the bathroom over the shower. The opening provides additional light during daylight hours, and the glass is tinted to provide privacy and reduce glare.

## Doors

The entrance door is equipped with a dead bolt lock for added security. When the door is opened fully, the "posi-lock" feature will automatically hold the door open. To close the door from the open position, either the inside or outside handle must be released for the door to move. For your safety, a lighted, acrylic assist handle has been installed at the entrance door of the unit, as well as a doorbell and camera you can access from several points in the unit.

# AWNINGS

**IMPORTANT**

It is important prior to extending you awnings that you inspect the areas beside and around your unit where the awning will extend to insure proper clearance.

## Side Awning

Power side patio awnings are standard on your London Aire. Extension and retraction is controlled by a switch located adjacent to the entry door, either on the wall or in a side overhead cabinet. To operate, follow these instructions:

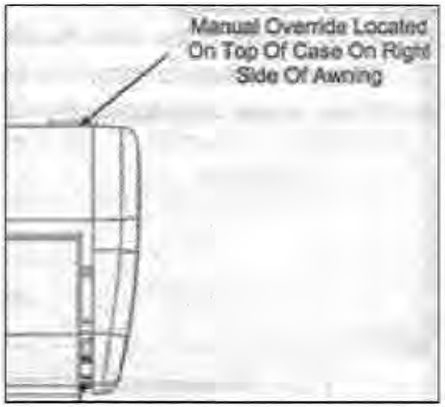
## Extending and Retracting

Turn the power "ON" to the awning. Press the "Extend" button on the awning switch panel and hold it until the awning has fully extended. To retract the awning, press the "Retract" button on the panel. Be sure to allow the awning to fully extend or retract when operating it. The mechanism is designed for best support at full extension, and fastens securely in place for travel at full retraction.

## Manual Retraction

In the event that electricity is not available in your unit, the power awning can be retracted manually.

On top of the awning on the right hand side (when facing the coach), there is a "Manual Override" that you can employ to retract the awning (see illustration).




**IMPORTANT**

If you have a wind sensor mounted in this location, you will need to remove the Phillips head screw attaching the wind sensor, and set the wind sensor aside.

1. Remove the Phillips head screw that is screwed into the well nut that is assisting in holding on the end cap.
2. Grasp rubber well nut that the Phillips head screw is screwed into. Pull the well nut out of the hole.
3. Take the provided 7 mm Allen wrench and put it into a 3/8" battery operated drill.

4. Place the Allen wrench down in the hole where the well nut was removed. Insert the Allen wrench into the Allen Head screw that is down inside the case (note: you will have to do this by feel as you cannot see the Allen Head screw once the wrench is inserted into the hole).

5. To close the awning, operate the drill in the "forward" direction. To open the awning, operate it in the reverse direction.

## "Oasis" Entry Door Awning

The "Oasis" entry door awning is a power operated awning. To extend the awning, press the "Extend" button on the switch plate. To retract it, press the "Retract" button. Please note that both buttons must be held down as the awning travels in or out. It will not extend or retract automatically.

## Window Awning

Also standard on this unit are the matching window awnings. To operate, follow these instructions.

### Extending

1. Grasp the loop on the pull strap and pull down to extend the awning.

2. Then hook the loop onto the window strap hanger.

### Retracting

1. Remove loop on the pull strap from the window strap hanger.

**CAUTION**

Do not release the strap as the window awning is under tension and may snap back against the vehicle.

2. Slowly allow the awning to roll back to the closed position by feeding the pull strap upwards and diagonally. This prevents the strap from building up and creating a bulge in the fabric.

3. The window awning is now ready for travel with no further locking required.

## DRIVERS DOOR POWER STEPS

If your London Aire is equipped with a drivers door, the left front basement compartment will house a power "swing out" set of stairs. These stairs will swing out and back to any time the drivers door is opened to allow easy egress to and from the drivers seat. The operation of these steps is totally automatic.

**CAUTION**

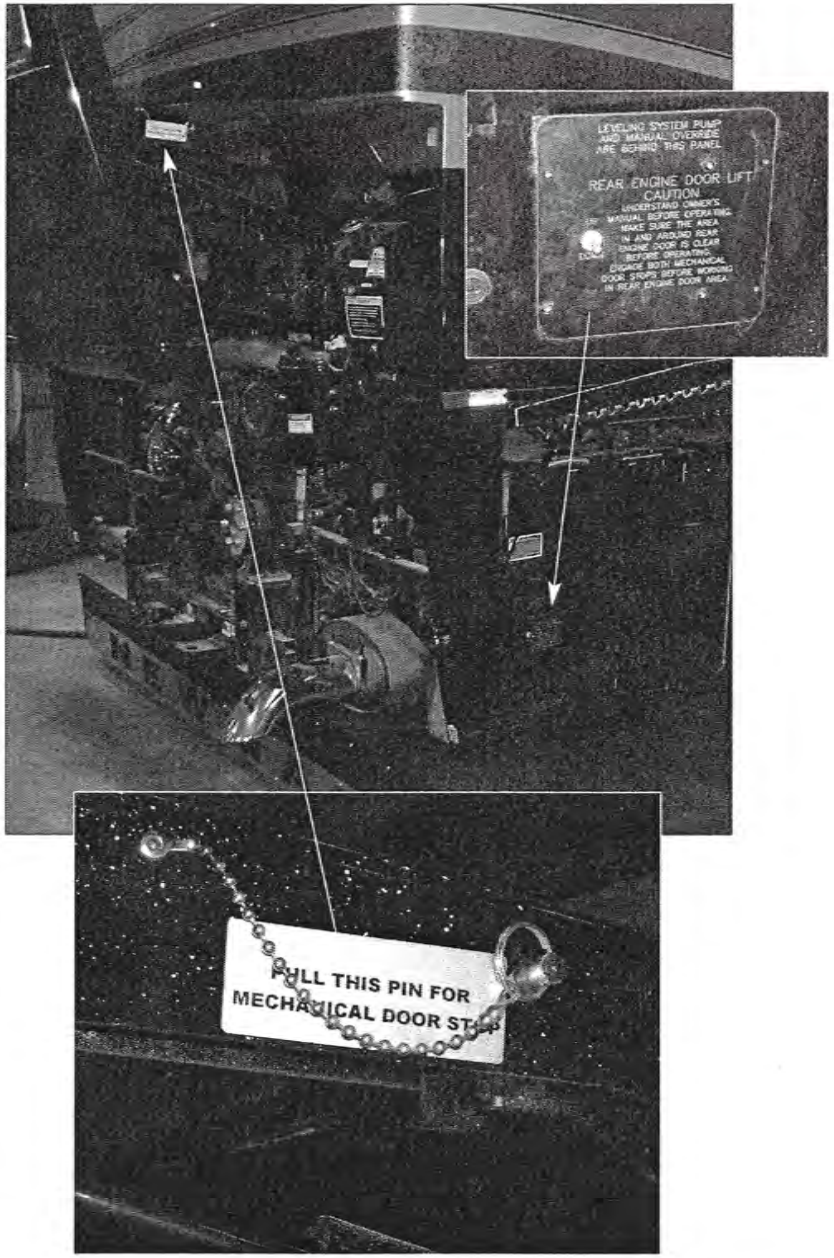
Do not store anything in the left front basement compartment where the steps are stored.

## Exterior Engine Access Cover

Located at the rear of your London Aire is the Engine Access cover. This cover features hydraulic operation to raise and lower the access door. The switch that controls this operation is located on the door side, inside the louvers at the very rear of the unit. Follow the directions located on the placard adjacent to the switch.

> **WARNING**
>
> The rear engine cover MUST have the lock pins removed from their holes and the brackets they retain locked into place any time it is open and the rear engine is being serviced. Failure to secure the cover with the brackets could result in severe damage to your unit, as well as great physical harm or death to anyone struck or struck by the door.

Be certain the area around the engine access door is clear of obstacles prior to opening or closing it. Take care to make sure fingers, hands, feet, head, and other body parts are clear of the door and all of the operating parts in the lift mechanism when operating it. Once extended, be certain to remove the safety pins, allowing the adjacent brackets to lock the cylinders in place.



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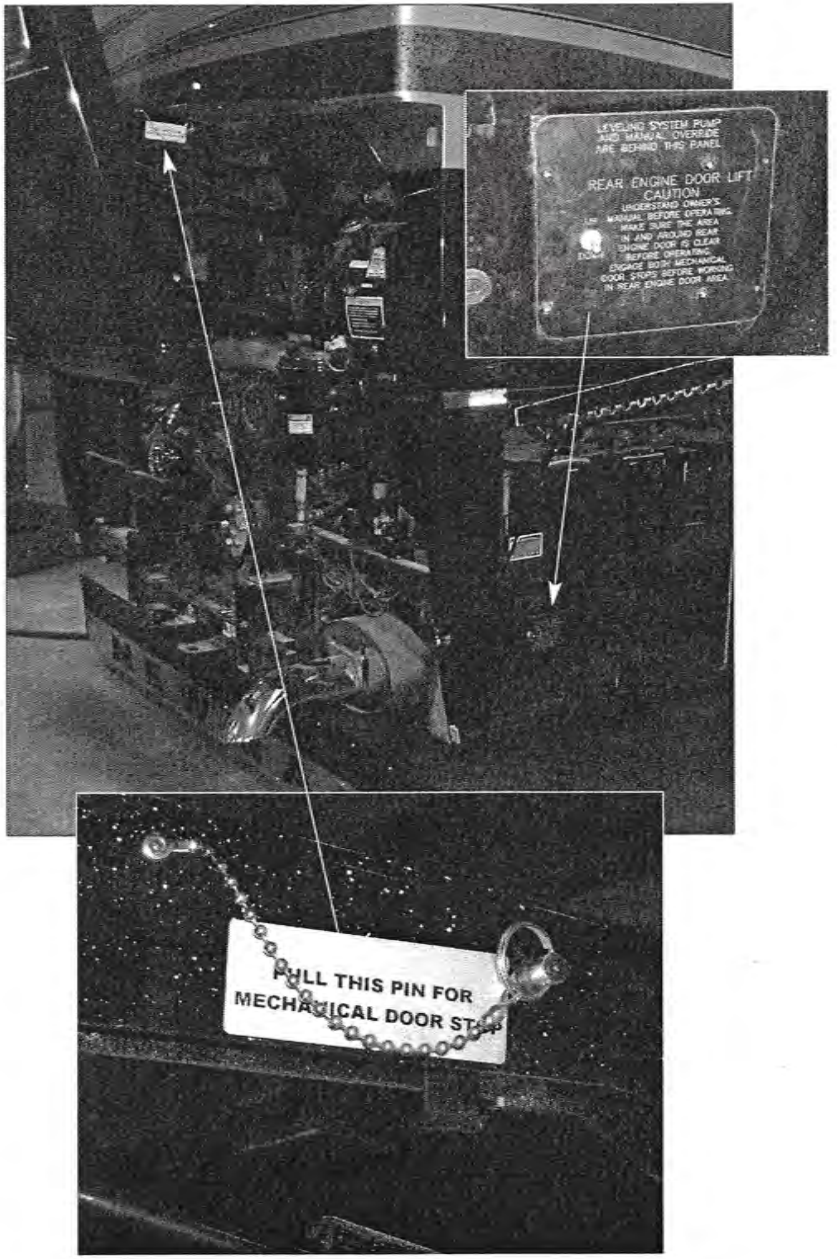


Chapter 7

# ELECTRICAL FEATURES

## General Information

There are two electrical systems in your coach. They are the 12 volt DC system and the 110 volt AC system. Most standard appliances require 110 volt electricity while the majority of the lighting used in recreation vehicles is powered by 12 volt electricity. The power for the 12 volt system is supplied by the coach batteries, which are charged by the charge circuit in the inverter, or the engine alternator while in transit. The power for the 110 volt systems is supplied by the power cord when the unit is connected to an outside power source or by the generator. The inverter can also supply 110 volt power. It will transform 12 volt "DC" (Direct Current) electricity from the batteries into 110 volt AC ("Alternating Current") power for basic appliances and accessories.

**CAUTION**

Failure to turn off the 120 volt appliances when starting or stopping the generator may damage the transfer switch and/or electrical appliances.

**WARNING**

Use of "Adapter" cords with the RV shore power cord. The London Aire is manufactured with 50 amp shore power cord (has 4 prongs). To provide the correct amperage into the RV, and to assure the operation is as designed, it is important that they be plugged into the correct type of receptacle. 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. NEWMAR CORPORATION CANNOT ASSUME LIABILITY FOR FAILURES OCCURING TO THE RV, ITS ELECTRICAL SYSTEM, OR ANY OF ITS COMPONENTS FROM THE USE OF ANY ELECTRICAL ADAPTER.

## 110 Volt AC System

The 110 volt AC system in your unit is designed to provide safe power for operating AC powered appliances and accessories in your unit. It is wired as a 50 amp, single phase system. Incoming power is supplied to your unit from one of three sources:

### Shore Power Cord

The "shore power" cord supplies electricity to the coach via the connection at the campground post.

### Generator

The generator supplies AC current to your coach when running. You generator is hard wired into the "Automatic Transfer Switch", which routes power into the breaker box and beyond to the accessories it powers.

### Inverter

The inverter is designed to invert DC power from the house batteries into AC to operate the applicable appliances and accessories. The inverter also has a charge circuit that will recharge the house batteries when AC is present from the shore power cord or generator.

### Incoming AC Power

The incoming power from the generator or shore power cord is routed to the main breaker panel. The source is selected by way of an "Automatic Transfer Switch". When 110 VAC is present on the incoming legs, the Automatic Transfer Switch will select that as the power source, and will switch automatically to it.

**IMPORTANT**

If power is supplied to the system by both the genset and shore power cord, the automatic transfer switch will select the generator input by default. By prioritizing the generator circuit, power will always be available as long as the generator will run, regardless whether there is access to shore power. If the unit is plugged into a shore power outlet at a campground, and the generator is started, the automatic transfer switch will default to the generator circuit.

To connect the unit to 110 volt shore power, first make sure all of the breakers are in the off position. This is done to avoid a power surge. Unwind the power cord from the electrical compartment. The standard electrical service in this unit is 50 amps with a flexible cord on power reel. Check to make sure the pins in the outlet are oriented correctly, that they match the power cable, and that they are in good condition. If there is a circuit breaker switch at the plug, it should be turned OFF before making the connection. Insert the plug completely into the outlet and turn the circuit breaker on. Close and lock the electrical compartment door to keep the contents clean, dry, and secure. Close the cover on the power box, if equipped, to avoid an unintended disconnection and to keep contents clean. Switch the main breaker to the ON position. The 120 volt system will energize all 110 volt circuits and outlets when the main breaker is turned on.

**IMPORTANT**

It is important to inspect the shore power cord before and after each use. If the cord or plug shows any signs of damage, either from abrasion or heat, or if the pins are loose, or the insulation is damaged or pulled back at all, it should be inspected by a qualified technician for potential replacement. NEVER use a shore power cord that has exposed wires or signs of heat damage (melting insulation or cover, misaligned pins, etc.).

## 110 VAC Breaker Boxes

### Main Breaker Box

The 110 volt and 12 volt breaker boxes are generally located in the bathroom cabinetry. Circuit breakers and fuses are installed to protect the electrical system from overloading. Do not attempt to change the circuitry or add appliances yourself. Please consult an authorized Newmar Service Center.

### Inverter "Sub-panel" Breaker Box

The circuits that the inverter supplies power to are independently protected in a smaller "sub" panel located adjacent to the main breaker box. This panel is powered by the inverter. When the unit is plugged into shore power or the generator is running, the current passes through the inverter to supply power to these circuits. When there is no external AC power source, the inverter powers these circuits with the house batteries. Note that every appliance and accessories in your unit is not on the Inverter "Sub" Breaker box. Only those appliances in the Inverter "Sub" Box will be powered by the inverter.

**IMPORTANT**

All generator and inverter functions are controlled by the E-Plex touch screen system. See chapter 2 for detailed operating instructions.

## Generator

The generator in your unit is located between the front frame rails, and is mounted on a hydraulic cradle that will extend or retract the generator at the touch of a button. It is wired into the "Automatic Transfer Switch", and will power all the 110 volt AC circuits in your London Aire. The generator can be

started from the dash switch, through the "E Plex" system, or remotely started at the generator itself.

Located on the generator remote start panel (at the generator) are two main breakers for the two output legs of the generator wiring. Please note that on start up, there is a momentary delay in the "Automatic Transfer Switch" engaging to pass the electricity on from the genset.

The generator in your London Aire 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 level.

Please refer to the generator manufacturers operating guide for specific information on maintaining your new genset. Regular oil changes and other maintenance performed at the prescribed intervals will greatly extend the life of your generator.

## Inverter

Your London Aire is equipped with a Magnum 2800 Sine Wave Inverter. An inverter changes DC power from the house batteries into AC current to operate most of your appliances. When 110 VAC is present from the generator or shore power, internal switching in the inverter passes the electricity through to the appliances it controls, and turns on a charge circuit to recharge the batteries. The inverter is controlled by the E-Plex Touch Screen in your unit.

The ME inverter / charger has two modes of operation: "Inverter" mode (providing power to the appliances from the house batteries), and "AC" mode (running from shore power or if your genset is running). When your inverter is in the "AC" mode, it passes power directly to your appliances, as well as recharges the batteries using a three stage battery charger ("Bulk", "Absorption", and "Float"). This approach to battery charging provides rapid and complete charging cycles without placing undue stress on the batteries. Inverter operation is completely automatic.

**IMPORTANT**

Inverters draw power from the "house" batteries to provide current to most of the appliances and accessories in your unit without having to plug into shore power or run your generator. Because they use DC power from the batteries to do that, energy consumption from those batteries is high, and increases significantly as more appliances are added to the load. To extend battery life, minimize the number of appliances operating at any given time. All AC operated appliances have a label attached to tell how much power they consume. Be sure to allow sufficient time for recovery / recharging between battery use cycles.

The Inverter and Auto Gen-Start System are all controlled through the Touch Screen Multiplex System described in Chapter 2. The Touch Screen system is designed to immolate the controls provided by the Inverter manufacturer, and perform essentially the same functions as the remote control panel they describe in their literature.

## Inverter Modes of Operation

### Search Mode

With "search" mode enabled, the inverter pulses the AC output looking for an electrical appliance (typically 5 – 100 watts, depending on the setting you've selected). Whenever there is no appliance, the inverter goes into a "search" mode (sleep) to minimize energy consumption. During this time, the green LED

light on the remote panel flashes (slow) to indicate "search" mode. When an appliance in your unit is turned on, the inverter recognizes the need for power, and automatically starts the inverter.

### Inverter Mode

Whenever the AC power from the shore power cord or the generator is no longer sensed, the inverter automatically switches to battery power, with no interruption to your appliances. The inverter's green LED flashes once every two seconds (medium flash) to indicate it is operating on battery power and is providing AC to your coach.

### A/C Shore Power Mode

Whenever incoming "AC shore power" is sensed, the inverter automatically transfers to the shore power line with only minimal interruption to your appliances.

### Bulk Charge Mode

When the inverter is running on nominal AC input (shore power / genset), it charges the batteries. The inverter's green LED stays ON (solid) to indicate the first stage of charging. During bulk charging, the inverter supplies the maximum amount of current possible to the batteries. As the battery voltage rises to a set value (typically around 14.1VDC for GEL, 14.3 VDC for AGM, and 14.6 VDC for liquid lead acid), the charger will then switch to the next charging mode.

### Absorption Charge Mode

As the inverter continues to run on nominal AC input (shore power / genset), and the batteries have been successfully "bulk" charged, the inverter will enter the second stage of charging. The inverter's green LED will flash once every second (fast flash) to indicate absorption charging for 1 – 3 hours, depending on the battery bank selected (see separate ME "Remote" manual for selection information). The charger then switches to it's final mode.

### Float Charge Mode

As AC input (shore power / genset) continues, the inverters green LED flashes once every eight (8) seconds (slow flash) to indicate the third and final state of charge. The batteries are held at the "float charge" voltage (13.6 VDC GEL, 13.1 VDC for AGM, and 13.4 VDC for liquid lead acid) as long as AC is present at the inverters input. Float charging reduces battery gassing, minimizes watering requirements (for flooded batteries) and makes sure the batteries are maintained at optimum capacity.

### Battery Saver Mode

This mode is designed to keep batteries fully charged over long periods (storage) without drying them out. When the charger is in the "float" mode for over 4 hours with no DC loads running, the charger will turn off. If the battery voltage dips below 12.5 VDC, the charger will automatically initiate the "Float" charge mode to return them to full charge.

## Inverter Fault/Alarm Conditions

### Fault / Alarm Conditions

The inverter monitors the incoming AC power (shore power / genset), the batteries, and itself. Whenever a condition occurs that is outside the normal operating parameters, the inverter will take the necessary steps to protect your appliances, batteries, and itself from damage.

### Low Battery

Whenever the battery voltage reaches a low level (programmable from 9.0 VDC to 11.0 VDC), the inverter will initiate "Low Battery Cut Off" (LBCO), which automatically shuts the inverter down, along with all connected loads, to protect the batteries from over discharge damage. The green LED on the remote panel turns off, and the red "Fault" LED turn on to indicate the fault condition.

### High Battery

As the inverter is charging, it constantly monitors the batteries. In the event the battery voltage approaches too high a level, it automatically turns off the battery charger to prevent damage to the batteries. The shut off threshold is approximately 15.5 VDC.

### Overload

During inverter and AC shore power / genset operation, the inverter monitors both AC and DC circuits. In the event of a short circuit, or an overload condition, the inverter will shut down.

**IMPORTANT**

High battery voltage may be caused by excessive voltage from the alternator, solar panels, or another external charge source. Be sure to correct the cause of the overcharging condition to prevent damage to the batteries and electronic equipment in your London Aire. The inverter must be manually restarted after this fault.

### Over Temperature

During inverter operation, if the inverter becomes overheated, it will shut down to protect itself from damage. The E-Plex touch panel will indicate battery temperature and any faults that might occur.

### Set Up Button

This configures the inverter/charger modes. This would include the following adjustable modes and parameters:

1. Search Mode (set "search" watt level to bring inverter out of "sleep" mode).
2. LBCO (Sets Low Battery Cut Out voltage).
3. Battery Size (Sets approximate battery bank capacity).
4. Battery Charge Rate (Sets maximum charge rate for batteries during the three stages of battery recharging).
5. Battery Type (Used to select battery type for charge profiles).
6. AC Dropout Voltage (Used to set low voltage threshold for transfer from shore power to batteries).

### AGS System

The AGS system (Auto Generator Start) is designed to, when activated, start and operate the genset in your London Aire under certain circumstances, and within certain programmable parameters. Using data you input, it can be set to start and run the air conditioners when interior temperatures get too high, or start the genset to run when battery voltage dips below a certain level.

> **WARNING**
>
> Set the AGS to "AutoGenSt OFF" before performing any service work to the generator or coach electrical systems. Damage, injury, and death may result from unexpected or inadvertent starting of the generator.

The primary programming for this system is done through the Magnum inverter remote, but certain parameters are defined at the AGS Control Module.

> **IMPORTANT**
>
> It is recommended that the "AutoGenSt OFF" system be left off while your unit is stored for extended periods, or if you will be away from the unit for extended periods. This setting is also recommended any time the coach is plugged into shore power.

Using the Multiplex Touch Screen controls, you can program the AutoGenSt as follows:

#### AutoGenSt Cntrl

Used to turn AGS system on and off, and to enable the "quiet time" feature.

#### AutoGenSt OFF

Disables the "Auto Generator Start" function.

#### AutoGenSt Enable

Enables the AGS system to automatically start and stop the generator based on the coaches interior temperature or low battery voltage conditions. Desired temperature and voltage thresholds are programmed into the system using the inverter remote panel.

#### AutoGenSt Test

Starts and runs the generator for 30 seconds, fully testing the AGS system in the process.

#### AutoGenSt w / Quiet Time

When this selection is made, the "Set Current Time" menu appears, prompting you to set the current time (for reference). Set the correct "Quiet Time" hours on the AGS controller, located adjacent to the 12 volt fuse panel the bathroom.

## Solar Panel Prep

Your unit has been pre-wired for installation of solar panels on the roof. To access them, find the metal plate located on the roof labeled "Solar Panel" or Solar Prep". Remove the cover to expose the red and white wires.

The two wires are routed from the junction box on the roof to the basement of your unit, terminating in the compartment where the shore power cord is stored.

# 12 VOLT DC SYSTEM

## General Information

There are two separate 12 volt DC electrical systems on your London Aire; one for the "chassis" portion, and the other for the "house" portion.

The "chassis" electrical system uses DC voltage to operate chassis related electrical accessories and lights, such as the headlamps, dash instrumentation, engine starting and management circuitry, and so on. This system includes a set of chassis batteries, and is charged in transit by the alternator. The chassis batteries have a disconnect switch located in the rear engine compartment.

The "house" electrical system uses DC voltage to operate all the house related DC lights and accessories, such as the interior lighting, ceiling vents and fans, slide outs, the water pump, and so on. The house electrical system also supplies the power (through the house batteries) for the inverter to operate. When 110 AC current is present, the inverter has a charge circuit that engages to charge the house batteries.

Though separate in operation, the two DC electrical systems are tied together through a battery isolator circuit. This circuitry is designed to keep the systems separated under most operating circumstances, but still allows them to be tied together under certain conditions. This is accomplished through a component called the Bi-Directional Isolator Relay Delay (BIRD). This component allows the two separate battery systems to be tied together for charging purposes or for "boosting" purposes if one set of batteries is low.

In transit, the alternator on the engine is the power source for charging batteries. The function of the "BIRD" allows the chassis batteries to be recharged off of the power coming from the alternator. Once the chassis batteries have been recharged (approximately 13.3 VDC), the "BIRD" will turn on circuitry that will then allow the house batteries to be charged in transit by the alternator. This allows both sets of batteries to charge while the coach is in transit.

When the RV is parked (with the engine off), and is connected to 110 VAC power (either generator or shore power), the "charge circuitry" in the inverter will engage, and will charge the house batteries. Once the house batteries have reached full charge (approximately 13.3 VDC), the "BIRD" will again engage circuitry that connects the two sets of batteries together, allowing the charge circuit in the inverter to charge the chassis batteries as well. This "Bi-Directional" operation works to keep both sets of batteries charged to capacity, regardless of whether it is in transit, or parked with incoming AC current.

## 12 Volt DC Circuit Protection

### House Circuits

The "house" fuse panel is located in a cabinet in the bathroom. This panel contains fuses for most of the Newmar installed 12 volt DC accessories, including interior lighting, vents and fans, and so on. The fuse panel uses conventional "spade" type automotive DC fuses. Fuse amperage is labeled on the end of the fuse for easy viewing and replacement.

**IMPORTANT**

NEVER replace a fuse with a higher amp capacity fuse than was originally installed. This compromises the circuit protection by allowing more amperage to flow through than the circuit was designed for, and could lead to failure of the component being operated, overheating of the wiring, or fire. Always use the same amperage fuse when replacement is necessary.

The "dash" fuse panel is located in the left front exterior compartment. This panel contains relays and fuses that protect Newmar installed dash accessories, including dash lights, blower fan, auxiliary accessory ports, and more. This panel uses standard "spade" type automotive fuses. The relays on this circuit board are not replaceable; they are permanently mounted to the circuit board and should be inspected only by a qualified technician prior to having any work done to them.

### Chassis Circuit Protection

The chassis 12 volt DC circuit protection is located in two primary areas on your London Aire. First, the front electrical panel, with fuses and relays, is located in the LF basement compartment, along with the Newmar dash fuse panel. This panel consists of fuses and relays that control engine start up and operating functions. It is recommended that these circuits be serviced ONLY by a trained Spartan chassis technician.

The first basement compartment aft of the right rear tires houses the chassis diagnostic center. This service area contains diagnostic ports, relays, and circuit protection for the engine and transmission. This compartment should be serviced ONLY by a trained Spartan chassis technician.

## Batteries

As previously mentioned, your London Aire has two different sets of batteries. One set of batteries operates the Newmar installed "house" lights and accessories, and the other set starts the engine and operates the "chassis" electrical systems. Though similar in function, they are distinctly different battery types and arrangements.

**IMPORTANT**

Charging batteries give off gasses as the fluids inside "boil". Because of this, 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.

Replacement batteries should be the same as was replaced. Any time one battery in a set of batteries is to be replaced, it is important to have all the batteries in the system tested to assure all are okay. If one defective battery is replaced, while leaving another weak or defective battery, lowered performance, or ultimately damaging the new or good batteries can be the result.

## House Batteries

The standard battery arrangement in the London Aire is a set of fdhe same batteries, significantly increasing the available reserve. Douglas batteries for operation of the chassis electrical systems. The London Aire comes with two (2) "group size" 37 - 12 VDC batteries with 960 cranking amps.

## Your All Electric London Aire

Your London Aire is "All Electric"; it is designed to operate solely on electricity, and will have no Propane gas tank or Propane fired appliances. Additional changes will include a larger bank of batteries (as previously mentioned), an electric range, and an electric refrigerator.

Note that because the London Aire does not have Propane, the refrigerator needs 110 AC current all the time to operate. Because of that, the refrigerator circuit is on the inverter.

Chapter 8

# PLUMBING & BATH FEATURES

# FRESH WATER SYSTEM

**IMPORTANT**

Ease of operation was the key element in the design of the water compartment and plumbing in your unit. It is very important that you read and understand all the operating instructions for the plumbing system prior to using your unit. Failure to connect and operate the system correctly can result in damage that is not covered by the Newmar limited warranty.

**IMPORTANT**

The fresh water system in your London Aire is designed to operate at a maximum of 60 PSI. Water pressure levels above that can damage the fresh water plumbing in your unit. If your travels take you to a destination where water pressure is above 60 psi, you must install a pressure regulator to reduce the incoming pressure, or fill the fresh water tank and use the internal water pump to supply water to your unit.

## Kitchen Sink

The kitchen sink installed in your unit is a double-bowl design equipped with two sink covers to provide additional counter space when not in use. Cleaning care consists of washing with mild detergents and a soft cloth. Avoid using "S.O.S." type cleaning pads because they may scratch the surface. The faucet in the kitchen is a single-handle faucet with a pullout spout.

## Bath Sink, Shower & Accessories

Use care when cleaning the bathroom sink to prevent scratching the surface. The bathroom accessories include two towel bars and a tissue holder. The faucet in the bathroom consists of a metal body with a brass finish. The shower installed is a combination fiberglass tub/shower with a glass shower door. The white tub faucet with shower head, hose and bracket coordinate with the sink faucet. An optional assist handle may be installed in the tub/shower.

## Multiplex Touch Screen Monitor Panel

The Multiplex Touch Screen Monitor Panel allows you to check the approximate levels in the fresh, gray, and black water holding tanks, as well as the battery condition and Propane gas level (on units with the "All Electric" option, the monitor panel will not have an Propane gas reading).

There are additional Touch Screen Monitor Panels located in the bathroom and in the basement water compartment. These additional screens are designed just to give readings for all the holding tanks in the unit. No other functions (inverter, genset, HVAC, etc.) controlled by the main Multiplex Touch Screen are accessible by the auxiliary Multiplex Touch Screen Monitor Panels.

## Water Pump Operation

Your London Aire has a fully self contained fresh water system with a fresh water storage tank, and a "demand" style 12 volt DC electric water pump. This pump is designed to build pressure in the fresh water plumbing in your coach, operating only when there is a demand for water on the system. When any water pump switch is turned on, the water pump will come on and build 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

The water pump is self-priming and totally automatic, operating on demand whenever water is required. The water pump is used to pressurize the fresh water system when the unit is not connected to city water. The switches to this pump may be located in the bathroom, on the monitor panel, and in the water works compartment. To start the pump follow these instructions:

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.
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.
7. Never allow the pump to run for long periods of time without water in the supply tank. Pump damage or blown fuses may result.

All of the water should be drained from the fresh water system when the unit is not in use for more than one week. For more detailed information regarding the water pump, refer to the water pump manufacturer's brochure in your Owner's Information Package.

## Exterior Water Compartment

The heart of the plumbing in your London Aire is the exterior water compartment. All plumbing functions can be controlled from this location. Additionally, the connection points for city water, sewer rinse, and holding tank draining are all located in this compartment.

For your convenience, several items have been placed in this compartment to help keep you and your plumbing compartment clean. Located in this compartment are a towel holder, a liquid soap dispenser, an exterior shower with flex hose, and an exterior water spigot where a conventional "garden" style hose can be connected.

## City Water Connection/Hose Reel

The city water connection is made with the white hose on the red reel in the left side of the water compartment. In conjunction with the "Fresh Water Fill Valve", this water source is used for a number of purposes, including pressurizing the plumbing in your unit, and filling the fresh water demand tank. The reel contains 35' of water hose.

The hose reel deploys manually by simply pulling the hose outward from the compartment. Once the desired length has been reached, route the hose down through the appropriate opening in the water compartment, which will allow you to close the compartment door. A switch located in the water compartment provides power for return; tripping the switch will activate the electric motor to retract the hose back onto it's reel.

**CAUTION**

Make sure the hose has an clear route back to the water compartment when retracting. If it catches on something, then suddenly releases, tension can cause it to fly back suddenly, potentially causing physical harm or injury to you and damage to your coach.

## Fill Valve Operation

The rotating "Fill Valve" located in the center of the water compartment is used to pressurize the fresh water system in your unit, as well as to fill the fresh water demand tank. When the unit is connected to city water, the "Fill Valve" is used to pressurize the fresh water plumbing in your unit, or fill the fresh water tank, or both. The panel is clearly labeled; simply rotate the "Fill Valve" to the appropriate position to perform the desired function. You can monitor the fresh water tank via the small "Multiplex" display unit located in the basement water compartment.

## Domestic Hot Water

The hot water in your unit is heated by the "Oasis" heating system. Turning the 110 heating element(s) on will usually provide sufficient hot water for most household chores. To operate an appliance that uses water, or to assure plenty of hot water for showering, turn on the Oasis. Both heat sources can be used at the same time to further sustain hot water performance.

## Water Filtration System

Your London Aire was manufactured with a fresh water filtration system. This system 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.

To replace the filter cartridges, turn off the water supply to the RV (at the city water connection). Unscrew the filter canisters by rotating it clockwise. Replacement filter cartridges are available through your Authorized Newmar Dealer; have them order part number 03738.

Insert the new filter cartridge, positioning it so the opening in the bottom of the filter seats on the molded ring at the bottom of the canister. Reattach the canister to the filter housing by rotating the canister in a counter clockwise direction. When replacing the filter, make certain the rubber "O-Ring" seal is properly positioned in its groove in the cartridge housing. An improperly seated or missing seal will cause leakage around the perimeter of the filter housing. Use caution not to over tighten the canister when attaching it back to the housing.

**IMPORTANT**

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.

## Water Distribution Manifold

Located in the upper left hand corner of the exterior water compartment is the water distribution manifold. The primary hot and cold water lines for the unit fed to this distribution center, and through a series of valves, supply water to the multiple plumbing systems in the unit.

In addition to offering greater organization and more balanced flow to the fresh water system in your unit, this distribution manifold offers the flexibility to allow you to shut off sections of the system while still using others. The blue knobs at the top are cold water supply valves; the red ones at the bottom are hot water supply valves. A tool is supplied with which you can open and close the valves as or if necessary.

## WASTE WATER SYSTEM

### General Information

The waste drainage system was designed to provide adequate and safe storage and/or disposal of waste materials. All of the materials used in the making of this system are tested by a nationally recognized testing laboratory. The drainage system uses plastic piping and fittings connected to the sinks, toilet, and holding tanks. This provides for their drainage to an outside termination. The unit should be reasonably level for best operation of the system. There are two separate waste systems. The gray water system is for waste water from the sinks and shower. The black water system is generally for sewage waste from the stool. Each tank has its own control valve, and both tanks drain through the sewer drain hose.

### Toilet

The standard toilet in your unit is a china stool. The toilet operates with water from either the fresh water tank with the water pump on or the city water supply. Before using the stool, add water to the bottom of the tank. Refer to the "BLACK WATER TANK" instructions in this chapter. The stool flushes waste directly into the black water holding tank. The stool uses high velocity water injection to produce a swirl effect in the bowl. The greatest problem that causes stool solids to build up in the holding tank is lack of liquids. When using your stool, it is wise to fill the stool 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. To add water to the stool bowl, press the button for "power fill" until the desired water level is reached. To flush the stool, push down on the lever until the water swirls. A small amount of water should remain in the bowl.

The stool should be cleaned regularly for maximum sanitation and operational efficiency. Clean the toilet bowl with a mild bathroom cleaner. do not use chlorine or caustic chemicals, such as laundry bleach or drain opening types, as they will damage the seals in the toilet and dump valves.

Refer to the toilet manufacturer's owner's manual in your Owner's Package for complete instructions and a troubleshooting guide.

### P-Traps

Each of the sink drains, the shower drain, and the washing machine drain (if equipped) has a water trap (P-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 splash out of the sink and shower drains. 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.

## Black Water Holding Tank

The black water, or sewage, holding tank is located directly beneath the toilet. Before using the stool, you will need to treat the tank with water that is mixed with an odor controlling chemical. These chemicals are readily available at any RV supply store. Be careful not to spill the chemical on your hands, clothing, or the carpet because it may cause a permanent stain. Pull the toilet levers forward to allow the chemical to mix with the toilet water. Continue pulling the toilet levers until at least one inch of solution is directly under the toilet. Release the levers, and the waste tank is ready for use.

**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.

## Gray Water Holding Tank

The gray water holding tank is located in the underbelly of the unit. It is primarily used for the drainage from the kitchen and bath sinks and the shower.

## Waste Water Disposal

Both of the holding tanks terminate in a valve arrangement that permits draining each tank separately or together. It is recommended to drain the black water tank before the gray water tank. This will allow the water from the gray tank to wash the black water residue from the drain lines and hose. 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 when the protective cap is installed on the pipe. Always drain the tank into an acceptable sewer inlet or dump station.

**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.

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.

The holding tanks should only be drained when they are at least 3/4 full. Doing this will provide sufficient water to allow the complete flushing of waste materials in the drain lines and hose. If the tanks are not 3/4 full, add enough water to allow for sufficient flushing.

To empty the waste water tanks, connect the adapter to the drain hose. Use the adapter supplied with your unit. If the adapter is lost or broken, one can be purchased from any RV supply store. Once you have placed the adapter on the drain hose, it can remain there for the life of the hose. One end of the hose threads up through the hole in the bottom of the service compartment, and the other end of the hose feeds into the sewer at the dump station. Unscrew the cap off the drain. Connect the hose with the adapter in place to the drain fitting.

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. After you have drained the black water tank, immediately drain the gray water tank. Doing this helps to flush the black water from the sewage hose.

When both of the tanks are empty, flush them with a fresh water rinse before you close the valves. The gray tanks are easily flushed 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. Always close the gate valves and secure the end cap to prevent leakage while in transit. After draining the black water tank, it is recommended to add a few gallons of water and a holding tank deodorant (such as Thetford Aqua-Kem) to help control the odor and break down the solids. Follow the instructions given on the holding tank deodorant package.

When using dump stations for draining the holding tanks, please keep other travelers in mind by practicing good housekeeping. Leave the dump stations in good order. Above all, do not pollute.

## Camping with Sewer Hook-Up

When camping at parks with sewer hook-up, it is important to keep the black water holding tank gate valve closed at all times, except when dumping. The gray tank can be kept open while hooked to a sewer connection but again, 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.

**CAUTION**

The gray tank valve must be in the open position when operating the optional washing machine.

## Sewage Tank Rinse

To aid in maintenance and cleaning, the sewage tank on your London Aire is equipped with a "Sewage Tank Rinse". This system uses a specially designed spray head permanently located in the sewage tank that cleans the inside of the tank when a water supply is connected.

**IMPORTANT**

Always drain the sewage tank PRIOR to rinsing. NEVER rinse a sewage tank that is full. The sewage drain MUST be open while rinsing the sewage tank, and the drain hose MUST be positioned to drain into an approved sewage dump station. Failure to open the valve will cause the sewage tank to fill with water, and can cause damage to your plumbing and interior.

The Sewage Tank Rinse should have its own dedicated water supply hose. NEVER use a hose that will be used for drinking or other uses. Attach the hose to the external water supply, then to the Sewage Tank Rinse connection. Attach the sewer drain hose to the outlet, and place the open end in an approved sewer "Dump Station". Open the sewer drain gate valve. Turn on the external water supply to rinse the tank. Allow the water to rinse the tank for a minimum of 3 – 5 minutes to insure it is clean.

## Winterization

It is critical to winterize the plumbing in your unit any time it is going to be either stored in temperatures below freezing, or used only on a limited basis in cold weather. Winterization is simply the removal of all of the water from the plumbing system. It also includes adding a potable antifreeze to at least portions of the systems (P-Traps) to help prevent freeze damage.

Located in the basement water compartment is a label identifying the steps used to winterize the fresh water system in your London Aire. The label reads as follows:

1. Drain and bypass the Water Softener
2. Drain Fresh Water Tank and Hose Reel
3. Close "Low Point" Hot and Cold Water Valves
4. Close Top "A" Valve On This Panel
5. Open Valve "B" Below It
6. Insert Hose into Container of Potable Antifreeze
7. Turn On Water Pump
8. Open All Faucets
9. Flush Toilet
10. Open All Drains

**WARNING**

USE ONLY A POTABLE "RV" ANTIFREEZE IN THE FRESH WATER SYSTEM OF YOUR LONDON AIRE. AUTOMOTIVE ANTIFREEZE CONTAINS ETHYL GLYCOL, WHICH CAN BE HARMFUL OR FATAL IF INGESTED.

This basic procedure allows you to drain as much of the water out of the system as possible, then adds safe antifreeze to the lines, faucets, p-traps, and tanks. It is important to remember to open all the fresh water drain valves (for the hot and cold water lines, the hose reel, and the fresh water tank) prior to pumping potable antifreeze through the system. Always remember to turn the water pump off when winterization is complete. Please note that the winterization hose and valve are located behind the panel where the soap dispenser is mounted.

**The following is the detailed procedure for winterizing your London Aire:**

1. Drain and bypass the Water Softener; Remove Filters and bypass the water lines on them (under cabinetry inside unit and in basement water compartment where applicable).
2. Open all "Fresh Water" related drains (hot and cold low points and fresh water tank). Drain as much water as possible; close all drain valves.
3. Set "Fill Valve" to "City Water / Auto Tank Fill" position (pointing up).
4. Attach compressed air fitting to "City Water Hose" (Reel). Set air pressure to 40 psi. Apply 40 psi air pressure to this setting for at least 30 seconds. (This forces water out of any lines and pockets that may not get antifreeze in a later step).
5. Go to exterior refrigerator service panel, and access the water valve/solenoid. Remove supply line and flex line to ice maker. Drain both lines until no more water comes out. The air pressure in the lines will force the existing water in this line out. Reattach water lines and close water supply valve to the refrigerator.

6. Switch "Fill Valve" to the "Manual Fill" position (to force any water out of the additional lines and valves between the tank and water pump). Apply 40 psi of air pressure to this valve position for at least 30 seconds.

7. Turn off air pressure and remove air hose from "City Water" connection. Switch "Fill Valve" to "City Supply / Manual Overide" for the rest of the winterization procedure.

8. In the exterior Water Compartment. Engage "Winterization" valves by closing the top "A" valve, and opening the "B" valve below it. Put the end of the clear "winterization" hose in a container of RV "Potable" Antifreeze. Turn on the water pump.

NOTE: APPROXIMATELY 5–7 GALLONS OF POTABLE RV ANTIFREEZE ARE REQUIRED TO WINTERIZE AN LONDON AIRE.

9. Start with the farthest faucet from the water compartment (usually the kitchen sink faucet). Open every valve (don't forget drinking water dispensers and both hot and cold sides of the faucet) and run until RV antifreeze flows freely from each. Close that faucet and move to the next faucet until all have been winterized. DO NOT forget the interior and exterior showers, and the toilet.

10. Winterize appliances as necessary:

    A. Winterize the dish washer (if so equipped) by running the appliance through a partial "rinse" cycle. Potable antifreeze will run into the wash drawer (where the dishes are), allowing antifreeze to the fill and drain areas of the appliance. It is important to run the entire rinse cycle so that the fill valves and drain valves and lines receive antifreeze. Note that this appliance only has a single "hot" water connection.

    B. Winterize the Washer / Drier (stackables or single unit) by running a complete rinse cycle in both hot and cold settings. Once the washer has drained the antifreeze, turn the appliance off, lift the lid, and add approximately one gallon of RV antifreeze to the wash tub.

    C. Ice maker was winterized during the initial steps of the procedure.

## Sanitizing

To assure complete disinfecting of your fresh water system, it is recommended that the following procedure be followed on a new system, on one that has not been used for a length of time, or one that may have become contaminated. This procedure is also recommended before long periods of storage, such as over the winter months:

1. Drain the fresh water tank by opening the drain valves. There is one valve per water tank. All of the faucets should be in the closed or off position.

2. Prepare a chlorine solution using one gallon of water and 1/4 cup of chlorine bleach (5% sodium hypo-chlorite solution). Prepare enough of the chlorine solution to administer one gallon of solution for every 15 gallons of tank capacity. For sanitizing this unit, prepare 4 - 1/2 gallons of the chlorine solution. This mixture puts a 50 PPM (parts per million) residual chlorine concentration in the water system that will act as a quick kill dosage for harmful bacteria, viruses and slime forming organisms. Concentrations higher than 50 PPM may damage the water lines and/or tank.

3. Once the fresh water tank is empty, close the drain valves on the water tank.

4. Pump the chlorine solution into the tank. This is done by placing the winterizing hose into the chlorine solution. Close the valve from the fresh water tank to the pump and open the valve from the solution to the pump. Turn the tank fill valve from city water to tank fill. Turn on the water pump until all of the solution is pumped into the fresh water tank.

5. Turn off the water pump. Close the valve to the solution. Open the valve from the tank to the water pump. Fill the water tank with the city water tank fill (or by using the same method as was used to put the sanitizing solution into the tank). Remove the water filter (from the drink dispenser faucet, if installed) and install the by-pass pipe to allow the sanitizing solution access to the faucet. Open each faucet in turn including the kitchen faucet, bath faucet, inside and outside shower, turning on both the hot and cold, and flushing the stool until all of the air has been purged from the pipes and the water runs freely. The entire system will then be filled with the sanitizing solution.

6. Allow the 50 PPM disinfecting solution to stand in the system at least four hours.

7. Drain the system and flush with fresh water. The water system needs to be flushed with clean water repeatedly, if necessary, until there is no chlorine taste or smell left in the system. To remove any excessive chlorine taste or odor that might remain, prepare a solution of one quart vinegar to five gallons of water. Allow this solution to agitate in the tank for several days by vehicle motion. Drain the solution and refill the tank with clean water.

**IMPORTANT**

Make sure the chlorine bleach solution is thoroughly and completely purged from the plumbing before using the fresh water system. Also, never use alternative cleansers; only potable materials may be used in your fresh water plumbing system.

## Water softener design and basic operation

This owner's guide will give you the information needed to keep your water softener in good operating condition. Please read the entire guide to familiarize yourself with the use, care and protection of your water treatment appliance. Service Manual for "Model 5600 SE down flow" will provide additional information on your water softening system.

The following are two questions that are commonly asked about water softeners:

Q. What will the water softener remove from my water?

A. Your water softener is designed to remove hardness and dissolved iron from the water entering your LondonAire coach.

Q. What is the water softener not designed to remove from water?

A. Sand, sediment other particulate matter are not effectively removed with a water softener. If your water source has these items present, make sure your sediment pre-filters are in working order. If the water softener is exposed to these items, the warranty will be void.

The water softener is designed to regenerate (a cleaning process) based on the demand for water within your coach. The meter measures the flow of water that is used. Upon reaching the set volume of usage, the water softener will regenerate. The regeneration process will take approximately 33 to 44 minutes, depending on the actual settings of your system. During the regeneration process, no water will be able to enter the fresh water storage tank. If you need water during this process, you must turn on the water pump. The water pump will supply water from you fresh water storage tank.

Operating specifications–Puritan LSSA-10-SE
Maximum flow rate . . . . . .5.0 gpm
Resin quantity . . . . . .35 cu ft
Maximum Hardness . . . . . .45 gpg
Electrical requirement . . . . .120 volt AC-60 Hz
Maximum pressure . . . . . .110 psi
Minimum pressure . . . . . .20 psi
Maximum temperature . . . . . .110˚ F
Minimum temperature . . . . . .35˚ F
pH range . . . . . .6.8-12.0
Types of Salt: Solar salt is recommended

## Manual regeneration

A manual regeneration is initiated by pressing the left button on the control valve directly below the LED display. A manual regeneration is normally suggested for the following situations:

1.The system has been idle for 14 days or more
2. The softener has run low or out of salt
3. Water quality is poor due to overrun or mechanical problem

## To start the process of winterization

### Salt usage and types

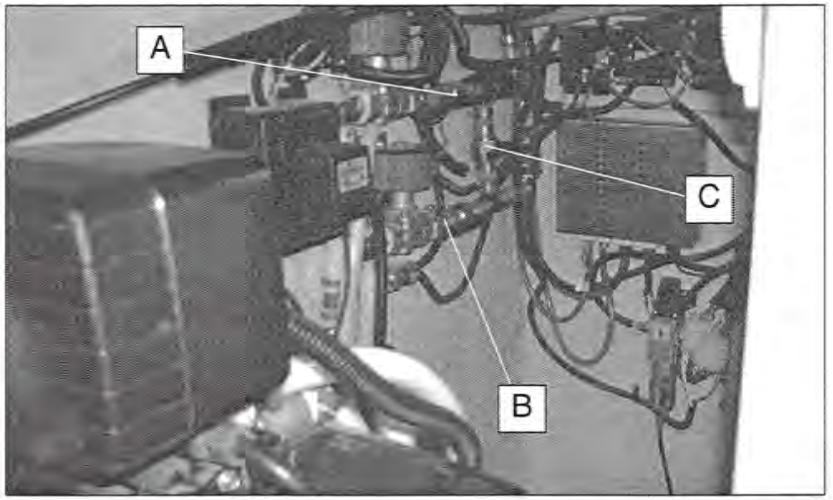
The water softener will use 4.5 lbs of salt (factory default) for each regeneration.

Salt should always be kept above the water level to ensure proper brine solution. This also reduces the splash of liquid brine during transport.

During idle times and high humidity conditions, the salt should be monitored for bridging or mushing. It is recommended to stir and agitate salt occasionally to help prevent bridging. Clean solar salt is recommended for use. Pellet or cube style salt is ok for use. Pellet and cube salt must be monitored closely for mushing.

## Manual bypass

In the event there is a malfunction or during shut down of the water softener, you can manually bypass the system. The manual three valve bypass system is located directly behind




the water softener.

You will find the 3 valves located on the plumbing behind the softener. To actuate the bypass, follow the steps below:

1. Close the inlet and outlet valves (valves "A" and "B" as shown in photo)
2. Open the bypass valve (valve "C" as shown in photo) This will allow untreated water to go directly to your coach or fresh water tank.

Reverse the process to resume providing treating water.

## Cold weather and winterization process

The water softener must not be exposed to temperatures of below 34° F. If the system is exposed to freezing temperatures, significant failure and damage could occur. (Note: the warranty does not include damage due to freezing)

The best option for storage of your water softener and other components in your coach is in an environment above 40° F.1 If this is not available, follow the directions listed below.

## Winterization process

Follow your Newmar owner's manual guidelines for winterization with compressed air.

You must winterize the water softener with compressed air prior to winterizing the rest of the coach.

1. Apply compressed air to main (city) water supply hook up.

**IMPORTANT**

Air pressure must not exceed 40 psi.

2. Place valve on Auto fill mode (this will bypass the fresh water tank) Open kitchen faucet. Allow the air to force water out of the softening system. Continue until only air flows from the faucet. Turn off the faucet and the air pressure.
3. Start a manual regeneration on the water softener by pressing the regeneration button. The button is located on top of the softener controls on the left side Immediately apply air pressure to the main water supply (not to exceed

80 psi). Allow the air to flow a minimum of 2 minutes in the backwash cycle. Display will read "1—6".

4. Press the "regeneration" button again. The softener will advance to brine and rinse cycle. Display will read "2——20". Allow the air to flow for 2 minutes.

5. Press the "regeneration" button again. The softener will advance to rinse cycle. The display will read "3——4". Allow the air pressure to flow for 60 seconds

6. Press the "regeneration" button again. The softener will advance to the brine refill mode. The display will read "4—3". Allow the air pressure to flow for 60 seconds.

7. Place the water softener in the bypass mode: You will find the 3 valves located on the plumbing behind the softener. To actuate the bypass follow the steps below: Close the inlet and outlet valves (valves "A" and "B" as shown in photo) Open the bypass valve (valve "C" as shown in photo)

8. You now have completed the winterization process for your water softener. Continue the process of winterization of the remaining components and plumbing.

## Master Programming and settings for Water softener

(The default settings are as follows)

| Format | Display | Newmar Default Settings |
|---|---|---|
| 1.US/Metric Format | U—1 | U—1 for US Format |
| 2. Regeneration Type | 7—2 | 7—2 Immediate Regeneration |
| 3. Treated Water Cap. | 480 | 480 gallons based on composite hardness of 25 grains/gallon |
| 4. Regeneration Day Override | A—0 | A—0 Zero Day Override |
| 5. Regeneration cycle step #1 | 1—6 | 1—6 Backwash cycle will be 6 minutes |
| 6. Regeneration cycle step #2 | 2—20 | 2—20 Brine and Rinse Cycle for 20 minutes |

continued on page 8:14

| Format | Display | Newmar Default Settings |
|---|---|---|
| 7. Regeneration Cycle Step #3 | 3—4 | 3—4 Rapid Rinse Cycle for 4 minutes |
| 8. Regeneration Cycle Step #4 | 4—3 | 4—3 Brine tank refill cycle for 3 minutes |
| 9. Regeneration cycle step #5 | 5 Off | 5 Off Cycle 5 Not Used |
| 10. Meter size | F133 | F133 5600 3/4" turbine flow meter |
| 11. Valve Type | 0—1 | 0—1 5600 SE control valve |
| 12. Line Frequency | LF60 | LF60 60Hz line frequency |

***See master programming instruction sheet for information on how to modify the program settings.***

**If the feed water harness is greater than 25 gpg, this regeneration frequency (gallons) will need to be reduced. Consult a local water treatment professional for information about the water in your area.

Chapter 9

# AUDIO, VIDEO & OTHER ELECTRONICS

# AUDIO/VIDEO FEATURES

**IMPORTANT**

This section is designed to give operating directions on the many entertainment and convenience electronic components in your new London Aire as Newmar has installed them. It does not, however, give detailed instructions pertaining to every option and feature of the components described herein. For complete operating directions for each component, please refer to the manufacturers information located in the literature bags that were provided with your unit.

## The Harmony Universal Remote

To simplify operation of the various electronic components in your London Aire, we have employed "Harmony" universal remote. This remote will operate the following components:

1. Bose Lifestyle 38 Surround Sound System
2. Sony Television(s)
3. Video Selector Box (for switching, NOT for power)
4. Exterior Entertainment Center TV
5. Phillips "Mirror Vision" TV in the bedroom

These components can all be controlled either individually, or through programming, can be used to operate a number of electronic accessories together as a package. For example, if you want to watch a DVD movie in a home theater "surround sound" mode, select "Watch a DVD" on the Harmony remote, and it will activate all the applicable components and sets the system for operation in that mode.

### Watch TV

To watch TV on the front or mid body TV's, press the WATCH TV button at the top of the remote.

### Watch a DVD movie

To watch a DVD movie and use the TV to control your volume, press the MORE ACTIVITIES button at the top right of the remote. Use the NEXT button to navigate through the screens until you come upon the WATCH A DVD function. Press the button that corresponds with this activity. This will activate all components needed to watch a DVD.

### Watch a DVD movie w/Home Theater

Press the WATCH A MOVIE button at the top left of the remote. This will activate all components needed to watch a DVD movie while using the home theater receiver as your audio source.

### Listen to CD

Press the LISTEN TO MUSIC button on the top of the remote. This will activate all components necessary to listen to your CD's.

### Listen to Radio

Press the MORE ACTIVITIES button at the top right of the remote. Use the NEXT button to navigate through the screens until you come upon the LISTEN TO RADIO function. Press the button that corresponds with this activity. This will activate all components needed to listen to a CD.

If you have any problems, or if something is not functioning correctly, please press the HELP button. This will walk you through the steps necessary to make your entertainment system function properly. For more information on operating this remote please refer to the owner's manual or go to www.harmonyremote.com

## Video Selector/Switch Box

The Video Switch Box in your unit is used to control the video signal flow throughout the coach. It allows you the opportunity to view satellite, DVD, or on-air video programs on any or all of the televisions in your London Aire.

Operation of the Video Switch Box is automated through the Harmony Universal Remote. Video source selection is automatic when the remote calls for a particular system to operate. For example, when you want to watch a DVD in the living room of your unit, selecting "Watch A DVD" function on the remote will automatically choose the DVD player as the video source for the TV in the living room.

> **IMPORTANT**
>
> The Harmony Universal Remote will control all of the functions of the Video selector Box except turning the power on or off.

Manual video source selection can also be accomplished by using the video source selection buttons on the face of the box. For manual operation, simply select the video source you want to watch on the TV of your choice.

Each "Output" has up to eight (8) selectable video inputs. Newmar uses only the first three. They are arranged as follows:

1) DVD Player (Bose Lifestyle 38 System)
2) DSS High Definition Satellite Receiver # 1
3) DSS High Definition Satellite Receiver # 2

This arrangement allows you to watch three different programs on three different TV's at one time, or any combination there of. Keep in mind that inputs 4-8 are NOT used.

The "Output" sections on the front panel of the Video Switcher refer to televisions in the unit.

**"Output 1"** is for the front TV's in your unit. It applies to both the Sony 26" built into the front overhead cabinets, as well as the 40" Sony that is ceiling mounted. Select "Video 5" on the ceiling mounted TV, or "Video 4" on the cabinet mounted TV to receive video signal from the switch box.

**"Output 2"** goes to the Phillips "Mirror Vision" bedroom television. Select "CVI" (Component Video Input) to view video programming from the video switch box.

**"Output 3"** goes to the Sony flat panel television located in the exterior entertainment center. As with the front overhead cabinet mounted Sony TV, you will select "Video 4" to view the programming sent by the Video Switch Box.

## Sony Flat Panel TV

Your new London Aire has been equipped with multiple Sony flat panel televisions. They can be operated either

independently, or as part of a system when using the Harmony remote. When operating the TV independently, it can be manipulated through either the controls on the TV, or with the Sony supplied remote control.

To operate the TV independently of the system, press the power button on the front, or use the remote to power the TV up. Once the TV has been turned on, use the input selector on the TV, and the video switch box to choose the desired programming.

### Viewing Programs in High Definition

The Sony TV(s) in your unit are HD (High Definition) compatible, meaning they are capable of displaying the resolution and clarity of High Definition broadcasts and video sources. The London Aire is equipped with two DSS High Definition Satellite Receivers, and a video switch box that carries the High definition signal throughout the coach, including the exterior TV.

To view High Definition programming, you will need to contact Direct TV and establish an account, and provide them the access codes to get your programming turned on. Once your programming is on, simply select the channels you want, and send them to the TV of your choice via the Video Switch Box.

## Phillips Mirror Vision Bedroom TV

In the bedroom on certain floorplans is the Phillips "Mirror Vision" vanity mirror / LCD TV / monitor. When inactive, the screen is blank and gives a clear, reflective surface for grooming. When activated, the translucent mirror screen becomes an LCD television for watching a variety of video sources, including use as a computer monitor. For connection to your computer, you will find a video port located in the footwell of the vanity cabinetry, or inside the cabinetry directly below the LCD TV location.

The Mirror Vision TV also features an AM FM radio, which is accessible and tunable via the remote control.
The Phillips LCD "Mirror Vision" TV in your unit is HD (High Definition) compatible, meaning it is capable of displaying the resolution and clarity of High Definition broadcasts and video sources. To play High Definition broadcasts on this TV, establish an account with Direct TV for your DSS High Definition receivers, tune a High definition channel in, and select the appropriate video source on the video switch box. Please refer to the Phillips Owners Guide that accompanied your unit for detailed instructions on operating the many features and functions of your new Phillips TV.

## Bose Lifestyle 38 Surround Sound System

The Bose Lifestyle 38 "Surround Sound" Home Theater system has been incorporated into your London Aire to bring the movie experience "to life". Located throughout your unit are five speakers and a subwoofer to deliver the dynamic, crystal clear digital sound, detailed sonic imagery, and advanced picture quality. This appliance can be operated manually, or as part of the "Harmony" remote control system.

Unique to the Bose Lifestyle 38 System is the ability to store your favorite music on it, and being able to share that stored music with the Bose Wave Radio located in the bedroom. Using the Bose remote, you can perform a variety of operations between the two. For more detailed information, and instruction, please review the video that accompanies this owners guide, as well as the Bose manufacturers literature.

## Bose Wave Radio

Mounted in the bedroom of your London Aire is a Bose "Wave" radio. It offers functions as an alarm clock and an AM/FM/CD stereo. The audio programming from the bedroom TV can also be heard through the "AUX" input of the Bose Wave Radio. The unit is controlled via a small remote control provided with your unit.
It is also linked to your Bose Lifestyle 38 system in the living room area of your unit so it can access the music you have stored there. Using the Bose remote, you can access the stored music, or play DVD sound as well.

Additional information and demonstration is provided on the video that accompanies this Owners Guide.

## Exterior Entertainment Center

For your convenience and pleasure, an Exterior Entertainment Center is standard on London Aire. This entertainment center features a flat panel Sony TV on a swing out bracket for ease of viewing, and an AM/FM/CD stereo and speakers to provide outside music when desired.

The Sony flat panel television is mounted on a swivel bracket that allows you to swing the TV out and away from the basement compartment, and to swivel it to allow for better viewing angles. To release the television from its retainers, grasp the sides of the TV firmly at the supplied "cut outs" and pull it directly toward you. It will release and swing freely to the desired viewing position. To store the TV for travel, swing it back into the opening, taking care to align the retaining brackets on the back of the TV with the catches mounted on the bracket wall. Press the television firmly into place until the catches have snapped into place and the TV is flush in the opening.

**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 London Aire 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.

The external stereo can be used to listen to AM and FM broadcasts, and to play CD's. It has the same functions and features as your in-dash stereo.

The sound from the Sony TV in the exterior entertainment center can be played through the exterior stereo. Locate and press the "source" button on the stereo until the audio program from the TV is heard.

## Power Lift Antennae

Your unit is equipped with a Winegard television antenna that features a power lift mechanism to raise and lower the antennae mast. To operate the system, locate the switch panel in the passenger side front overhead cabinet.

When using the antennae, raise and lower it to full extension. Once the antenna is fully extended, it can be rotated to the position that provides optimum signal reception. In rural or fringe areas where reception may be poor or weak, the antennae head had a signal amplifier built in. To turn this amplifier on, use the "Antennae Booster" button Antennae Control Panel located in the same compartment as the elevation and rotation controls. You can then direct tune the local programming on any of the TV's in the unit. The signal from this antennae is NOT distributed through the Video Switch Box.

## KVH TracVision In-Motion Satellite System

The London Aire comes standard with the KVH "TracVision" in motion satellite antennae. This system employs a state of the art actively stabilized antennae system. Once the satellite is acquired, the antennae constantly monitors vehicle motion and position to keep the dish pointed at the satellite at all times.

Operating the KVH system is as simple as turning it on. Once the system has initialized, the display will ask you to select between a series of numbers; select 101, and the system will lock onto the appropriate satellite.

The system will need to be re-initialized each time the unit is switched off, or when power to it is interrupted.

When your unit is parked, once you have acquired the satellite of choice, you can turn the TracVision system off. This will help conserve power. If you decide to watch programming on another satellite, you will need to turn the TracVision system back on to search out and lock onto the next desired satellite.

## In Motion Internet Service

Your London Aire is equipped with cellular based "in motion" Internet access service. This service works with a card installed in your laptop computer to provide wireless access to the internet while traveling. The equipment for this service is located in the left front side overhead compartment, above and left of the drivers seat.

Chapter 10

# ROUTINE MAINTENANCE

# EXTERIOR CARE

**IMPORTANT**

Damage caused by improper or unapplied maintenance is not covered by your Newmar Limited Warranty.

## Washing

The exterior of your London Aire is made of smooth fiberglass. The "Masterpiece" paint is a BASF automotive exterior finish, painted in a "cover coat – clear coat" configuration. For additional brilliance and protection, the painted surfaces are clear-coated twice. The resulting finish is lustrous and durable, but requires careful maintenance to maintain that brilliant shine. Frequent washings and thorough cleanings are required to prevent damage to the vehicle finish after exposure due to damaging salts, calcium chloride, road tar, tree sap, insects and other foreign material. Damage caused by exposure to these items is not covered by your warranty agreement. Never wash the vehicle in direct sunlight, while the vehicle is hot or with hot water. Rinse the surface thoroughly before washing to remove loose dirt and road grime. Use ONLY a soft cloth or soft bristle brush designed specifically for automotive washing use to apply mild automotive detergents and water. Rinse the soap thoroughly from the finish, and dry the exterior with a soft towel or chamois. Build up of mud and dirt under the body can cause damaging rust on steel parts. Corrosive materials, such as those used for ice and snow removal and dust control, also accumulate on the underside of the vehicle. These materials should be removed by flushing the underbelly regularly with water, especially areas where mud and other foreign materials collect. The chance of corrosion can be minimized by frequent washings of the vehicle. When washing the vehicle, make certain that the undercarriage and the wheel wells are cleaned, as well as the exterior of the coach. Do not use strong soaps or detergents for washing the vehicle. Always use a mild soap in warm water, a commercially prepared product for automotive finishes or your local car wash. Be careful when using a pressure-type washer to avoid loosening any exterior decals or sealants, etc. After washing, carefully inspect the caulking around window frames and vents and any other joints that may have separated. Recaulking, if necessary, is relatively simple, and is considered routine maintenance, which is the responsibility of the owner.

**IMPORTANT**

Never use a strong solvent, such as lacquer thinner or harsh abrasives, on any of the exterior painted surfaces.

## Waxing

**IMPORTANT**

When using a polishing compound that does not contain a wax preservative, reapplying a coat of hard wax after polishing is recommended.

The exterior finish 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.

## Seals

The seals around doors, windows, vents, slide out trim and external seams should be checked at least twice a year. In addition, the roof seams should be inspected twice a year for cracking or peeling. If deterioration is noted during a routine maintenance inspection, reseal the seams or seals with an approved sealant to prevent leaks. It is recommended that a Newmar Authorized Service Center perform these inspections, and reseal when necessary.

Careful inspection of these seals on a regular basis will greatly extend the life and appearance of your London Aire. Every window, door, joint, and seam offers the opportunity for water entry, so diligent inspection is important. Clearance lights, headlights, and any accessories mounted to the exterior of your unit (doorbell buttons, grab handles, etc.) should also be inspected and resealed as necessary to prevent water entry.

The following list of sealants is recommended by Newmar for your London Aire:

**Proper Sealants for Application**

Plas-T-Cote . . . . . .Metal or fiberglass roof

Surebond #SB-140 . . . . . .Rubber laminated to metal Roof and all skylights.

Carlisle #502-LSW . . . . . .Rubber roof over wood Base

**Self Leveling Silicone Sealant**

Silicone Sealant . . . . . .To cover butyl and other sealants; not to be used as the main sealant.

Parbond . . . . . .To seal across tops of windows, etc. on exterior where silicone is not used.

## Fiberglass Roof

Your London Aire is equipped with a one piece fiberglass roof. 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.

**WARNING**

Use caution when working on top of your vehicle. The wet roof surface is extremely slippery.

The surface of the fiberglass roof has a gelcoat finish that is very similar to the paint on the exterior of your unit. This provides a bright, durable finish that is easy to maintain. Around the perimeter of the roof is a textured area designed to provide better traction while walking on the roof. Great care should be taken when walking on a roof that is wet, as the surface can be extremely slippery.

Clean the roof with a mild detergent and soft brush, such as you would use to wash the exterior of your unit. Stubborn stains, like tree sap or bird droppings, may require additional scrubbing. Do not use harsh chemicals, or any caustic or acid based solutions for cleaning. Standard household cleaners diluted in water and applied with a soft bristle brush provide the best cleaning action. Rinse with clear water, taking care not to spray directly into roof vents, air conditioners, the refrigerator chimney, or and other roof mounted accessories.

## Battery Inspection & Care

**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.

**CAUTION**

Disconnect the 120 volt electrical power cord and the negative terminal from the coach batteries before working on the electrical system.

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 and case. 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. 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. 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.

The batteries should be removed and stored in a warm place when not using your motorhome for an extended period of time. Mark the cables, positive and negative, for easy identification. Batteries are not to be stored on concrete floors. The batteries require periodic charging during storage. If the motorhome is to be stored for a long period of time, it is recommended that all of the batteries inside the unit be removed from clocks, radios, smoke alarms, etc. This will prevent unnecessary drain and corrosion of the batteries. The coach batteries are 6 volt RV/Marine deep cycle batteries. This type of battery consumes water and must be filled periodically. Please be sure to check the battery water level on a regular basis. Consult the owner's manual supplied by the battery manufacturer.

## Alloy Wheels

Your London Aire is equipped with Accuride Aluminum "Alloy" Wheels. With proper cleaning and maintenance, they will provide a lifetime of durability and beauty. Accuride recommends the following for maintaining your new alloy wheels:

1. Rinse the wheel with high pressure water to remove any debris, grit, or dirt particles. High pressure water is recommended.

2. Use a 100% cotton cloth dipped in a mild soap (dish soap or an automotive autowash soap) to help remove stuck on road dirt and grease.
3. Thoroughly rinse any remaining soap residue from the wheel.
4. Dry the wheel thoroughly with a 100% cotton cloth. Be certain all soap and water residue is removed as they can "spot" the finish, or discolor it.

**IMPORTANT**

To insure damage does not occur to your alloy wheels while cleaning, the following list must be adhered to:

**DO NOT** scrub the wheels before rinsing off loose particles with high pressure water; rubbing debris against the surface of the wheel will scratch it.

**DO NOT** use synthetic cleaning pads; synthetic cleaning pads can result in streaking on the surface of the wheel.

**DO NOT** use wire brushes to remove dirt or grime from the wheel surfaces.

**DO NOT** use strong detergents, acidic or alkaline cleaners to clean your alloy wheels. These solutions can attack the finish on the surface of the wheel, causing damage or dull spots in the finish.

**DO NOT** use strong solvents to remove grease or grime from the surface of the wheel. Damage to the wheel surface finish might occur.

**DO NOT** allow soap solutions to dry on the surface of the wheel; be sure to rinse them thoroughly after cleaning.

**DO NOT** use polishes or waxes on an Accu-shield aluminum wheel. The finish will maintain it's bright, shiny surface for years to come without the need for special polishes.

## Important RV Tire Information

READ AND UNDERSTAND THE FOLLOWING INFORMATION BEFORE TAKING YOUR FIRST TRIP IN YOUR RV!

**WARNING**

Routine maintenance on your RV is important, but it cannot be overstated just how critical proper tire maintenance is to the safety, operation, and durability of your new unit. To insure your tires are operating safely, regular inspection of your tires, and checking of tire pressures is absolutely mandatory. FAILURE TO FOLLOW PROPER INFLATION GUIDELINES MAY RESULT IN TIRE FAILURE, WHICH, UNDER CERTAIN CIRCUMSTANCE CAN CAUSE LOSS OF VEHICLE CONTROL OR ACCIDENTS THAT MAY RESULT IN PROPERTY DAMAGE, BODILY INJURY, AND / OR DEATH. 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 that is affixed to the interior wall just behind the driver's seat in motorhomes, and to the lower front corner of the road side sidewall on fifth wheel trailers. Below is a sample of the Federal ID Tag you will find with your RV. IT IS PARAMOUNT TO THE SAFE OPERATION OF THE VEHICLE TO MAINTAIN PROPER TIRE PRESSURES. TIRE PRESSURES SHOULD BE CHECKED AND ADJUSTED BEFORE AND AFTER EACH TRIP, AND SHOULD ALWAYS BE CHECKED AND ADJUSTED WITH THE TIRES COLD. NEVER ADD OR RELEASE PRESSURE FROM THE TIRES WHEN THEY ARE HOT (AFTER HAVING DRIVEN A MILE OR MORE).

MANUFACTURED BY / FABRIQUE PAR: DATE:

GVWR/PNBV KG ( LB)

| GAWR/PNBE | | TIRES/PNEU | RIMS/JANTE | COLD INFL PRESS./PRESS. DE GONFL. A FROID |
|---|---|---|---|---|
| FRONT/ AVANT | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |
| INTERM/ INTERM | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |
| REAR/ ARRIERE | KG ( LB) | | | KPA SINGLE DUAL ( PSI/LPC) ☐ ☐ |

THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN MOTOR VEHICLE SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE. - CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION.

V.I.N./N.I.V.: TYPE/TYPE: FD-228

# INTERIOR CARE

**WARNING**

Urea-formaldehyde is used in the productions 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. Proper ventilation should reduce the risk of such problems.

**IMPORTANT**

The fading of upholstery, carpet and other interior fabrics is generally caused by excessive sunlight. The drapes, blinds or shades should be kept closed when the vehicle is parked for an extended period of time to minimize the fading. Normal deterioration of appearance items due to wear and/or exposure is not covered by the Newmar Limited Warranty.

## Carpet

A weekly routine of vacuuming the carpet and fabrics throughout the vehicle is recommended. Doing this will prevent an accumulation of dirt that can detract from the materials appearance and shorten its life. Remember to empty or replace vacuum bags before they become half full. In carpet areas that receive the most sunlight, close the curtains frequently to prevent fading. And act quickly when anything is spilled or dropped on the carpet.

Included in the Owner's Information Package is the carpet manufacturer's Carpet Care Guide. The Carpet Care Guide lists detailed information on cleaning soiled areas and removing stains from the carpet installed in the unit.

## Fabrics

The fabrics used in this motorhome for the bedspread, draperies, headboard and valances 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. Some stains or soils are extremely difficult or impossible to be removed 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.

## Walls & Ceiling

The wall and ceiling coverings should be cleaned periodically to maintain a new appearance. Use a non-abrasive cleaner with a soft cloth on the walls. Do not use solvents of any kind. Solvents may damage the surface.

## Dash

In order to keep the dash in like-new condition, follow these guidelines:

**DO—**

1. Dust and clean the dash with a soft, damp cloth, or chamois, wiping the surface gently.
2. Use a mild detergent and lukewarm water.
3. Dry the surface, after washing and rinsing, by blotting with a damp cloth or chamois.

**DO NOT—**

1. Use harsh chemicals that may damage the dash.
2. Use cloths containing grit or abrasive particles or kitchen scouring compounds to clean or dust the dash.
3. Subject the dash to hard, direct blows.
4. Use boiling water, strong solvents or other materials listed below to clean the dash, as they will soften the plastic.

## Woodwork

The wood cabinetry should be cared for with furniture polish to sustain the natural beauty and luster of the wood. This will also keep your cabinetry looking new, and prevent the wood from drying. Use of area rugs and floor mats by the entrance door is recommended to trap dirt. To clean the flooring, begin by vacuuming the floor to remove loose dust and dirt. Then, damp mop the floor using one gallon of clean, warm water with a non-abrasive, soap-free cleaner. The mop should be damp, not dripping. Do not use soap-based cleaners, scouring powders, steel wool, abrasive cleaners, wax or polish on the floor. To remove stubborn spots like shoe polish, oil, tar, markers, scuffs, etc., use a household solvent, acetone or nail polish remover, then wipe with a damp cloth. To remove chocolate, grease, juice or wine, use warm water and a non-abrasive cleaner. To remove candle wax or chewing gum, carefully scrape off when the material has hardened. For further tips, please see the manufacturer's information sheet in your Owner's Information Packet.

### Counter Tops

To properly care for the countertop in your new unit, always use a heat pad or trivet to protect the surface from hot objects that may mar or damage the surface. Also avoid cutting directly on the surface and avoid using harsh chemicals on the counter top. Wipe the counter top with a damp cloth to remove water spots. For most dirt and stains, wipe with a damp cloth and use soapy water or ammonia-based cleaners.

### Accessories

Your London Aire is equipped with either brass or brushed nickel light fixtures, bath accessories and faucets. They are cleaned by wiping with a soft, damp cloth. Washing with warm water will remove dry water spots. Do not use cleaners that contain harsh or abrasive chemicals. Alcohol or similar solvents should never be used.

## Detectors

The CO detector (if equipped) is self-contained and DOES NOT require any maintenance other than normal cleaning and dusting. The smoke detector installed in this coach is 9 volt battery operated. The battery needs to be tested periodically and replaced when necessary. 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.

## Condensation

**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. 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. 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.

**IMPORTANT**

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. Newmar Corporation does not recommend the use of any catalytic heaters.

# ROUTINE MAINTENANCE

**IMPORTANT**

Aways follow the chassis maintenance guidelines found in the chassis manufacturer owner's manual.

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.
Items supplied by other manufacturers may require specific individual maintenance not listed herein. Please refer to the manufacturers' suggested maintenance guidelines in the Owner's Information Packet.

**IMPORTANT**

Cosmetic adjustments and alignments must be performed within the first three (3) months from date of original purchase for warranty consideration. Thereafter, these items are considered routine maintenance.

**Monthly**

1. Check battery water level.

**Every Three (3) Months**

1. Clean range hood exhaust fan filter and blades.
2. Check gas lines for leaks with soap solution or leak detector.
3. Test smoke alarm, carbon monoxide detector and Propane gas detector.
4. Check operation of windows, latches and hinges.
5. Clean the roof ducted air conditioner filter(s).
6. Clean and inspect all door and window seals; reseal where necessary.
7. Inspect and reseal around the tub and shower area where necessary.
8. Lubricate the exterior door hinges and latches with a graphite (silicone) lubricant.
9. Check, clean and tighten battery cables, and inspect batteries for proper fluid level.

**Every Six (6) Months**

1. Inspect the slide out for proper seal. If realignment is necessary, please contact an Authorized Newmar Service Center.
2. Inspect the exterior rubber slide out seals and apply a UV inhibitor, such as 303 Protectant.
3. Rotate tires as recommended by the tire manufacturer.
4. Check all gas appliances for proper operation.
5. Have the Propane system inspected by a qualified technician.
6. Lubricate the moveable parts on the entrance step.

**Annually**

1. Inspection of roof seams and joints should be performed by an Authorized Newmar Service Center. If resealing is necessary, it is the owner's responsibility and is not covered by the Newmar Limited Warranty.
2. Sanitize the fresh water system. Wax and buff all gel-coat surfaces on the vehicle as described previously in this chapter.

## Cold Weather Use

Although great care has been taken to build a well-insulated unit, recreational vehicles are not intended for extended use in subfreezing weather without special precautions. When the temperature drops below freezing, the furnace must be turned on to keep the unit warm. Continued use in cold weather will require the unit to be winterized.

Dear Newmar Owner,

The DVD that accompanies your Owners Guide was not available at the time of printing. It will be sent to you as soon as it becomes available. We apologize for any inconvenience this may cause.

Newmar Corporation