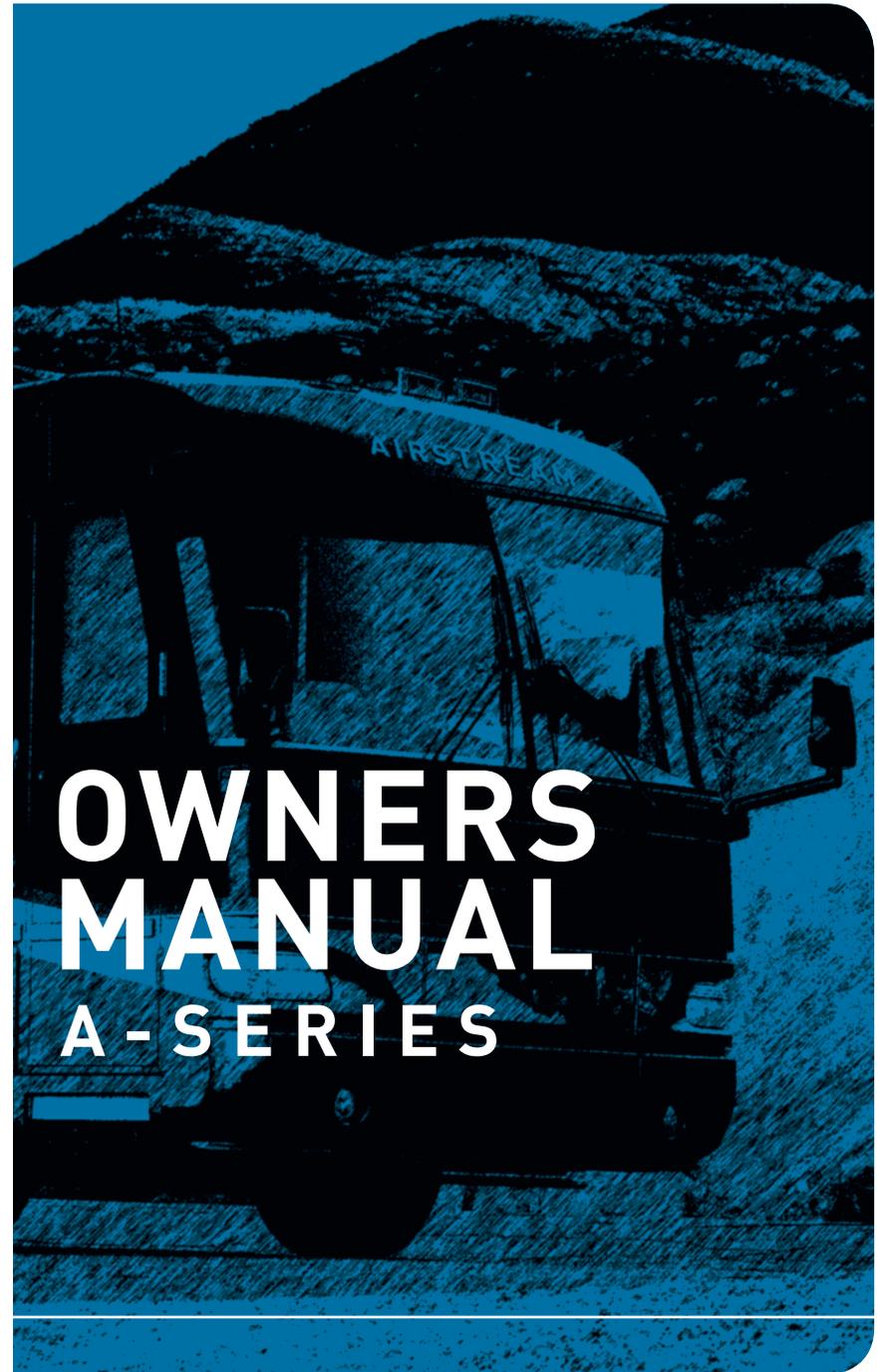


**AIRSTREAM**

A MOTORHOME GUIDE



# INTRODUCTION

# 2006 MODEL



The Owners Manual for your new Airstream Motorhome is designed to respond to the most frequent inquiries regarding the operation, function and care of the many systems that make modern motor homing a joy.

Airstream realizes our customers possess varying degrees of expertise in the area of repairing and maintaining the appliances in their motorhome. For this reason, the service and trouble-shooting information found in this manual is directed toward those with average mechanical skills. We also realize you may be more familiar in one area than you are in another. Only you know your capabilities and limitations.

We want you to use this manual, and hope you will find the information contained in it useful, however, should you ever feel you may be “getting in over your head” please see your dealer to have the repairs made.

The operation and care of component parts such as chassis, refrigerator, furnace, water heater and others are briefly explained in this manual. However, you will also find the complete manufacturer’s information supplied in a packet included with this manual.

**Note:** All information, illustrations and specifications contained in the literature are based on the latest product information available at the time of publication approval. Airstream reserves the right to make changes if and when new materials and/or production techniques are developed that can improve the quality of its product, or when material substitutions are necessary due to availability.

Throughout this manual **CAUTION** and  **WARNING** notations are used.

Failure to observe “**CAUTION**” can cause equipment damage if not observed..

Failure to observe “  **WARNING**” can lead to damaged equipment, serious personal injury and/or death if not observed.

Please read and follow all cautions and warnings. If any questions arise contact your dealer or the factory customer service department.

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# WARRANTY AND SERVICE

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## **AIRSTREAM INC.**

### **LIMITED WARRANTY**

#### **WARRANTY COVERAGE**

When you buy a new Airstream Motorhome from an authorized Airstream dealer, Airstream, Inc., warrants the motorhome from defects in material and workmanship as follows:

#### **BASIC WARRANTY PERIOD**

This warranty is for 30,000 miles (40,000 Kilometers) or two years, whichever comes first, beginning when the vehicle is delivered to the first retail customer or first placed into demonstrator service. This warranty must have started prior to the accumulation of 4,000 miles in order to be valid.

#### **ITEMS COVERED**

Any part of the motorhome or any component equipment installed by the factory is covered by the basic warranty *except* the following items, which are *not covered*:

- House Batteries
- Automotive Chassis
- Generator

The above items will be handled by their respective service points and according to their written policy. This limited warranty does not include failure caused by accident, abuse, normal wears, overload or any cause not attributable to a defect in original material or workmanship of the motorhome or component equipment as installed by the factory.

#### **LIMITATION OF IMPLIED WARRANTIES**

All warranties of merchantability and fitness for a particular purpose, whether written or oral, express or implied, shall extend only for a period of two years from the date of original purchase, or 30,000 miles, whichever comes first. There are no other warranties, which extend beyond those described on the face hereof and which expressly excludes conditions resulting, from normal wear, accident, abuse, exposure or overload. Some states do not allow limitation on how long an implied warranty lasts, so the above limitations may not apply to you.

#### **AIRSTREAM'S RESPONSIBILITY**

The basic **Airstream Limited Warranty** applies for a period of two years from the date of original purchase or 30,000 miles, whichever comes first, and the application date of all warranties is that indicated on the owner's Limited Warranty. Defects in items covered under this Warranty will be corrected without cost upon the return, at the owner's expense, of the motorhome or defective part to an authorized Airstream dealer.

# WARRANTY AND SERVICE



## CARE AND MAINTENANCE

This warranty covers only defective material and/or workmanship; adjustments are made at the factory prior to shipment, and rechecked by the dealer prior to delivery to the customer. Adjustments thereafter become a customer responsibility.

The owner is also responsible for following all recommendations, instructions and precautions contained in the Airstream Motorhome Owner's Manual and the individual manuals furnished by the chassis, appliance and other manufacturers.

## INSTALLATIONS NOT COVERED

Airstream Inc. does not accept any responsibility in connection with any of its motorhomes for additional equipment or accessories installed at any dealership or other place of business, or by any other party. Such installation of equipment or accessories by any other party will not be covered by the terms of this warranty.

## IF REPAIRS ARE NEEDED

If your motorhome needs repairs under the terms of the basic Airstream Limited Warranty, you should:

1. Take your motorhome to your selling dealer or other Authorized Airstream Dealer.
2. If the dealer is incapable of making the repair, request that he contact the Service Administration Department at Airstream, Inc., for technical assistance.
3. If repairs are still not made, the customer should contact:

## AIRSTREAM, INC.

419 W. Pike Street - P.O. Box 629

Jackson Center, Ohio 45334-0629

Attention: Owner Relations Department

Furnish the following information:

- The complete serial number of the motorhome
  - Mileage
  - Date of original purchase
  - Selling dealer
  - Nature of service problem and steps or service, which have been performed. (The owner may be directed to another dealer at the owner's expense.)
4. If, after taking the above steps, repairs are still not complete, the Airstream owner may request the motorhome be allowed to be brought to the Factory Service Center at the owner's expense.

## DEALER REPRESENTATION EXCLUDED

The full extent of the basic **Airstream Limited Warranty** is set forth-in detail in the folder, and in the explanation of the basic **Airstream Limited Warranty** covered in the Airstream Motorhome Owner's Manual. Airstream Inc. will not be responsible for additional representations or implied warranties made by any of its dealers to the extent those representations are not a part of, or are contrary to, the terms and conditions of the basic **Airstream Limited Warranty**.

# WARRANTY AND SERVICE

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## CONSEQUENTIAL AND INCIDENTAL DAMAGES

**Airstream, Inc., will not be responsible for any consequential or incidental expenses or damages resulting from a defect. Incidental expenses include, but are not limited to: travel expenses, gasoline, oil, lodging, meals, telephone tolls, and loss of work and loss of use of the motorhome. Some examples of consequential damages would be: stained curtains due to rain leaks or delaminated floor caused by a plumbing leak. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.**

## WARRANTY TRANSFER

The basic **Airstream Limited Warranty** is transferable to subsequent owners for the duration of the warranty period. Warranty transfer application forms are available from your dealer or the Airstream Inc. Service Administration Department.

## CHANGES IN DESIGN

Airstream Inc. reserves the right to make changes in design and improvements upon its product without imposing my obligation upon itself to install the same upon its products theretofore manufactured.

## CONSUMER ARBITRATION PROGRAM

Airstream, Inc. participates in the consumer Arbitration Program for Recreational Vehicle (CAP-RV). This third-party dispute resolution program is available, at no charge to you, to settle unresolved warranty disputes for recreational vehicles. This dispute resolution program reviews eligible product and service related complaints involving warranty covered components.

To find out more about this program, or to request an application/brochure, please call the Arbitration Administration office toll-free 800.279.5343.

For recreational vehicles purchased in the State of California: The CAP-RV program operates as a certified mechanism under the review of the California Arbitration Certification Program. You must utilize the arbitration program before claiming rights conferred by 15 USC section 2310 (Uniform Commercial Code) or Civil Code section 1793.22(b) (Son-Beverly Warranty Act). You are not required to use the program if you choose to seek redress by pursuing rights and remedies not created by those laws.

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

Thor Industries  
Airstream Inc.  
419 West Pike Street  
Jackson Center, Ohio 45334  
937-596-6111

# WARRANTY AND SERVICE

## WARRANTY EXPLANATION

Along with your new Airstream motorhome you have purchased the Airstream Limited Warranty. Read your Limited Warranty carefully. It contains the entire agreement with respect to Airstream's obligation on the Limited Warranty on your new vehicle. The terms of the Limited Warranty, and only those terms, will define Airstream's responsibility. When you receive your Limited Warranty file it for safekeeping.

Upon proof of purchase date to any Airstream Dealer Service Center, defects in materials or workmanship will be repaired or replaced without cost to the owner for a period of twenty four (24) months from the original purchase date, or 30,000 miles, whichever occurs first. Written warranties of some component manufacturers of the motorhome will be honored by Airstream for the duration on that manufacturer's warranty.

Items such as motorhome chassis, engine, tires, batteries and generator are serviced by their respective manufacturers and will be handled by their service centers according to the terms of their written policy. Any warranty forms from these manufacturers should be completed promptly, preferably at time of purchase.

Your motorhome chassis is pre-checked by its manufacturer before delivery to Airstream. All service to the chassis must be performed by the chassis manufacturer according to the manufacturer's warranty and service policies. Literature is supplied with each Airstream motorhome, which gives important information concerning its warranty coverage; however, the Airstream Limited Warranty covers the chassis heater, defrosters, windshield wiper blade, motor, and washer.

Paint and appearance items, which show imperfections, should be brought to the attention of your dealer at the time of delivery and during pre-delivery inspection. Normal deterioration by use and exposure is not covered by the Airstream Limited Warranty.

Damage to enamel or porcelain surfaces resulting from abrasion, collision or impact, and broken window glass are not covered by the Airstream Limited Warranty.

## The Airstream Limited Warranty Excludes:

### Normal Wear:

Items such as water purifier packs, curtains, upholstery, floor coverings, window, door and vent seals may show wear within the one year Limited Warranty period depending upon the amount of usage, weather and atmospheric conditions.

### Accident

Damage caused by accident is usually visible, and we strongly urge our dealers and customers to inspect the motorhome upon delivery for any damage caused by accident while being delivered to the dealer, or while it is on the dealer's lot. Damage of this nature becomes the dealer's or your responsibility upon acceptance of the motorhome. GLASS BREAKAGE, whether obviously struck or mysterious, is always accidental and covered by most insurance policies.

### Abuse

Lack of customer care and/or improper maintenance, including failure to comply with the terms of the Owner's Manual, or failure to heed proper vehicle operation shown by the dash instruments is not covered by warranty.



# WARRANTY AND SERVICE

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## Exposure

It is the responsibility of the owner to take such preventative measures as are necessary to maintain the exterior caulking and sealer of your unit. It is the responsibility of the owner to use reasonable, prudent care to prevent foreseeable secondary damage from rain, plumbing leaks, and the natural accumulation of moisture in your unit, such as a delaminated floor; stained upholstery, carpeting, or drapes; mold formation and growth; furniture damage, etc. Mold is a natural growth given certain environmental conditions and is not covered by the terms of the Limited Warranty.

Deterioration by sunlight is possible to such items as tires, curtains or upholstery. Steel or metal surfaces are subject to the elements, causing rust and corrosion, which is normal, and beyond the control and responsibility of Airstream.

## Overload

Overload Damage due to loading beyond capacity or to cause improper balance is not covered by the Airstream Limited Warranty. The Airstream motorhome body is engineered to properly handle any normal load. There are limits to the amount of load that can be safely transported depending upon speed and road conditions. If these limits have been exceeded the Airstream Limited Warranty will not cover resulting damage. For additional information on the load capacity of your motorhome consult your Owner's Manual or gross vehicle weight rating plate. Each motorhome is aligned during the last quality inspection. These tolerances will only change if the motorhome is subjected to abuse, such as dropping off a sharp berm, striking a curb, or hitting a deep hole in the road. Such damage would be considered as resulting from an accident which risks are not covered under the warranty. Abnormal tire wear and/or wheel alignment resulting from such damage is not covered under the terms of the warranty.

## SERVICE

The Airstream Silver Key Delivery Program is an exclusive Airstream program. Before leaving the factory each and every vital part of the motorhome is tested for performance. Each test is signed and certified by an inspector. After the motorhome arrives on your dealer's lot all of these vital parts and systems are again tested. When you take delivery of your new motorhome you will receive a complete checkout.

Please contact your dealer if you need service. Major service under your Airstream Limited Warranty is available through our nationwide network of Airstream Dealer Service Centers. An up-to-date list of Dealer Service Centers has been provided with your new motorhome. This list is current as of the date of publication.

Occasionally dealerships change, or new dealers are added who may not appear on this list. For this reason, it is suggested that you contact your local dealer from time to time and bring your list up to date. He can also provide you with additional copies if you need them.

## **ALL CENTERS OPERATE ON AN APPOINTMENT BASIS FOR THE UTMOST EFFICIENCY.**

When you require service from the Airstream Factory Service Center, or a Certified Dealer Service Center, please contact the service manager for an appointment, and kindly inform him if you are unable to keep the appointment date or wish to change it. Service may be arranged at the Factory Service Center by contacting the Service Coordinator at:

Airstream Factory Service Center  
419 W. Pike Street P.O. Box 629  
Jackson Center, Ohio 45334-0629  
Phone: 937-596-6111 Fax: 937-596-6802

# WARRANTY AND SERVICE

## You Should Also be Aware of the Following:

Airstream is not responsible for any consequential or incidental damages incurred as a result of any defect. Consequential damages include, but are not limited to, travel expenses, gasoline, oil, lodging, meals, telephone tolls, loss of work and loss of use of the motorhome.

In the event of a defect, the owner must take all reasonable corrective action to lessen the damages, which might result from such defect. Airstream will not be responsible for damages, which could have been avoided.

Airstream's responsibility is defined solely by the Airstream Limited Warranty. Airstream is not responsible for or bound by representations or warranties made by any of its dealers.

Your Airstream Limited Warranty is transferable to subsequent owners of the motorhome, but only for the duration of the warranty period. Warranty transfer application forms are available from your dealer or the Airstream factory.

## CONSUMER ARBITRATION PROGRAM

Airstream, Inc. participates in the consumer Arbitration Program for Recreational Vehicle (CAP-RV). This third-party dispute resolution program is available, at no charge to you, to settle unresolved warranty disputes for recreational vehicles. This dispute resolution program reviews eligible product and service related complaints involving warranty covered components.

To find out more about this program, or to request an application/brochure, please call the Arbitration Administration office toll-free 800.279.5343.

For recreational vehicles purchased in the State of California: The CAP-RV program operates as a certified mechanism under the review of the California Arbitration

Certification Program. You must utilize the arbitration program before claiming rights conferred by 15 USC section 2310 (Uniform Commercial Code) or Civil Code section 1793.22(b) (Son-Beverly Warranty Act). You are not required to use the program if you choose to seek redress by pursuing rights and remedies not created by those laws.

## REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect, which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Airstream, Inc.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Airstream, Inc.

To contact NHTSA you may either call the Auto Safety Hotline toll-free at 1-800-327-4236 (TTY 1-800-424-9153) or write to: NHTSA, 400Seventh ST, S.W., Washington, D.C. 20590.

You can also obtain other information about motor vehicle safety from the Hotline or view the NHTSA Website: [www.safercar.gov](http://www.safercar.gov)



# WARRANTY AND SERVICE

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## MAINTENANCE SCHEDULE



**WARNING:** FAILURE TO MAINTAIN YOUR COACH CAN CAUSE PREMATURE AND UNEXPECTED PARTS BREAKAGE AND/OR ERRATIC OPERATION THAT MAY BE HAZARDOUS.

**Note:** See Freightliner and appliance manufacturer's literature for further information.

### EVERY 1,000 MILES OR 60 DAYS

- |                     |   |
|---------------------|---|
| Escape Window       | Check operation of latches and upper hinge.                                 |
| Battery (Lead acid) | Check water level.  |
| Smoke Alarm         | Test and replace battery as required.                                       |
| Tires               | Check tire pressure (125 psi max.)<br><b>See tire warnings on page C-4.</b> |
| GFI Circuit Breaker | Test and record.  |

### EVERY 5,000 MILES OR 90 DAYS

- |                           |                                    |
|---------------------------|------------------------------------|
| Exterior Door locks       | Lubricate with dry graphite        |
| Exterior Hinges           | Lubricate with light household oil |
| Main Door Striker Pocket  | Coat with paraffin.                |
| Range Exhaust Hood        | Clean fan blades and wash filter.  |
| Roof Vent Elevator Screws | Lubricate with light household oil |

Main Door Step	Check and lubricate moving parts.
----------------	-----------------------------------

### EVERY 10, 000 MILES OR 6 MONTHS

- |          |                                      |
|----------|--------------------------------------|
| Exterior | Clean and wax.                       |
| Hitch    | Check bolts and welds. (60 Ft. Lbs.) |

### EVERY YEAR or 12,000 miles

- |         |   |
|---------|---|
| Battery | Clean, neutralize and coat terminals with petroleum jelly.  |
| Seams   | Check and reseal exterior seams, windows, lights and vents if necessary. Reseal with Bostik urethane sealant or equivalent as needed. |

# WARRANTY AND SERVICE

## MAINTENANCE RECORDS



DATE	DEALER	SERVICE PERFORMED

DATE	DEALER	SERVICE PERFORMED

# DRIVING

## WIDE BODY LIMITATIONS

Vehicles with overall body width greater than 96” are known as “wide bodies. Wide body vehicles are restricted to use on main highways in certain states. A vast majority of states allow 102” body width on all highways, but wide body width is not allowed on all federal highways in the United States. Your dealer may be able to furnish more specific information. If you are concerned about vehicle width, we invite you to consider other fine Thor vehicles offered in the standard 96” width.

## LOADING

Below is a sample of the weight information chart provided in all Airstream vehicles. This information can be found in your vehicle in one of the lounge overhead lockers.

### MOTORHOME WEIGHT INFORMATION

#### VIN OR SERIAL NUMBER

**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 MANUFACTURED 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	.....		
MINUS UVW	.....		
MINUS FRESH WATER WEIGHT OF	GALLONS @ 8.3 LB/GAL		
MINUS LP GAS WEIGHT OF	GALLONS @ 4.5 LB/GAL .....		
MINUS SCWR OF	PERSONS @ 154 LB/PERSON .....		
<b>= CCC FOR THIS MOTORHOME*</b> .....			

\*DEALER INSTALLED EQUIPMENT AND TOWED VEHICLE TONGUE WEIGHT WILL REDUCE CCC

CONSULT OWNER MANUAL(S) FOR SPECIFIC WEIGHING INSTRUCTIONS AND TOWING GUIDELINES. CD-130

See specification section in this manual for weights and term definitions.



**WARNING: NEVER exceed the weight ratings of the trailer hitch installed on a motorhome.**

The Unloaded Vehicle Weight (**UVW**), listed on the chart in your coach, is the weight of this motorhome as manufactured at the factory with full fuel, engine oil, and coolants.

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

## WEIGHT DISTRIBUTION

The motorhomes have large fluid tanks and lots of storage areas. It gives you great flexibility in loading. With flexibility comes responsibility. If you want to load down all the storage compartments the amount of fluids will have to be reduced. Distribute your additional cargo as evenly as possible with the heaviest objects located as low as possible.

Do you really want to carry 750 pounds of water to a RV park 1,000 miles away and then hook up to a city water supply? Even if you're going to the “boondocks” you can usually fill your water tank shortly before entering the area. Just reducing your load by 10 gallons of water lets you carry an awful lot of fishing and camping gear.

## WEIGHING

To determine the actual weight of your vehicle with personal cargo, and water, it must be weighed on scales. The most common scales are those used by states to weigh trucks used along the highway. In rural areas grain elevators are a good source and another would be a gravel pit. See instructions on weighing your vehicle later in this section.

If you have trouble locating scales, a call to your State Highway Patrol will usually find them very cooperative in assisting you.



**WARNING:** Do not exceed the Gross Axle Weight Ratings or the Gross Vehicle Weight Rating when loading your vehicle.

## SAFETY CHECK LIST

Your Airstream motorhome should be given a thorough safety check before a trip. Regular use of the following list will provide safe operation of your motorhome and will help you spot any malfunctioning equipment and correct the problem as soon as possible. The list is to help you and may not be all-inclusive.



**WARNING:** Failure to heed many of the following items may cause damage to the vehicle or personal injury.

## EXTERIOR CHECK LIST (BEFORE ENTERING VEHICLE)

1. Check condition of tires for proper inflation.  
**See tire warnings on page C-4.**
2. Check that sewer connection, all external compartments and filler openings are properly stowed or closed and/or locked.
3. Check that items stored on exterior of vehicle are securely tied down.
4. Would any items stored on exterior of vehicle present a clearance problem?
5. Lower and secure awnings/TV antenna.

## INTERIOR CHECK LIST (BEFORE DRIVING OFF)

1. It is important that the main door and cab door be completely closed and locked during travel. As an added precaution we recommend the dead bolt also be locked on the main door.
2. Turn off living area water pump.
3. Check that refrigerator door is fastened.
4. Check that nothing heavy is stored in overhead or high cabinets that could fall out and cause injury. Heavy items should be stored in low cabinets.
5. Stow folding and pedestal tables.
6. Check that counter tops, range top, credenza tops and shelves are clear of even small items that could become projectiles in an accident.
7. Do not cook while under way. Hot food or liquid could scald due to a sudden stop or accident.
8. Check that any internal stowage is securely held in place.
9. Secure optional freestanding dinette chairs to the dinette table support using the fabric straps.
10. Check that lights and switches are set in positions safe for travel.

# DRIVING

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## INTERIOR CHECK LIST (BEFORE DRIVING OFF) (continued)

11. Adjust the driver's seat so that you can easily reach and operate all controls. Make sure seat is locked in position. Do not adjust driver's seat swivel or fore and aft mechanism while vehicle is moving. The seat could move unexpectedly causing loss of control.
12. Check that front passenger's seat is locked in position - both fore and aft adjustment and swivel mechanism.
13. Check rear view mirror adjustment.
14. Fasten lap belts.
15. Check that step light goes out and that electric step has retracted.

## SAFETY SEAT BELTS

In the forward driver's area of the motorhome, safety seat belts are provided for the use of the driver and the right front passenger. Safety belts are available for other seats. It is strongly recommended that all occupants remain seated with their safety belts firmly attached while the motorhome is in motion, in most states it is illegal to travel without buckling up the driver's and passenger seat occupants. The driver should adjust his seat so that he is able to reach all controls easily with the belt on, especially able to use all the travel on the foot brake. The belt should be placed as low as possible around the hips to prevent sliding out from under them in case of accident. This places the load of the body on the strong hipbone structure instead of around the soft abdominal area. Two people should never try to use the same seat belt.



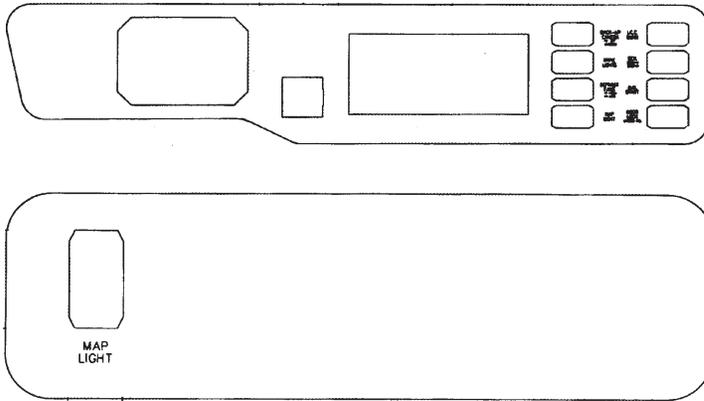
**WARNING:** Children must be secured in a Federally Approved Child Restraint Device. Failure to use proper restraints can result in severe or fatal injuries in case of accidents.

Child restraint devices are designed to be secured with lap or lap/shoulder belts. All instructions supplied by the restraint manufacturer must be followed. Statistics have shown children are safer when properly restrained in a rear seating position than in a front seating position.

Often the children traveling in motorhomes are grandchildren. There are times when our love for grandchildren makes us hesitate to properly supervise their actions. Don't hesitate when it comes to their safety. Make sure they are properly restrained.

**CHILDREN HAVE LOVED ONES TOO.**

**IF YOU WON'T BUCKLE UP FOR YOURSELF, BUCKLE UP FOR THEM.**



**NOTE: Switches will vary according to options on vehicle.**

## AIRSTREAM CAB CONTROLS

Most automotive gauges and controls are standard instruments provided by the chassis manufacturer. Their function and use is described in your Drivers Manual. The exception on automotive controls is the heater/air conditioner. Operating- instructions on these components can be found in the chassis section of this manual.

### DASH SWITCHES:

- **Aisle Lights** The low aisle lights will allow passengers to converse without using overhead lights that could be bothersome to a driver at night.

### ARMREST SWITCHES:

- **Docking Lights** The docking lights illuminate the area at the side of the motorhome and are intended for use when parking in a campground at night.

- **ICC Blink** With this switch it is possible to blink the clearance lights on the motorhome. Its most commonly used as a way of indicating your thanks for a courtesy shown to you by another driver.
- **Backup Camera** This switch is used to view the Rear Monitor System when traveling on the road. It not installed when unit has optional Navigation Package.
- **Defrost Fans** In cool, damp weather these fans really help to clear the large windshields
- **Door Lock** The main door dead bolt can be locked or unlocked electronically from the drivers seat. Remember to hide an extra door key on the exterior in case of unexpected battery failure. The manual knob is located by the passenger seat and is for interior use only.
- **Auxiliary Start** The auxiliary start switch is used to start the motorhome if the engine battery becomes too discharged to turn the engine over. To operate, hold the switch in the start position, and then use the ignition switch in a normal fashion. Operating the auxiliary start switch closes the points on a large solenoid, tying all three-vehicle batteries together for increased starting power.
- **Generator Switch** - The remote generator switch on the dash allows the driver to start or stop the Generator without leaving the driver's seat. It should be noted a built-in time delay allows the generator to reach full operating speed before 120 volt current is provided to the coach.

# DRIVING

- **Mirror** - Move center switch to R or L. The four perimeter switches will then move the right or left mirror in the direction indicated. The paddle type switch marked heat is for defrosting the mirrors. (Hopefully you won't need this unless you're a skier).
- **Map Lights** – Lights mounted above both cab seats to aid in reading. Switches are mounted in both armrests and each light is individually switched.

## POWER SEAT CONTROLS

Besides the normal power seat switch there are two additional finger levers. One allows the seat to recline and the other will allow the seat to rotate.



**WARNING:** Never adjust drivers seat while vehicle is in motion.

**CAUTION:** Revolving the power seat completely around will pull the wiring apart. The seats should only be swiveled toward the center of the vehicle. If the wires are loosened following the color code can reconnect them: Red-to-red, green-to-green, etc. On some models the wires will be on a plug that can be reattached.

## TRAILER TOWING AND DRIVING TIPS

This vehicle is designed and intended to be used primarily as a load-carrying recreational vehicle, towing a trailer will affect handling, durability and economy. Maximum safety and satisfaction depends upon proper use of correct equipment and avoiding overloads and other abusive operation. **The 10,000 pound GVW hitch requires a 2.5" x 2.5" draw bar.**

**CAUTION:** The maximum loaded trailer weight that you can pull with your vehicle is listed on the hitch. Vehicles should be properly equipped for towing trail-

ers. **Information on trailer hauling capabilities and special equipment required may be obtained from your Airstream dealer.**



**WARNING:** Gross Combination Weight Rating (GCWR) means the maximum allowable loaded weight of this motorhome and any towed trailer or towed vehicle. **Do not exceed this weight whenever you are towing behind your motorhome.**

To assist in attaining good handling of the vehicle/trailer combination it is important that the trailer tongue load be maintained at approximately 10% of the loaded trailer weight, but not to exceed the hitch weight ratings. Tongue loads can be adjusted by proper distribution of the load in the trailer, and can be checked by weighing separately the loaded trailer and then the tongue. When towing trailers, tires should be inflated to the highest pressures shown on the information plate attached to the driver's doorjamb or dash of your motorhome. The allowable passenger and cargo load (GVW) of this vehicle is reduced by an amount equal to the trailer tongue load on the trailer hitch.



**WARNING:** The towing vehicle's braking system is rated for operation at GVWR (GROSS VEHICLE WEIGHT RATING), NOT at the GCWR (GROSS COMBINED WEIGHT RATING). A separate functioning brake system is required for any towed vehicles or trailers weighing more than 1000 lbs. (450 kg) when fully loaded. **NEVER** exceed the GVWR (GROSS VEHICLE WEIGHT RATING), or the GAWR (GROSS AXLE WEIGHT RATING) specified on a motorhome certification label. Also **NEVER** exceed the weight ratings of trailer hitch installed on a motorhome. **Failure to heed any part of this warning could result in loss of control of the motorhome and towed vehicle or trailer and may cause an accident and serious injury. For specified towed vehicle braking requirements, consult the chassis owner's manual that comes with this vehicle.**

**CAUTION:** If your Freightliner chassis requires towing please refer to their manual for directions. They may be called at 1-864-487-1700.

## Procedure for Weighing A RV

1. Fill in first row from Specification Section of this manual.
2. Weigh vehicle as shown in row 2 (Scale Weight) and fill in blanks.
3. Weigh one side of vehicle as shown In Individual Wheel Position Weight.
4. Calculate the other side as shown in last row.

FRONT AXLE GAWR	GVWR	REAR AXLE GAWR	GCWR – GVW
<b>SCALE WEIGHT</b>		<b>Optional Tow Weight</b>	
<p>STEP 1</p> <p>Front Axle GAW</p>	<p>STEP 2</p> <p>GVW</p>	<p>STEP 3</p> <p>Rear Axle GAW</p>	<p>STEP 3a</p> <p>Tow Weight minus Weight of Trailer or Vehicle Towed</p>
<b>INDIVIDUAL WHEEL POSITION WEIGHT</b>			
<p>STEP 4</p> <p>Left Front Wheel Position</p>	<p>STEP 5</p> <p>Left Side (Total LF + LR)</p>	<p>STEP 6</p> <p>Left Rear Wheel Position</p>	
Calculated	Calculated	Calculated	
<p>Right Front Wheel Position</p> <p>Step 1 minus Step 4</p>	<p>Right Front (Total RF + RR)</p> <p>Step 2 minus Step 5</p>	<p>Right Rear Wheel Position</p> <p>Step 3 minus Step 6</p>	
<p>GAWR = Gross Axle Weight Rating</p> <p>GVWR = Gross Vehicle Weight Rating</p> <p>GCWR = Gross Combination Weight Rating</p>			

# B

# CHASSIS

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The Airstream motorhome is built on a Freightliner chassis. Operation of the engine and other related components are discussed in the Freightliner Owners and Drivers Manual supplied with each coach.

If repairs are needed it can be difficult to determine which parts of the chassis are warranted by Freightliner, and which are Airstream's responsibility. The following list shows the major components of the chassis and the company responsible for their servicing.

## FREIGHTLINER X LINE CHASSIS

Engine	Air Conditioner Compressor
Transmission	Shocks
Brakes	Automotive Fuse Panels
Steering Assembly	Parking Brake
Front Spindle, Bearings	Fuel Tank
Alternator	Cruise Control
Turn Signals	Wheels & Tires
Drive Axle and Hubs	

## AIRSTREAM

Windshield Wipers  
Dash Air Conditioner/Heater  
Isolator

The above list covers almost all of the chassis components. If you need further clarification or information your dealer should be contacted with the details.

## ENGINE ACCESS

Although most engine functions and maintenance can be preformed from outside the coach, occasionally "top" engine service will be required.

To make this servicing easier the bed top can be raised with the assistance of gas props. Once the bed top is raised the engine cover can be unlatched and raised to expose the engine.



**WARNING:** The lifting and supporting strength of the gas props vary according to temperature. Props that support the bed top when hot may let the bed close rapidly when cold.

## AIR BRAKE SYSTEM DRAINAGE

Your motorhome is equipped with an air brake system. When air is compressed some liquid is forced out and collects in the bottom of the air tanks and must be drained.

Three drain valves are on your brake system. The valves can be opened for drainage by pulling on the looped cables in your front wheel wells on each side. See your Freightliner operator's manual under Pre-trip Inspection for directions.

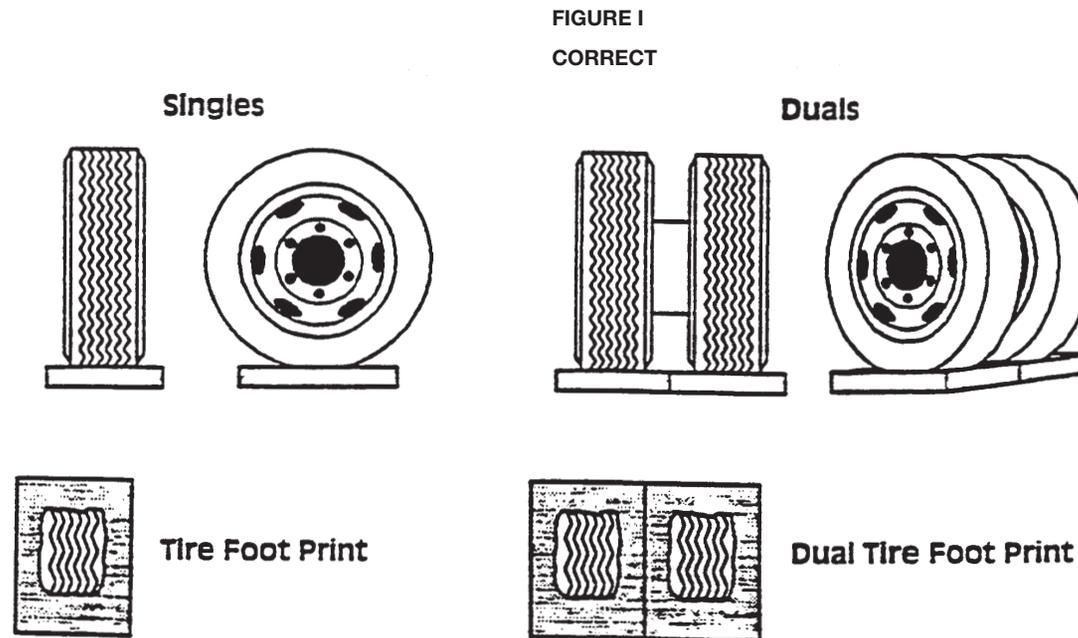
## TIRE SUPPORT (Leveling)

Since motorhomes may sit for long periods of time it is important to properly support the tires if blocks are used for leveling.

The tire manufacturer for your RV provides a Recreational Vehicle Tire Guide with each Freightliner chassis that is passed along to you in the Airstream Owner's Packet. Please take the time to read it as it has information on the loading, weighing, care, and inflation of your RV and its tires.

**CAUTION:** Extreme care must be taken to ensure that the tires are fully supported when using blocks to level motorhomes and/or RV's. The load on the tire should be evenly distributed on the block and in the case of duals, evenly distributed on blocks for both tires. If not properly done, the steel cables in the sidewall of the tires may be damaged and could lead to premature fatigue of the sidewall. **See tire warnings on page C-4**

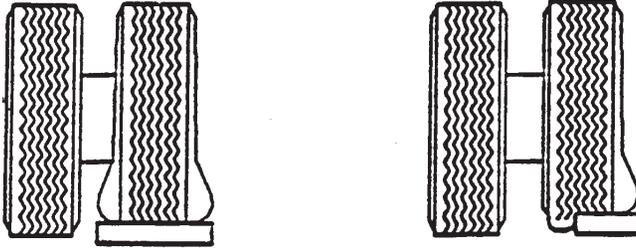
The **CORRECT** methods are shown in Figure 1. Please note that the blocks are wider than the tread and longer than the tire's footprint. This provides maximum support to the tires and assures that the load is evenly distributed throughout the tire's footprint area.



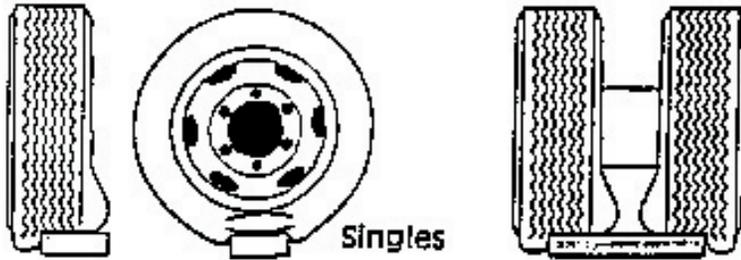
# CHASSIS

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INCORRECT



One tire or a portion of one tire is supporting load

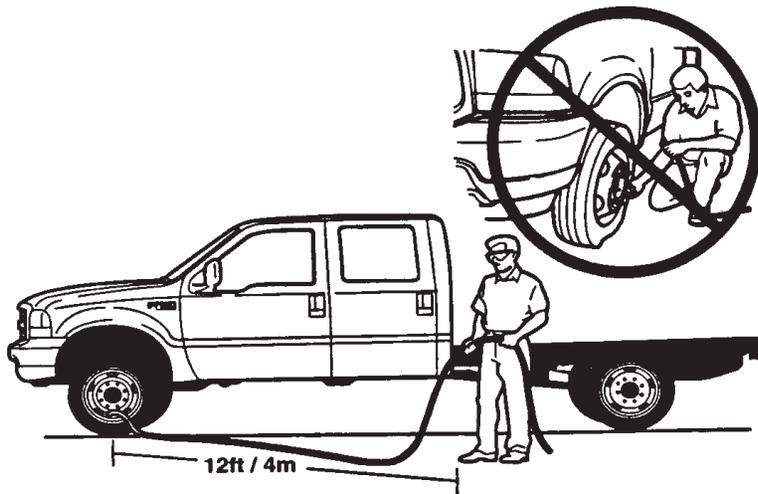


Portion of two tires are supporting the full load.

**CAUTION:** Tires incorrectly supported, as shown above, may be damaged which could lead to casing failure resulting in serious injury or property damage. If, on previous occasions, the tires have been incorrectly supported, a hidden damage may be present. Please contact your local GoodYear dealer and request an inspection and a determination of possible damage. **See tire warnings on page C-4**

## TIRE INFLATION INFORMATION

Your vehicle is equipped with a tire that is an all-steel radial. All-steel radial tires utilize steel cords in the sidewalls, and also require increased inflation pressures. Has such, they cannot be treated like normal light truck tires. Personnel trained, supervised and equipped according to Federal Occupational Safety and Health Administration (OSHA) regulations must perform tire service, including adjusting tire pressure. For example, during a procedure involving tire inflation, the technician or individual must utilize a remote inflation device, and insure that all persons are clear of the trajectory area.



**!** **WARNING:** An inflated tire and rim can be very dangerous if improperly used, service or maintained. To avoid serious injury, never attempt to re-inflate a tire which has been run flat or seriously under inflated without first removing a tire from the wheel assembly for inspection. Do not attempt to add air to tires or replace tires or wheels without first taking precautions to protect persons and property.

The tire manufacturer provides a Recreational Vehicle Tire Guide with each Freightliner chassis that is passed along to you in the Airstream Owner's Packet. Please take the time to read it as it has information on the loading, weighing, and inflation of your RV and its tires.



# CHASSIS

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## DASH AIR CONDITIONER/HEATER

Specific Climate Systems Inc.

1200 West Risinger Road

Fort Worth, Texas

Technical Assistance: 1-800-275-7524

## OPERATION

The dash heater control is very similar to many automobiles

The center rotary switch marked "cold-hot" controls the amount of hot water flowing through the heater core. When the maximum air conditioner is engaged, inside air is circulated through the evaporator to obtain the utmost in cooling.

Although the dash air conditioner/heater is one of the most power units available on the market, it does not have the capacity to cool/heat the entire motorhome. The use of the roof air conditioner system and floor heaters maybe needed to cool/heat the living area on very cold/warm days.

## SERVICE

SCS has requested you to call them on the 800 number listed above should you experience any service problems. They are usually able to help get any repairs needed at an air conditioner repair facility close to your location.

## ELECTRIC STEP

SCS Frigette Coach Step

Manufacturer:

Fleming Sales Company

2101 Industrial Parkway

Elkhart, Indiana 46516

574 - 295 - 0234

The step is easy and convenient to operate. Just inside the main door is a wall switch for the step. When traveling, leave the switch in the "ON" position - the step will lower when the door is opened and retract when the door is closed.

When parked, open the door so the step is lowered, then shut the switch off. The step will remain in the lowered position



**WARNING:** Look before you exit. As it is possible to deliberately lock the steps up with the rocker switch, passengers should always be cautioned to be sure the steps are fully deployed before exiting the motor home.

WITH THE POWER SWITCH "ON"

Open the door and the steps will extend and lock in the down position. The amber entry lamp will turn on automatically.

Closing the door will shut off the light and will cause the steps to retract.



**CAUTION:** With the power switch ON, steps extended, and door open, it will be possible to start the vehicle and drive away with the steps extended. This combination of events is discouraged since damage to the steps and vehicle is possible.

WITH THE POWER SWITCH "OFF"

If the steps are extended with the door open and the power switch is then turned OFF, the steps will remain extended. The amber light will go off.

If the steps are retracted when the power switch is turned OFF, the steps will remain retracted.

With the power switch OFF, the steps extended and the door closed, turning on the ignition will cause the steps to automatically retract. This feature reduces the possibility of the vehicle being driven with the steps extended.

After the ignition is turned OFF, and the door is opened, the steps will extend one time only. This is known as the "last man out" feature.

If the door is opened and closed without allowing the steps to fully extend, the step will retract and will stay in that position until the power switch is turned ON and the door is reopened.



# CHASSIS

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## OPERATION NOTE:

If the step encounters an immovable obstacle such as a curb, they will stop and shut down in that position, they will retract normally when the door is closed.

## Lubrication

Coach Steps are equipped with self-lubricating bushings on the drive assembly and all step joints. No lubrication is necessary: If in extreme conditions lubrication is deemed necessary silicon based grease or spray will not harm the bushing material.

## **BE SAFE-LOOK BEFORE YOU LEAP**

A complete SCS/Frigette Coach Step Owner's Manual is provided with you owner's packet. If any difficulty is encountered either in the use, installation or service of the steps that is not covered in the service instructions, please call the following number for service or warranty information. The manufacturer takes no responsibility for unauthorized service or installation procedures. 1-800-275- 7524

## STEP WELL COVER

Your motorhome is equipped with a pneumatically powered step well cover.

The switch (valve) is a black lever located in the front of the passenger right hand armrest. The air pressure is supplied by the chassis air ride system. It is normal for the air system to leak down so you may find the cover to be inoperable if the engine has been shut off for a period of time.

The intent of the step cover is to provide the passenger with a “floor” while traveling and then be retracted so the steps can be used when stopped. With this in mind you can see where the loss of air after the motorhome has been shut off for a time is not a problem. When you park the motorhome you’ll normally retract the step cover so you can at least get out and stretch your legs.

If you happen to lose air pressure before retracting the step cover just starting the engine for a few minutes will replenish the air supply.



**WARNING:** Do not operate the pneumatic cover while standing in the step well.

## WINDSHIELD WIPER

The wiper system is a made by Trico and uses a 28” blade. The washer bottle and motor is located in the roadside front compartment.

## AIR SUPPLY

There is an air supply chuck located in the roadside front compartment. A hose and fitting is included with the tool kit for your convenience. The air is supplied by the chassis compressor and will be replenished only with the ignition on.



# CHASSIS

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NOTES

C

## SAFETY

As always, safety should be one of your top priorities. Make sure you, and everyone traveling with you, can operate the main door and exit window rapidly without light.



**WARNING:** The escape window are identified by their red release handles. Pull red handle toward window center. Push out on the glass and it will swing clear. The window operation should be checked each trip and the latches lubricated with WD-40 or equivalent every six months. Do not parked in a manner that would prevent the escape windows from opening or block an emergency exit route.



**WARNING:** At each campsite make sure you have not parked in such a manner as to block the operation of the escape window by being too close to trees, fences or other impediments. Scenic views are one reason for traveling, but don't park so the beautiful lake or steep cliff is just outside your escape window.



**WARNING:** Read the directions carefully on the fire extinguisher. If there is any doubt on the operation, you and your family should practice, then replace or recharge the extinguisher. You will find your local fire department will be happy to assist you and answer any questions.



**WARNING:**

**DON'T SMOKE IN BED!**

**KEEP MATCHES OUT OF REACH OF SMALL CHILDREN!**

**DON'T CLEAN WITH FLAMMABLE MATERIAL!**

**KEEP FLAMMABLE MATERIAL AWAY FROM OPEN FLAME!**

We have all heard these warnings many times, but they are still among the leading causes of fires.

## SMOKE ALARM

### OPERATION, TESTING

OPERATION: The smoke detector is operating once a fresh battery is installed and testing is complete. When products of combustion are sensed, the unit sounds a loud 85 db pulsating alarm until the air is cleared.

HUSH CONTROL: The "HUSH" feature has the capability of temporarily desensitizing the alarm circuit for approximately 7 minutes. **This** feature is to be used only when a known alarm condition, such as smoke from cooking, activates the alarm. The smoke detector is desensitized by pushing the "HUSH" button on the smoke detector cover. If the smoke is not too dense, the alarm will silence immediately and "Chirp" every 30-40 seconds for approximately 7 minutes. This indicates that the alarm is in a temporarily desensitized condition. The smoke alarm will automatically reset after approximately 7 minutes and sound the alarm if particles of combustion are still present. The "HUSH" feature can be used repeatedly until the air has been cleared of the condition causing the alarm.



# CAMPING

**NOTE: DENSE SMOKE WILL OVERRIDE THE HUSH CONTROL FEATURE AND SOUND A CONTINUOUS ALARM.**

**CAUTION: BEFORE USING THE ALARM HUSH FEATURE, IDENTIFY THE SOURCE OF THE SMOKE AND BE CERTAIN A SAFE CONDITION EXISTS.**

**FLASHING L.E.D. LIGHT:** This smoke detector is equipped with a flashing red indicator light. The light is located under the test button and will flash every 30-40 seconds to indicate that the smoke detector is receiving power.

**TESTING:** Test by pushing the test button on the cover and holding it down for a minimum of 2 seconds. This will sound the alarm if all the electronic circuitry, horn and battery are working. If no alarm sounds the unit has defective batteries or other failure. You can also test the alarm by blowing smoke into it.

**TEST THE ALARM WEEKLY TO ENSURE PROPER OPERATION.** Erratic or low sound coming from your alarm may indicate a defective detector, and it should be returned for service.

## FALSE ALARMS

Smoke detectors are designed to minimize false alarms. Cigarette smoke will not normally set off the alarm, unless the smoke is blown directly into the detector. Combustion particles from cooking may set off the alarm if the detector is located close to the cooking area. Large quantities of combustible particles are generated from spills or when broiling. Using the fan on a range hood which vents to the outside (non-recirculating type) will also help remove these combustible products from the kitchen.

MODEL 0916 HAS A “HUSH” CONTROL that is extremely useful in a kitchen area or other areas prone to nuisance alarms. For more information refer to OPERATION AND TESTING.

If the detector does alarm, check for fires first. If a fire is discovered, get out and call the fire department. If no fire is present, check to see if other reasons may have caused the alarm.

## MAINTENANCE

### BATTERY REPLACEMENT

To replace-the battery remove the detector from the mounting plate by rotating the detector in the direction of the “OFF” arrow on the cover.

The Model 0916 Smoke Detector uses one (1) 9-volt battery. The SMOKE DETECTOR is powered by a 9V carbon zinc battery (alkaline battery may also be used). A fresh battery should last for one year under normal operating condition. This detector has a low battery monitor circuit that will cause the detector to “chirp” approximately every 30-40 seconds for a minimum of seven (7) days when the battery gets low. Replace the battery when this condition occurs. **USE ONLY THE FOLLOWING 9 VOLT BATTERIES FOR SMOKE DETECTOR REPLACEMENT**

Carbon-zinc type: EVEREADY 216 OR 1222,  
GOLD PEAK 1604P OR 1604S

Alkaline type: EVEREADY 522;  
DURACELL MN 1604, Gold Peak 1604A

Lithium type: ULTRALIFE U9VL. NOTE:

REGULAR TESTING IS RECOMMENDED.



**WARNING: USE ONLY THE BATTERIES SPECIFIED. USE OF DIFFERENT BATTERIES MAY HAVE A DETRIMENTAL EFFECT ON THE SMOKE DETECTOR.**

NOTE: IF AFTER BATTERY REPLACEMENT, THE UNIT CONTINUES TO CHIRP, WAIT FOR APPROXIMATELY 7 MINUTES. THE "HUSH" FEATURE MAY HAVE BEEN ACTIVATED ACCIDENTALLY WHILE CHANGING THE BATTERIES AND WILL RESET AUTOMATICALLY

## CLEANING YOUR DETECTOR:

To clean your detector remove it from the mounting bracket as outlined in the beginning of this section.

You can clean the interior of your detector (sensing chamber) by using your vacuum cleaner hose and vacuuming through the openings around the perimeter of the detector.

The outside of the detector can be wiped with a damp cloth.

AFTER CLEANING, REINSTALL YOUR DETECTOR. TEST YOUR DETECTOR BY USING THE TEST BUTTON.

## LIMITATIONS OF SMOKE ALARMS:



**WARNING:** Smoke detectors are devices that can provide early warning of possible fires at a reasonable cost; however, detectors have sensing limitations. Ionization type detectors offer a broad range of fire sensing capability but are better at detecting fast flaming fires than slow smoldering fires. Photoelectric detectors sense smoldering fires better than flaming fires. Home fires develop in different ways and are often unpredictable. Neither type of detector (photoelectric or ionization) is always best, and a given detector may not always provide warning of a fire. Also, smoke detectors do have limitations. For a battery powered detector the battery must be of the specified type, in good condition, and installed properly. AC powered detectors will not operate if AC power has been cut off such as by an electrical fire or an open fuse.

Smoke detectors must be tested regularly to make sure the batteries and the detector circuits are in good operating condition.

Smoke detectors cannot provide an alarm if smoke does not reach the detector. Therefore, smoke detectors may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor. If the detector is located outside the bedroom or on a different floor, it may not wake up a sound sleeper. The use of alcohol or drugs may also impair ones ability to hear the smoke alarm. For maximum protection a smoke detector should be installed in each sleeping area on every level of a home.

Although smoke detectors can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Homeowners and renters should have adequate insurance to protect their lives and property.

## GOOD SAFETY HABITS

### DEVELOP AND PRACTICE A PLAN OF ESCAPE:

- Make a floor plan indicating all doors and windows and at least two (2) escape routes from each room. Second story windows may need a rope or chain ladder.
- Have a family meeting and discuss your escape plan, showing everyone what to do in case of fire.
- Determine a place outside your home where you all can meet if a fire occurs.
- Familiarize everyone with the sound of the Smoke Alarm and train him or her to leave your home when they hear it.
- Practice a fire drill at least every six months. Practice allows you to test your plan before an emergency; you may not be able to reach your children. It is important they know what to do.



# CAMPING

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## WHAT TO DO WHEN THE ALARM SOUNDS:

- Leave immediately by your escape plan. Every second counts, so don't waste time getting dressed or picking up valuables.
- In leaving, don't open any inside door without first feeling its surface. If hot, or if you see smoke seeping through cracks, don't open that door! Instead use your alternate exit. If the inside of the door is cool, place your shoulder against it, open it slightly and be ready to slam it shut if heat and smoke rush in.
- Stay close to the floor if the air is smoky. Breathe shallowly through a cloth, wet if possible.
- Once outside go to your selected meeting place and make sure everyone is there.
- Call the fire department from your neighbor's home - not from yours!
- Don't return to your home until the fire officials say that it is all right to do so.

There are situations where a smoke detector may not be effective to protect against fire as stated in the NFPA standards 72.

For instance:

- a) Smoking in bed;
- b) Leaving children home alone.
- c) Cleaning with flammable liquids, such as gasoline.

Further information on fire safety can be obtained in a pamphlet titled "IN A FIRE SECONDS COUNT" published by the NFPA, Batterymarch Park, Quincy, Mass. 02269.

## SERVICE AND WARRANTY

If after reviewing this manual you feel that your smoke alarm is defective in any way, do not tamper with the unit. Return it for servicing to: FYRNETICS, INC., 1055 STEVENSON CT./STE 102W, ROSELLE, IL 60172. (See Warranty for in-warranty returns).

## CARBON MONOXIDE ALARM

The following information is highlights from the folder provided by the alarm manufacturer. The folder, with more detailed information, is contained in your Owners' Packet.

**Test detector immediately following installation** and weekly for proper operation by pushing the test button until the YELLOW L.E.D. lights and a short beep is heard (approximately three seconds). Release the button. The detector will then test itself for proper operation. At completion of the self-test, the alarm will sound and both L.E.D.s will light for 3/4 of a second. The detector then resumes normal operation.

## NORMAL OPERATION

In normal operation the detector will flash the RED L.E.D. once every 30 seconds.

## WARNING CONDITION

If the COSTAR senses a low level of CO The YELLOW L.E.D. will light and the detector will beep every three seconds warning that CO is present. The area should immediately be ventilated. A concentration of 60 PPM within 67 minutes will cause the warning condition. Pushing the test button will silence the warning signal but the YELLOW L.E.D. will stay on. After two hours the warning signal will sound again if the CO source has not been eliminated. If the condition persists there is a possibility that it may cause the unit to enter alarm condition (below). If this occurs pushing the reset button will silence the alarm for 30 minutes.

## ALARM CONDITION

If the COSTAR senses unsafe levels of CO, the RED L.E.D. will light up and the alarm will sound. The alarm condition will be signified by a repetitive alarm-sounding pattern of approximately 4.5 seconds on 1.5 second off. Immediate evacuation is required. Pushing the test button will silence the alarm once for approximately 4 minutes.

After approximately 4 minutes the alarm will once again sound until the unsafe CO concentration is removed.

## FAULT CONDITION

Periodically the detector's measurement circuit is tested. If an error is detected, the detector will sound twice and the YELLOW L.E.D. will flash twice every 30 seconds. This is an indication of circuit malfunction and that the detector requires immediate servicing.

## MAINTENANCE

### Battery Replacement:

If tamper resistant pin has been used, refer to "tamper resistant locking pin" for removal instructions.

To replace the battery remove the detector from the mounting plate by rotating the detector in the direction of the "OFF" arrow on the cover.

The Model 9L-i CO Detector uses one (1) 9-volt battery. A 9V alkaline battery powers the CO DETECTOR. A fresh battery should last for one year under normal operating conditions. This detector has a low battery monitor circuit which will cause the detector to "chirp" and the red LED to flash approximately every 30-40 seconds for a minimum of seven (7) days when the battery gets low. Replace the battery when this condition occurs. **USE ONLY THE FOLLOWING 9 VOLT BATTERIES FOR CO DETECTOR REPLACEMENT.**

Alkaline type: EVEREADY522; DURACELL MN1604; GOLD PEAK 1604A

Lithium type: ULTRALIFE U9VL

### **NOTE: REGULAR TESTING IS RECOMMENDED.**



**WARNING: USE ONLY THE BATTERIES SPECIFIED. USE OF DIFFERENT BATTERIES MAY HAVE A DETRIMENTAL EFFECT ON THE CO DETECTOR.**

### CLEANING YOUR DETECTOR:

To clean your detector remove it from the mounting bracket as outlined in the beginning of this section.

You can clean the interior of your detector by using your vacuum cleaner hose and vacuuming through the openings around the perimeter of the detector. The outside can be wiped with a damp cloth.

**AFTER CLEANING, REINSTALL YOUR DETECTOR. TEST YOUR DETECTOR BY USING THE TEST BUTTON.**

Test detector weekly for proper operation by pushing the test button until the YELLOW L.E.D. lights and a short beep is heard (approximately three seconds). Release the button. The detector will then test itself for proper operation. At completion of the self-test, the alarm will sound and both L.E.D.s will light for 3/4 of a second. The detector then resumes normal operation.

### SERVICE AND WARRANTY

If after reviewing this manual you feel that your CO Detector is defective in any way, do not tamper with the unit. Return it for servicing to: Quantum Group, Inc., 11211 Sorrento Valley Road, Suite Valley Road, Suite V. San Diego, CA 92121.

Or call us toll free (800) 432-5599

E-mail address: [mktsls@gginc.com](mailto:mktsls@gginc.com)

# CAMPING

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## OVERNIGHT STOP

In time you will develop a knack for spotting wonderful little roadside locations by turning off the main highway and exploring. There are many modern recreational vehicle parks, including State, County and Federal parks with good facilities, where you may obtain hookups of electrical, water and sewer connections. Directories are published which describe in detail these parks and tell what is available in the way of services and hookups. On overnight or weekend trips, chances are you will not use up the capacity of the sewage holding tank, deplete the water supply, or run down the batteries which supply the living area 12 volt current.

## Hydraulic Leveling Jacks

The motorhome is equipped with hydraulic leveling jacks that can be deployed. Complete instructions are included with the Owners Packet. Be sure to read the directions completely prior to operating the jacks. The jacks will be able to level your unit in most modern campgrounds. However, their capabilities are limited, and in some situations you will have to use planks to level the coach.

## WINTER TRAVELING

Traveling in your motorhome during the cold winter months can be a most exhilarating experience. There are, of course, certain precautions that must be taken as you would in your home in low temperatures.

1. You must have a plentiful supply of diesel fuel for the generator, heat, and hot water if no 110 volt shoreline service is available.
2. If your stay is longer than overnight, you should endeavor to have 120-volt electricity available. The batteries, fully charged, will not last more than about 15 hours in freezing weather. The automatic start feature on your motorhome will start the generator to keep your batteries charged.
3. Leave cabinet doors, bed doors and wardrobe doors slightly open at night to allow circulation of air in and around all furniture components.
4. Use propylene glycol type antifreeze in waste and drain water tanks to prevent freezing. Quantity of antifreeze needed will vary with ambient temperature and the amount of liquids in tank.
5. For extended stays in cold weather, insulate the water line outside the motorhome. You should remember that low temperatures in combination with high winds cause an equivalent chill temperature much below what your thermometer is reading. For instance, with an outside temperature of zero degrees, and the wind velocity of 10 miles per hour, the equivalent chill temperature is minus 20° F. The exterior water faucet has an in-line valve inside the motorhome. In below freezing temperatures, shut off the valve inside and open the exterior brass valve so it will drain.

## LONGER TRIP

On a longer trip, when you have stayed where sewer connections and utility hookups were not available, it will be necessary for you to stop from time to time to dispose of the waste in the holding tank and replenish the water supply. Many gas stations (chain and individually owned) have installed sanitary dumping stations for just this purpose. Booklets are available which list these dumping stations.

When you stop for the night, your Airstream motorhome is built to be safely parked in any spot that is relatively level and where the ground is firm. Your facilities are with you. You are self-contained. Try to pick as level a parking spot as possible.

All you need to do to enjoy self-contained luxury is to:

1. Hook up to a shoreline power source..
2. Turn on the water pump and open the faucets until the air is expelled from the system.
3. Level the motorhome and deploy the slide outs.

Before moving on, turn off the water pump, make sure all hookups have been disconnected, check you campsite, both for cleanliness and also to be sure you haven't left anything behind. Make sure everything is properly stowed.

## EXTENDED STAY

Making a long trip is not very different from making a weekend excursion. Since everything you need is right at hand, you are at home wherever you go. When packing for an extended trip, take everything you need, but only what you need. Some models are equipped with Hydraulic Leveling Jacks that can be deployed. Complete instructions are included with the Owners Packet. Be sure to read the directions completely prior to operating the jacks.

When you plan to stay in the same place for several days, weeks or months, you will want your motorhome to be as level as possible. Check the attitude with a small spirit level set on the inside work counter. If a correction is necessary, then you must first level from side to side. This can be done most easily by driving up a small ramp consisting of 2" x 6" boards tapered at both ends. **WE DO NOT RECOMMEND PLACING TIRES IN A HOLE FOR LEVELING.**

## CAMPGROUND SETUP

**Hook Up to Water** by attaching a ½" minimum high-pressure water hose to the city water service located on the utility panel in the lower compartment.

The **110-volt power cord** is an electrically operated cord reel in the first compartment located behind the roadside rear wheels. Turning the switch to "out" will extend the power cord so it can be plugged into City Power Service.

When you stay for extended periods where electric or water hookups are not available, you must make regular checks on the condition of your 12-volt battery and the contents of your water tank. Carry drinking water in a clean bucket to refill your tank. When your waste tank nears capacity, move your motorhome to a dumping location.



**WARNING:** If adapters are required make sure the polarity is correct and the "ground" function is not lost.

# CAMPING

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A **Cable TV and Telephone Hookup** is located on the roadside power cord compartment of the motorhome. It is already wired into the existing system, so the exterior connection is all that is required. An exterior TV outlet w/12-V outlet and a 110-V outlet are in the lower compartment in front of the curbside rear wheel.

To use the Generator you simply start it. All switching is done automatically. The generator can be started either from your interior monitor panel, armrest switch, bedroom switch, or the switch on the generator itself. It is easier on your generator and appliances if you'll allow the generator to reach its normal operating speed (about a minute) prior to applying heavy current loads.



**WARNING:** The escape window is identified by its red release handles. Rotate red handle toward window center. Push out on the glass and it will swing clear. The window operation should be checked each trip and the latches lubricated with WD-40 or equivalent every six months. Do not park in a manner that would prevent the escape windows from opening or block an emergency exit route.

Hook your **Waste Drain Hose into the Sewer Disposal Facility** and attach to the drain outlet in your motorhome. For details on this procedure see Drain and Waste System Section.

## EFFECTS OF PROLONGER OCCUPANCY

Your motorhome was designed primarily for recreational use and short-term occupancy. If you expect to occupy the motorhome for an extended period, be prepared to deal with condensation and the humid conditions that may be encountered. The relatively small volume and tight compact construction of modern recreation vehicles mean that the normal living activities of even a few occupants will lead to rapid moisture saturation of the air contained in the motorhome and the appearance of visible moisture, especially in cold weather.

Just as moisture collects on the outside of a glass of cold water during humid weather, moisture can condense on the inside surfaces of the motorhome during cold weather when relative humidity of the interior air is high. This condition is increased because the insulated walls of a recreation vehicle are much thinner than house walls. Estimates indicate that a family of four can vaporize up to three gallons of water daily through breathing, cooking, bathing, and washing. Unless the water vapor is carried outside by ventilation, or condensed by a dehumidifier, it will condense on the inside of the windows and walls as moisture, or in cold weather as frost or ice. It may also condense out of sight within the walls or the ceiling where it will manifest itself as warped or stained panels. Appearance of these conditions may indicate a serious condensation problem. When you recognize the signs of excessive moisture and condensation in the motorhome, action should be taken to minimize their effects. For tips on controlling condensation see the "Tips To Controlling Condensation" section.

**Note:** Your motorhome is not designed, nor intended, for permanent housing. Use of this product for long term or permanent occupancy may lead to premature deterioration of structure, interior finishes, fabrics, carpeting, and drapes. Damage or deterioration due to long-term occupancy may not be considered normal, and may under the terms of the warranty constitute misuse, abuse, or neglect, and may therefore reduce the warranty protection.

## Tips to Controlling Condensation

To avoid condensation problems, try to follow these tips to help alleviate excess moisture.

1. Allow excess moisture to escape to the outside when bathing, washing dishes, hair drying, and laundering.
2. Always use the vent hood when cooking.
3. Keep the bathroom door closed and the vent or window open when bathing and for a period of time after you have finished.
4. Do not hang wet clothes in the motorhome to dry.
5. In hot weather, start the air conditioner early as it removes excess humidity from the air while lowering the temperature.
6. Keep the temperature as reasonably cool during cold weather as possible. The warmer the vehicle, the more cold exterior temperatures and warm interior temperatures will collide on wall surfaces, thus creating condensation.
7. Use a fan to keep air circulating inside the vehicle so condensation and mildew cannot form in dead air spaces. Allow air to circulate inside closets and cabinets (leave doors partially open). Please keep in mind that a closed cabinet full of stored goods prevents circulation and allows the exterior temperature to cause condensation.
8. The natural tendency would be to close the vehicle tightly during cold weather. This will actually compound the problem. Simply put, you need to remove some of the warm air, and allow some cool outside air to get inside the vehicle, so the furnace will not recycle the humid interior air.

9. Use fluorescent ceiling lights and minimize prolonged use of incandescent lights, which produce heat and contribute to condensation in the roof above the ceiling lights.

## ABOUT MOLDS

### What are molds?

Molds are microscopic organisms that naturally occur in virtually every environment, indoors and out. Outdoors, mold growth is important in the decomposition of plants. Indoors, mold growth is unfavorable. Left unchecked, molds break down natural materials, such as wood products and fabrics. Knowing the potential risks is important for any type of homeowner to protect their investment.

### What factors contribute to mold growth?

For mold growth to occur, temperatures, indoor or outdoors, must be between 40 degrees and 100 degrees Fahrenheit and also have a source of moisture, such as humidity, standing water, damp materials, etc. Indoors, the most rapid growth occurs with warm and humid conditions.

### How can mold growth be inhibited?

By controlling relative humidity, the growth of mold and mildew can be inhibited. In warm climates, use of the air conditioner will reduce the relative humidity. Vents are located in the bathing and cooking areas and constant use is advised during food preparation and bathing, even during colder weather. Additionally, opening a window during these activities will assist in ventilation. In extremely humid conditions, the use of a dehumidifier can be helpful.\*

Frequent use of your RV or cleaning regularly is an important preventive measure.



# CAMPING

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Further, any spills should be wiped up quickly and dried as soon as possible. Avoid leaving damp items lying about. On safe surfaces, use mold or mildew killing cleaning products. Check sealants regularly, and reseal when necessary to avoid water leaks. Proper preventive maintenance to the RV and its accessories, as described both in this manual and in accompanying literature, will provide the best protection to the RV.

For more information of controlling moisture in the RV, please read, "Tips to Controlling Condensation," located in this manual.

## D

\*If using a dehumidifier, please read and follow all manufacturer instructions and recommendations to the use and cleaning of the dehumidifier.

## SLIDE OUT OPERATION

**CAUTION:** Read and follow all warning labels in the coach and safety instructions in the Power Gear owner manual and as posted inside your coach.

To operate the SLIDE-OUT rooms you MUST first remove the interior travel locks. These are located on the top of the room on the interior of the coach and are out of your normal sight. There are two and they provide pressure between the exterior wall of the coach and the top facer board on the room. They have a caming action and the tension is adjustable. The first time you remove them you'll probably need to stand on a stable step stool to see how the cam is released. After seeing their simple operation you may be able to operate them from the floor according to your height and strength. Also make sure the driver's seat is forward enough to clear the room.

Push the rocker switch to extend/retract the slide out room. The two rear slide out switches are located on the bedroom panel and the front slide out switch is located above the driver's cab window on the wall panel. The room will stop when fully extended or retracted.

**NOTE:** Before a slide-out room can be deployed the ignition switch must be off. We also recommend leveling the coach prior to deploying the slide-out.

Instructions for manual retraction and extension of the room during a power failure are in the Power Gear owner's manual.

The motor for the slide out mechanism has an emergency retraction/expansion feature.

The motors are located as follows:

Bed Slide out: Under the bed bolted to the floor. It is accessible by removing the mattress and opening the bed top access door.

Galley Slide out: It is accessible by opening the third lower compartment door from the

front on the driver's side. It is bolted to the floor.

Wardrobe Slide out: It is accessible by removing the center panel under the wardrobe.

The end of each motor has a nut that can be turned with a wrench, or a socket and ratchet. The slide out mechanism manufacturer also provides a flexible socket extension that can be mounted to an electric drill chuck for easier operation of this emergency procedure. Turn the nut until the room is returned to its storage position.



### **WARNING PLEASE READ:**

**LEVEL AND STABILIZE UNIT PRIOR TO OPERATING SLIDE OUT ROOMS. FAILURE TO LEVEL MOTORHOME MAY CAUSE THE ROOM TO OPERATE IMPROPERLY OR CAUSE DAMAGE.**

**MAKE SURE THERE IS ADEQUATE CLEARANCE TO OUTSIDE OBJECTS BEFORE SLIDE OUT ROOM IS EXTENDED.**

**TO PREVENT ACCIDENTAL INJURY, STAND CLEAR OF SLIDE OUT ROOM WHILE ROOM IS IN MOTION.**

**REMOVE TRAVEL LOCKS BEFORE ATTEMPTING TO OPEN SLIDE OUT ROOM.**

**NEVER ATTEMPT TO MOVE MOTORHOME WITH A ROOM EXTENDED.**

**INSTALL TRAVEL LOCKS PRIOR TO TRAVEL.**

**TRAVEL LOCKS ARE TO BE POSITIONED & ADJUSTED PROPERLY TO HOLD ROOM FIRMLY IN POSITION FOR TRAVEL.**

# CAMPING

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## HYDRO-HOT WATER/HEATING SYSTEM

The Hydro-Hot system serves two primary functions within the RV - to provide a supply of on-demand hot water, and to provide interior heating. Diesel fuel, drawn from the main fuel tank, 120-Volt AC, or a combination of both, are required to operate the Hydro-Hot system. A switch panel designating the preference of using diesel fuel or 120-Volts AC is installed in galley wall panel for convenience, and allows users the option of using one or both energy sources at the same time.

**D**iesel fuel is the most efficient energy source to bring the Hydro-Hot system up to operating temperature in the least amount of time. When the system is engaged, the green indicator light on the diesel control switch will illuminate and an audible roar will sound from the diesel burner. At this time the outside exhaust of the Hydro-Hot will be warm to the touch. Do not place your hand in front of the exhaust and risk injury from burns.

During mild weather temperatures, and when you expect a low demand for on-board hot water, operating the Hydro-Hot is easily accomplished using 120-Volts AC through shore power, or the on-board generator. When hooked to shore power, consider choosing to run energy sources simultaneously to insure a quick and efficient supply of on-demand hot water.

The inverter is not wired to supply battery power voltage to the Hydro-Hot system to prevent the risk of discharging the house or chassis batteries through excess discharge from the Hydro-Hot system. However, 12-Volt DC power, which is provided from the RV house batteries, is required to operate the Hydro-Hot switch panel located inside of the RV, the electronic controller located in a passenger side basement compartment, and Comfort Control thermostats installed inside of the motor home.

Therefore, the house and chassis battery banks must be charged, and battery disconnect switch must be turned to the ON position, to operate the Hydro-Hot system. When the battery disconnect is switched to ON, current is passed to the house 12-Volt DC fuse panel. The interior battery disconnect switch is located just inside the RV entry door.

Once the main battery disconnect switch is set to ON, the sub-systems of the Hydro-Hot system are then powered for use.

The Hydro-Hot system does not simultaneously supply both interior heat and hot water, but instead relies on a domestic water priority system to interrupt interior heating upon a demand for hot water. Interior heating will again commence once the demand for hot water ceases. During cold weather temperatures, you may find it convenient to postpone interior demands for hot water until the Hydro-Hot has had ample time to heat the interior of the RV. Once interior heating is interrupted in order to obtain hot water during cold exterior temperature conditions, avoid opening and closing the RV entry door to retain existing interior heat until such time as the Hydro-Hot system is once again providing interior heat.

Located in a roadside basement compartment is an electronic controller. In the event the Hydro-Hot system fails to operate once all operating conditions have been met, the electronic controller can become a valuable tool in quickly troubleshooting potential problems with the system by pinpointing a particular fault within the system at a glance.

Lights aligning the panel of the electronic controller are well marked for easy reference. Green illumination of any light within the panel is indication of favorable working conditions. Any red light indicates a fault condition. Becoming familiar with the various operating designations within the electronic controller, as well as working knowledge of light indications, will help you to efficiently diagnose problems with the Hydro-Hot system.

The Emergency Cutoff lamp will indicate when there is a low liquid level in the heat tank, a strong impact to the unit, or when power has been disconnected from the system for an extended period of time. Low voltage supply may also trip the Emergency Cutoff Switch, causing the Hydro-Hot system to cease operation because the RV house batteries have reached a state of charge insufficient to operate various sub-systems that comprise the Hydro-Hot system.

In the event a red light illuminates in the Emergency Cutoff lamp, the electronic controller must be manually reset. Using a small screwdriver, or one end of a paperclip, reset the Low Voltage/Reset button located on the electronic controller.

## Heating

There are three thermostats that are used to control heat to areas of the motorhome.

The bath/bedroom area thermostat is located under the medicine cabinet.

For the basement area, a thermostat knob is located next to the Hydro-Hot Control Panel in the basement compartment.

The living area heat is controlled by the air conditioner Comfort Control Center mounted on the galley wall. Push the zone button to the furnace mode and adjust the thermostat.

When there is a call for heat, the system will activate the circulation pumps only after confirming there is no demand for domestic hot water. While interior heat is supplied through the Hydro-Hot system, the fan speed selector switches (certain models) will have power applied and produce an audible sound when engaged.

## Expansion Tank

The expansion tank, a clear plastic bottle, resembling a small version of the engine coolant reservoir, is located in a curbside basement compartment. When the Hydro-Hot system is at operating temperature, visually inspect the coolant level of the tank on a monthly basis, and refill as needed. Refer to the manufacturer's manual for specific instructions on system operations, winterization procedures and maintenance requirements.

The coolant reservoir should be inspected monthly, when the diesel burner has shut off, to confirm that coolant within the hydronic heating system is at the full hot level.

At installation, the Hydro Hot systems rely on this coolant that contains a 50/50 mixture of distilled water and non-toxic Propylene Glycol Based Boiler Antifreeze that is pink in color. Add additional antifreeze as needed. Do not mix antifreeze types. This boiler-type antifreeze is available through Vehicle Systems, Inc., and should be combined with 50% distilled water prior to adding. Using other than the recommended type antifreeze within the hydronic heating system can cause scaling and possible component failure. Add antifreeze when the system is at operating temperature. Refilling the coolant reservoir when the system is cold may cause the fluid to overflow when the system heats up.

Standard RV and Marine antifreeze formulated specifically for winterizing application only, should not be used in the RV heater hydronic system. Because this type of antifreeze does not contain rust inhibitors, it is not designed to transfer heat, which is essential to the heating system function.

Auto coolant is designed to specifically protect automobiles against corrosion, freezing temperatures and overheating. Auto coolants also provide excellent heat transfer and thermal conductivity characteristics. Although these types of antifreeze products are considered less toxic, they contain high levels of chemical rust inhibitors. These potentially hazardous properties make this type of antifreeze unsuitable for the heater



# CAMPING

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hydronic heating system.

Routinely inspect the system's overflow bottle to monitor antifreeze levels, and add additional antifreeze as needed. Check fluid levels when the burner cycles off. The level should be at full hot. Keep a fresh supply of cleaning rags handy to wipe up spills as they occur.

Store RV antifreeze in the original container and away from heat. If it becomes necessary to throw away left over or used RV antifreeze, securely cap the container, insure that the receptacle is clearly marked, and carefully adhere to local laws regarding the proper disposal of hazardous material.

## Winterizing

You may normally keep the RV plugged into shore power during cold winter months and presume that it is unnecessary to maintain antifreeze levels within the hydronic heating system. Relying on continuous shore power supply to protect the Aqua Hot system from freezing is risky when taking into account that the shore power supply may be interrupted due to a black out, or because the shore power cord has inadvertently disconnected from the source.

In preparation for winter storage, drain potable water and all the low point drains in the RV. The Hydro Hot system will require specific steps in winterizing. Evacuating the hydronic heating system of water when preparing the RV for winter storage by blowing out the lines with compressed air may not be effective in completely draining water out of the long length of tubes inside of the system. Moisture left within the tubes could collect and settle at the bottom loop. If temperatures during storage reach freezing, that moisture may expand and crack the tubes.

Winterize the Hydro Hot systems before freezing temperatures of winter set in. Use the RV water pump to move the antifreeze through the system until the solution is detected at the hot water faucet.

When it is time to take the RV out of winter storage, flush the domestic water system with clear water. Give the hydronic heating system a tune up by replacing the fuel nozzle and fuel filter, clean out the combustion chamber, and inspect the system for any signs of wear and tear.

## Service

Once per year, have the Hydro-Hot system tuned up by a qualified technician to assure ongoing performance of the system when needed. When storing the RV during freezing temperatures, winterize by draining the Hydro-Hot system of water. The Hydro-Hot system is still available for use in interior heating during storage following winterization.

## EXTERIOR MAINTENANCE

The roof of your Airstream motorhome is a fiberglass compound. If it is damaged contact the Airstream customer service department and ask for the Service Bulletin on roof repairs.

The walls, front, and rear end are fiberglass that is custom painted by Carrera Designs with an automotive finish. As a general rule of thumb, we recommend the motorhome washed about every four weeks and waxed in the spring and fall.

ALWAYS CLEAN YOUR MOTORHOME IN THE SHADE OR ON A CLOUDY DAY WHEN THE SKIN IS COOL. Oil, grease, dust and dirt may be removed by washing with any mild non- abrasive soap or detergent. Do not use hot water. Cleaning should be followed by a thorough clean water rinse. Drying the unit with a chamois or a soft cloth can prevent spots and streaks.

After cleaning and drying, a good grade of nonabrasive automotive paste or liquid wax will increase the life of the finish, especially in coastal areas where the finish is exposed to salt air, or in polluted industrial areas. It will also protect the shell from minor scratches and make subsequent cleaning easier.

If your vehicle is exposed to pollen, bird droppings, tree sap, or the like, especially in hot and sunny weather, wash it as often as necessary to keep it clean. If you do not, your paint will be damaged. Take similar precautions if you vehicle is exposed to chemical industrial fallout. If asphalt remains on the motorhome after washing, use a small amount of 100% mineral spirits on a rag and wipe the spots individually, being

careful not to scratch the finish.

It is recommended that the caulking and sealant used in external seams and joints such as window frames, light bezels, beltline and rub-rail molding, etc., be checked regularly. If this material has dried out and becomes cracked or checked, or if a portion has fallen out, it should be replaced with fresh material to prevent possible rain leaks. Caulking and sealing material is available from your motorhome dealer.

**CAUTION: Do not use high-pressure vehicle washes with harsh detergents or automatic truck washes.**

**The front nose of the motorhome is coated with a protective paint film. This film gives added protection from insects. The care of the film is the same as for the rest of the motorhome.**



# EXTERIOR

## ROOF, LADDER AND STORAGE

For traveling, the lower section of the ladder should be removed and stored in one of your lower compartments.

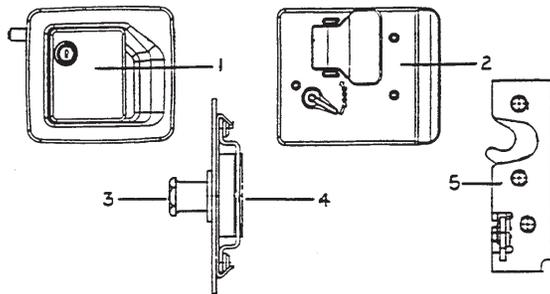
To remove, pull out the cross pins in the lower sockets then pull the bottom of the ladder out of the sockets. This will allow the top of the ladder to be unhooked freeing it for storage.

**CAUTION:** Unit roof storage is limited to 250 pounds evenly distributed.

## MAIN DOOR LOCK

### LOCK ASSEMBLY, MAIN DOOR

1. Outside housing assembly
2. Inside plate
3. Striker bolt
4. Caged nut
5. Rotary latch

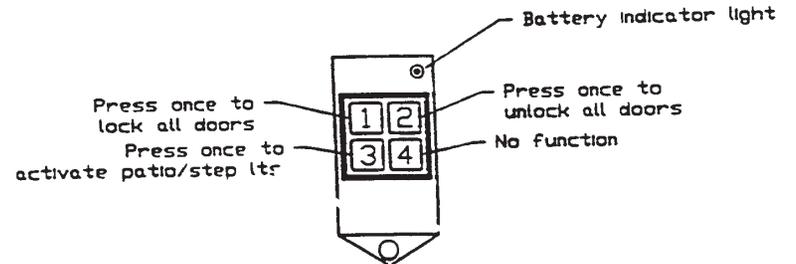


## KEYLESS DOOR LOCK

### Operation

The dead bolt portion of your motorhome may be controlled by radio signals produced by the key fob shown below. One characteristic of this system is the one second delay after a pad has been depressed.

### TouchTronics Keyfob Operating Instructions



**NOTE:** When you use the keypad to turn the patio lights ON you must also use the keypad to turn them OFF. The same goes for the switch inside the door, if you turn the lights on with this switch, you must use the same switch to turn them off. You cannot turn the lights on with the keypad and off with the switch.

There are four major components operating the door locks; control module/receiver, dash switch, relay, and drive motors. The control module is mounted on the inside wall just behind the main door. The relay operates in conjunction with the dash switch and is located up under the left hand side of the dash. The drive motors, located at each lock, are polarity sensitive. When testing you'll find the wires at the drive motors will switch from positive to negative and vice versus as the key fob or dash switch is being operated. When using the dash switch the relay under the dash performs the polarity switching functions and the control module/receiver serves the same function when the key fob is used.

## SEARCH LIGHT, REMOTE CONTROL

Model 60020-Series  
135SL

Manufacturer:

Jabsco

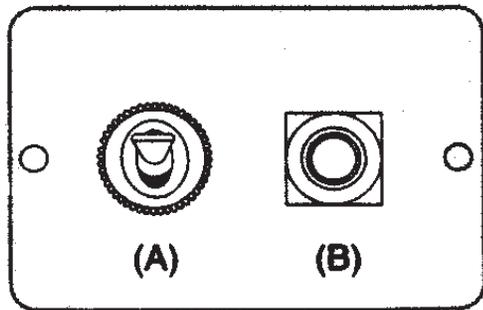
1485 Dales Way, PO Box 2158

Costa Mesa, CA. 92628-2158

Tel: (714) 545-8251

Fax: (714) 957-0609

## CONTROL UNIT OPERATION



## SWITCH FUNCTIONS

(A) Light Switch - On/Off switch positions.

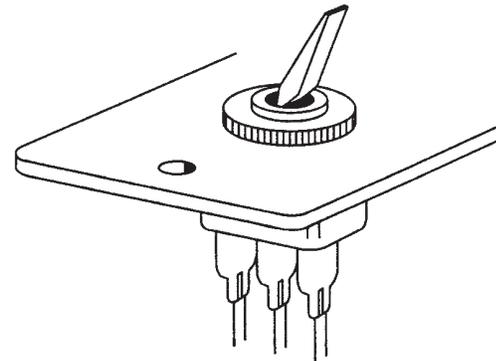
(B) Directional Switch - Lever has eight contact positions and will operate in horizontal, vertical, and in four intermediate directions.

## CLEANING OF EXTERIOR PLASTIC SURFACES

Recommendation for cleaning "Exterior Surfaces" is a solution of warm water and a mild "Dish washing" Detergent soap.

**CAUTION:** Do not use cleaners that contain esters, halogenated solvents, aromatic solvents, ketones and strong acids or bases.

**CIRCUIT PROTECTION** A 10-amp fuse is located in the On/Off toggle on control. To replace fuse grasp On/Off toggle and push in while turning to left facing control. Pull out fuse and replace. The proper fuse has been included in the fuse holder. Should this fuse blow, replace with the same size fuse after determining reason for blown fuse.



## BULB REPLACEMENT

Remove four (4) screws and retaining bezel. Pull bulb assembly forward and disconnect spade connectors from back of bulb. Reconnect spade terminals to new bulb. Install bulb and fasten with bezel and four (4) screws.

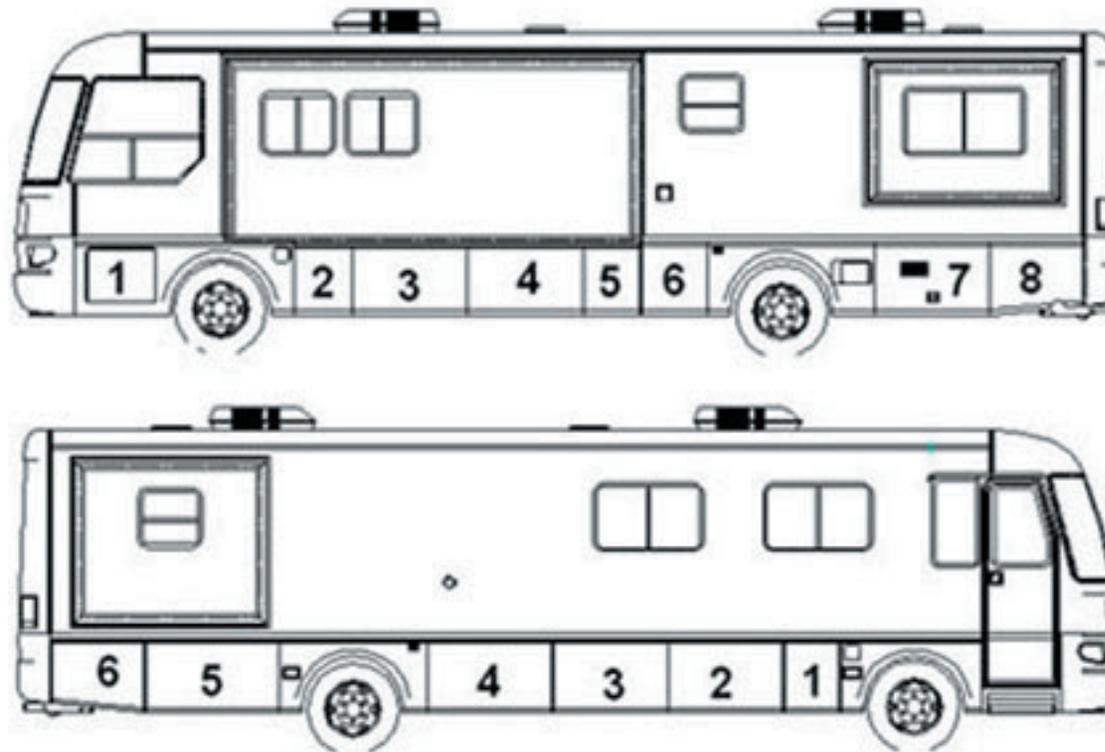
# EXTERIOR

## BASEMENT FEATURE LOCATIONS DRIVERS SIDE

1. Chassis 12 Volt fuse panels.
2. Leveling jack pump.
3. House batteries compartment, Cross car storage.
4. Hydro-Hot System control panel, basement area heat thermostat knob, cross car storage.
5. Low point water drain valves, Fresh water tank drain valve, Exterior water faucet, Exterior water pump switch.
6. Fresh water tank fill valve, City water hook up, Black tank flush, Main/Aux. Tank dump valves.
7. 50 amp shoreline power reel and switch, Cable TV & Telephone hook up, Generator Auto-transfer switch.
8. Storage.

## BASEMENT FEATURE LOCATIONS PASSENGER SIDE

1. Automatic generator start control panel, Inverter, Power awning control panel w/exterior switch, 12 Volt Energy Management System.
2. House batteries compartment, cross car storage.
3. Cross car storage.
4. Water pump access, TV booster w/12 volt outlet, Exterior entertainment center.
5. Engine batteries, Storage
6. Storage.



## INTERIOR

The luxurious interior of your Airstream motorhome has been designed for comfort, convenience, durability and appearance. An understanding of the operational procedures and maintenance techniques of the interior appointments will add to your pleasures, as well as to the long life of your motorhome.

### LOUNGE

To convert the lounge into a beds grasp the front edge of the seat, raise and pull it toward the aisle of the motorhome. The backrest will slide down into place automatically. A pull out drawer is located under the lounge.

### REAR BED

The bed top raises to reveal the engine cover for access to top of the engine. Gas rod props assist the bed top raising. Remove the mattress and open the bed top to gain access to the engine cover and bed slide out motor.



**WARNING:** The lifting and supporting strength of the gas props vary according to temperature. Props that support the bed top when hot may let the bed close rapidly when cold.

### RECLINER w/FOOTREST

The recliners supplied with the motorhome has a slide lever that will extend a footrest.

**CAUTION:** Position the chair so it isn't chafing the wall or any other object when in use or transit.

## TILE FLOOR

The ceramic tile floor in your unit in your galley and bath area can be cleaned with liquid floor cleaning solutions recommended for tile floors and warm water. Begin by sweeping or dust mopping the area. You'll need to clear the floor of all furniture or other objects. Remove all loose dust and dirt by using a broom or a clean, dry dust mop and dustpan.

Remove any stains from the floor.

Wet-mop tile floors on a weekly or as-needed basis. Select the appropriate cleaner for a ceramic tile floor.

## SHADES

Day-Night shades are lowered and raised by the bars running across the shade. Grasp in the center of the bottom bar or place hands evenly on the bar. Pull the bottom bar down to the lower sill. A center bar with small handles can be lowered (night) or raised (day). Rough roads and long trips may cause the pleated shades to come down slightly during travel. Tensions on the strings at the sides of the shades adjust the ease of operation and their ability to stay up during travel. Do not over-tighten as this may cause the string to break, requiring service.

A feather duster, or the soft-bristled brush often found as part of vacuum cleaner attachments, are recommended for cleaning the blinds and pleated shades. The longevity of the pleated shades will be increased if the shades are in the up position when your vehicle is stored.



# INTERIOR

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## TABLE AND COUNTER CARE

The table tops and counter areas are made from Corian. Most dirt and residue can be removed by using soapy water or an ammonia-based cleaner, rinsing and wiping dry. For difficult residue, spray residue with Cleaner for DuPont Corian® from Stone Care International, wait for about 30 seconds for cleaner to work. Wipe dry with a paper towel. If residue persists, repeat process.

For occasional disinfecting, wipe surface with dilute household bleach (1 part water/1 part bleach). Rinse top thoroughly with water and wipe dry. Over the counter cleaners, such as, Clean EnCounters® may be used for routine cleaning in place of soap and water.

To enhance the gloss level on semi-gloss and high-gloss finishes, use a countertop polish such as Countertop Magic®1, Hope's Countertop Polish®2 or Enhance Countertop Polish®.

Corian® is an excellent material for heat resistance. As with all countertop materials, it is important to minimize direct heat exposure to protect your surface and investment. We recommend using heat trivets or hot pads when placing hot objects on any surface. Allow cookware to cool before placing them into a Corian® sink.

In most cases Corian® can be repaired if accidentally damaged.

- Avoid exposing Corian® to strong chemicals, such as paint removers & oven cleaners. If contact occurs, quickly flush the surface with water.
- Do not cut directly on Corian® countertops.

## TILE COUNTER TOPS

Protect against chipping, scratches, especially on glazed tiles.

Avoid hard blows which can chip the tile.

## Tile Counter Cleaning

Wash with detergent solution, and rinse. To clean dingy grout, occasionally apply a solution of chlorine bleach and water to stand not more than 5 minutes; rinse thoroughly and wipe dry. General-purpose household cleaners may also be used if label says can be used on ceramic tile; follow directions exactly. NEVER use scouring powders or other abrasives as they will scratch the finish.

Creamy liquid appliance wax can be used, if wished, for further protection of tile and grout.

## DRAWERS

Drawer removal - pull drawer out to stop then raise front of drawer to clear rollers.

## SHOWER STALL

To clean your ULTRA/GLAS shower stall unit, use warm water and one of the stronger liquid detergents. Do not use abrasive cleaners; they may scratch and dull the surface of your ULTRA/GLAS unit. Stubborn stains can be removed with solvents such as turpentine, paint thinner or acetone. Restore dulled areas by rubbing with an automotive-type liquid cleaner, and then put the soft glow back into your ULTRA/GLAS unit with a light application of liquid wax.



**WARNING: Do not wax the floor of the stall without using a bath mat afterward to prevent a dangerous slippery floor condition.**

## INTERIOR METAL SKIN

The interior skin is coated aluminum sheeting. It is important to remove oil, grease and dirt as soon as possible after they appear by washing. Oil, grease, dust and dirt may be removed by washing with any mild non-abrasive soap or detergent. Cleaning should be followed by a thorough clean water rinse. Drying the skin with a chamois or a soft cloth may prevent spots and streaks.

ALWAYS WIPE “WITH” THE GRAIN OF THE METAL.

If a substance is found on the coating that cannot be removed by normal washing procedures, Airstream recommends using DX 330 Acryli-Clean made by PPG Industries. Follow all directions and warnings on the product container. Acryli-Clean should be used by trained personnel only, using the proper equipment under controlled conditions. Use the Acryli-Clean as sparingly as possible in a well ventilated area.

**CAUTION:** ABRASIVE POLISHES OR CLEANING SOLVENTS SUCH AS AUTOMATIC DISHWASHER OR ACID ETCH CLEANERS ARE TOO STRONG AND SHOULD NEVER BE USED. RINSE ALL GRIT FROM SURFACE PRIOR TO WASHING. Use soft rags or wash mitts always moving lengthwise with the trailer. NEVER rub hard on the coating. Even the softest rag can damage the coating if excessive pressure is applied.

## CARPET

The carpet can be cleaned with any good commercial carpet cleaner, or with a detergent and water. BE CAREFUL NOT TO SOAK THE CARPET WITH WATER. Vacuum as needed.

## GALLEY SINK

The stainless steel galley sink can be cleaned with a commercial stainless steel cleaner available at most stores.

## FREE STANDING DINETTE

Your unit may be equipped with a freestanding dinette. The dinette tabletop pulls away from the wall on a slide and a leaf is provided to extend the top. Hold on to the end of the table and give it a slight tug to release the top from its wall catches. Once free from its catches, the table can be extended into its full length. The chairs have straps to stabilize them during travel and can be folded for travel

## VINYL CEILING

Damp wiping with mild detergent does routine cleaning. Using any of the automotive cleaners designed for vinyl car seats and dashes can perform more thorough cleaning.

## LAVATORY SINK

The lavatory sink is made from borosilicate glass and is highly resistant to stains and corrosives.

Clean the surface with mild soap and warm water. Wipe the entire surface completely dry with a clean soft cloth. If the surface becomes excessively dirty, you can use a non-abrasive cleaning compound recommended for either glass or tile (such as Windex, ammonia and water, vinegar and water, etc.). Follow the rinsing instructions carefully.



# INTERIOR

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## CLEANING CODES

The following are the cleanability code instructions for the various fabrics used in the Airstream motorhomes:

### CODE W-S

Fabric care. Spot clean this fabric either with a mild solvent or a water-based cleaning agent. When using a solvent or dry cleaning product, follow instructions carefully and clean only in a well-ventilated room. Avoid any product that contains highly toxic carbon tetrachloride. You may also use an upholstery shampoo product or the foam from a mild detergent. With either method, pretest a small area before proceeding. Use professional furniture cleaner when an overall soiled condition is reached.

### CODE S

Fabric care. Spot clean, using a mild, water-free solvent or dry-cleaning product. Carefully follow instructions on such product. Clean only in a well-ventilated room. Avoid any product containing carbon tetrachloride, which is highly toxic. Pretest small area before proceeding. Use professional furniture cleaner when an overall soiled condition is reached.

### CODE W

Fabric care. Spot clean, using the foam only from a water-based cleaning agent, such as mild detergent or non-solvent upholstery shampoo product. Apply foam with a soft brush in a circular motion. Vacuum when dry. Pretest small area before proceeding. Use professional furniture cleaner when an overall soiled condition is reached. The manufacturer of the fabric designed the above code.

**CAUTION:** Never remove cushion cover for separate cleaning or washing. Any tumble cleaning method can destroy the backing, shrink or otherwise damage

upholstery.



**WARNING:** Keep your furniture and family safe from fires caused by careless smoking. Do not smoke when drowsy. Remove immediately any flowing ash or a lighted cigarette that falls on furniture. Smoldering smoking material can cause upholstered furniture fires.

## FABRIC CLEANING

All material should be professionally dry cleaned to remove any overall soiled condition. These materials may be spot cleaned, however, using the cleanability code instructions as listed. Sample swatches are furnished to our dealers. The dealer will be able to give you the cleaning code and part number for the fabrics used in your particular motorhome.

## FORMICA PANELS AND FURNITURE

Formica laminate is designed for beauty and durability. With minimal care it will last for years and remain as beautiful as the day it was installed. It's very easy to clean. Normally, a clean, damp, non-abrasive cotton cloth with a mild detergent or household cleaner works best.

For hard to clean areas use a nylon bristled hand or vegetable brush, using a rotating motion. Rinse with clean water, using a clean, non-abrasive cotton cloth. Do not flood a laminate surface, especially near seams because water can penetrate and cause the substrate to swell. Periodic application of a self-cleaning wax can help minimize staining. For difficult stains apply a paste of baking soda and water on the area to pull out the stain. The paste will be slightly abrasive so do not rub.

# PLUMBING & HEATING

## HYDRO-HOT WATER/HEATING SYSTEM

The Hydro-Hot system serves two primary functions within the RV - to provide a supply of on-demand hot water, and to provide interior heating. Diesel fuel, drawn from the main fuel tank, 120-Volt AC, or a combination of both, are required to operate the Hydro-Hot system. A switch panel designating the preference of using diesel fuel or 120-Volts AC is installed in galley wall panel for convenience, and allows users the option of using one or both energy sources at the same time.

Diesel fuel is the most efficient energy source to bring the Hydro-Hot system up to operating temperature in the least amount of time. When the system is engaged, the green indicator light on the diesel control switch will illuminate and an audible roar will sound from the diesel burner. At this time the outside exhaust of the Hydro-Hot will be warm to the touch. Do not place your hand in front of the exhaust and risk injury from burns.

During mild weather temperatures, and when you expect a low demand for on-board hot water, operating the Hydro-Hot is easily accomplished using 120-Volts AC through a supply of shore power, or the on-board generator. When hooked to shore power, consider choosing to run energy sources simultaneously to insure a quick and efficient supply of on-demand hot water.

The inverter is not wired to supply battery power voltage to the Hydro-Hot system to prevent the risk of discharging the house or chassis batteries through excess discharge from the Hydro-Hot system. However, 12-Volt DC power, which is provided from the RV house batteries, is required to operate the Hydro-Hot switch panel located inside of the RV, the electronic controller located in a passenger side basement compartment, and Comfort Control thermostats installed inside of the motor home.

Therefore, the house and chassis battery banks must be charged, and battery disconnect switch must be turned to the ON position, to operate the Hydro-Hot system. When the battery disconnect is switched to ON, current is passed to the house 12-Volt

DC fuse panel. The interior battery disconnect switch is located directly inside the RV entry door.

Once the main battery disconnect switch is set to ON, the sub-systems of the Hydro-Hot system are then powered for use.

The Hydro-Hot system does not simultaneously supply both interior heat and hot water, but instead relies on a domestic water priority system to interrupt interior heating upon a demand for hot water. Interior heating will again commence once the demand for hot water ceases. During cold weather temperatures, you may find it convenient to postpone interior demands for hot water until the Hydro-Hot has had ample time to heat the interior of the RV. Once interior heating is interrupted in order to obtain hot water during cold exterior temperature conditions, avoid opening and closing the RV entry door to retain existing interior heat until such time as the Hydro-Hot system is once again providing interior heat.

Located in a roadside basement compartment is an electronic controller. In the event the Hydro-Hot system fails to operate once all operating conditions have been met, the electronic controller can become a valuable tool in quickly troubleshooting potential problems with the system by pinpointing a particular fault within the system at a glance.

Lights aligning the panel of the electronic controller are well marked for easy reference. Green illumination of any light within the panel is indication of favorable working conditions. Any red light indicates a fault condition. Becoming familiar with the various operating designations within the electronic controller, as well as working knowledge of light indications, will help you to efficiently diagnose problems with the Hydro-Hot system.



# PLUMBING & HEATING

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The Emergency Cutoff lamp will indicate when there is a low liquid level in the heat tank, a strong impact to the unit, or when power has been disconnected from the system for an extended period of time. Low voltage supply may also trip the Emergency Cutoff Switch, causing the Hydro-Hot system to cease operation because the RV house batteries have reached a state of charge insufficient to operate various sub-systems that comprise the Hydro-Hot system.

In the event a red light illuminates in the Emergency Cutoff lamp, the electronic controller must be manually reset. Using a small screwdriver, or one end of a paperclip, reset the Low Voltage/Reset button located on the electronic controller.

## HEATING

There are three thermostats that are used to control heat to areas of the motorhome.

The bath/bedroom area thermostat is located under the medicine cabinet.

For the basement area, a thermostat knob is located next to the Control Panel in the basement compartment.

The living area heat is controlled by the air conditioner Comfort Control Center mounted on the galley wall. Push the zone button to the furnace mode and adjust the thermostat.

When there is a call for heat, the system will activate the circulation pumps only after confirming there is no demand for domestic hot water. While interior heat is supplied through the Hydro-Hot system, the fan speed selector switches (certain models) will have power applied and produce an audible sound when engaged.

## EXPANSION TANK

The expansion tank, a clear plastic bottle, resembling a small version of the engine coolant reservoir, is located in a curbside basement compartment. When the Hydro-Hot system is at operating temperature, visually inspect the coolant level of the tank on a monthly basis, and refill as needed. Refer to the manufacturer's manual for specific instructions on system operations, winterization procedures and maintenance requirements.

## SERVICE

Once per year, have the Hydro-Hot system tuned up by a qualified technician to assure ongoing performance of the system when needed. When storing the RV during freezing temperatures, winterize by draining the Hydro-Hot system of water. The Hydro-Hot system is still available for use in interior heating during storage following winterization.

# PLUMBING & HEATING

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## FAUCETS AND SHOWER

Delta Faucet Company

Delta Customer Service

1-800-345-DELTA (3358) between 7 a.m. and 9 p.m.(CST), Monday through Saturday.

Your faucets and shower are manufactured by Delta and have a their registered finish “Brilliance”. Developed with a patented process using Physical Vapor Deposition (PVD), Brilliance® molecules are embedded deep into the faucet’s surface, creating a bond that is virtually indestructible. However, failure to give the proper care for the finish can cause damage and may void the warranty.

In general, most common household cleaners meet the criteria for cleaning any Brilliance® finish product. Avoid industrial cleaners and abrasive cleaners, such as those used for toilet bowls and green Scotch-Brite® heavy-duty scrub sponges. Please read the cleaning product’s instructions, contents and cautions on any new cleaner before using it. Avoid bleach, products that state on the label that they remove tarnish and rust, and those containing hydrofluoric, hydrochloric and/or phosphoric acids or caustic agents. For stubborn stains and/or mineral deposits, a mild abrasive cleaner can be used. Current examples of mild abrasive cleaners are Bon-Ami, Barkeeper’s Friend, Zud or Soft Scrub without bleach.

After every use or cleaning, it is always best to wipe dry with a soft cloth to prevent water spotting and mineral build-up. We recommend that you clean and wax regularly. You may use an aerosol furniture polish or floor paste wax for this purpose.

Manufacturers of cleaning agents always have the prerogative of changing their formulation without notice. As a result, Delta Faucet Company and Airstream Inc. does not endorse any specific cleaner. To remove hard water deposits and soap scum, use a 50/50 mix of vinegar or liquid Lysol® and water.

For more information on your Delta faucets and shower visit the Delta Web site at <http://deltacom.deltafaucet.com/> or [www.brizofaucet.com](http://www.brizofaucet.com).



# PLUMBING & HEATING

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## WATER SYSTEM - SELF-CONTAINED

Most exterior plumbing functions are accomplished in the plumbing utility compartment on the roadside of your motorhome. To fill your water tank, hook up a garden hose to the city water inlet then open the water tank fill valve in the upper right corner of the compartment. The water level can be monitored on your control panel above the range or the tank can be filled until water is expelled out gravity fill vent tube.

If it is more convenient for you, a water fill is also located on the side of the vehicle. Open the small access door, unscrew the cap, pull the air plug, insert water hose and fill.

Open the hot side and cold side of the galley faucet and turn on the water pump switch located on the monitor panel. For some time the open faucet may only sputter. This is because the water lines are being filled and air is being pushed out through the lines. Once the lines are filled and a steady stream of water is coming from the faucet, shut off the faucet and start the Hydro-Hot Water system.

All other faucets can now be opened until all air is expelled.

Once the system is filled with water and the faucets closed, the water pump will shut off. When a faucet is opened the pump will come back on automatically. If the faucet is just barely open it is normal for the pump to cycle on and off rapidly.

Water pressure at some campgrounds may be low. The water pump can be turned on to assist the city water hookup pressure. Be sure there is some water in the fresh water tank. The pump will only use the water that is needed out of the tank to bring the pressure up to the usual standard. The water pump should be turned off when the motorhome is left unattended.

## Cleaning Water Storage Tank

1. Prepare sodium hypochlorite solution using potable water and household bleach (5 1/4 to 6%) in the ratio of 1/4-cup bleach to 1 gallon of water. (Common household bleaches are Purex and Chlorox.)
2. Pour 1 gallon of hypochlorite solution for each 15 gallons of capacity into the empty water tank.
3. Add enough potable water to completely fill the water system.
4. Allow closed system to stand for three hours.
5. Drain the hypochlorite solution from the system and refill with potable water.
6. Excessive hypochlorite taste or odor remaining in the water system is removed by rinsing the system with a vinegar solution mixed in the ratio of 1 quart of vinegar to 5 gallons of water.
7. Drain the system and flush with potable water.

# PLUMBING & HEATING

## WATER PUMP

Manufacturer:

Aquatec

17422 Pullman Street

Irvine, CA 92614

800 975-9995

949 225-2200

Fax 949 225-2222

www.aquatec.com

### Aquajet RV Series

This revolutionary pump employs state-of-the-art electronics to automatically control motor speed the pump actually adjusts its speed as you open and close water fixtures. The Aquajet RVs exclusive soft start feature eliminates annoying rapid cycling, and its exclusive 5-valve design can deliver twice the flow and pressure conventional RV industry pumps.

(Partial Reprint. Please contact Aquatec for complete instructions.)

Please read these Operational Guidelines before operating the AQUAJET RV PUMP. If additional help is needed, please consult the Factory.

## CAUTIONS:

- A. The pump is equipped with an electrical speed controller; please insure that electrical connections are made in accordance with these instructions.
- B. The pump is equipped with a pressure sensing demand switch, which controls the maximum operating pressure as set at the Factory. Never subject the pump to pressures above 125 PST (9.5 bars).
- C. Never operate the pump in a harsh environment or hazardous atmosphere, since motor brush and switch may cause electrical arcing.
- D. Pump head materials are designed for use with water only. Do not use with petroleum products.
- E. As long as there is inlet water pressure, the pump will not stop forward flow of water even if the motor is turned off. Be sure the system has a positive means of shutting off water supply.
- F. Always consider electrical shock hazards when working with and handling electrical equipment. If uncertain, consult an Electrician. Electrical wiring should only be done by a qualified Electrician per local and State Electrical Codes.

Do not subject the pump to extreme high or low (freezing) temperatures while in operation. (Operating ambient temperature range is 32° to 115° F).

The pump will only prime if all pressure is relieved from the outlet port



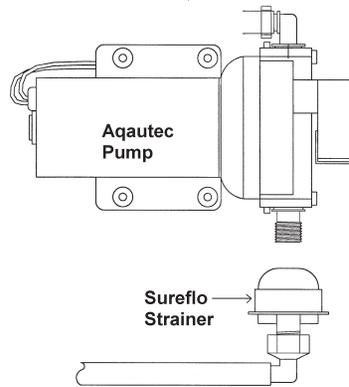
# PLUMBING & HEATING

## WATER PUMP AND STRAINER

Water pump access is in the lower exterior compartment on the curbside just in front of the rear wheels. Once the exterior door is raised, the pump can be found behind the small access door in the upper right corner of the storage area.

To clean strainer screen, first remove inlet connection from pump side of strainer. This will allow the intake side of the strainer to be rotated about 1/8 turn counter clockwise and removed. The screen part of the strainer will now be accessible for cleaning.

When reassembling, only rotate the inlet side of the strainer until the stops are felt. The "O" ring performs sealing and too much pressure will only break the strainer.



## Water Pump Trouble Shooting

### MOTOR DOES NOT OPERATE.

- Is battery discharged?
- Are any wires disconnected?
- Are terminals corroded?
- Is switch in "ON" position?
- Is fuse good?
- Is water frozen in pump head?

### MOTOR RUNS BUT NO WATER FLOWS.

- Is water tank empty?
- Are there kinks in the inlet hose?
- Is air leaking into inlet hose fittings?
- Is inlet line or in-line filter plugged?
- If using a filter, check the line just before the filter.
- Is outlet hose kinked?

# PLUMBING & HEATING

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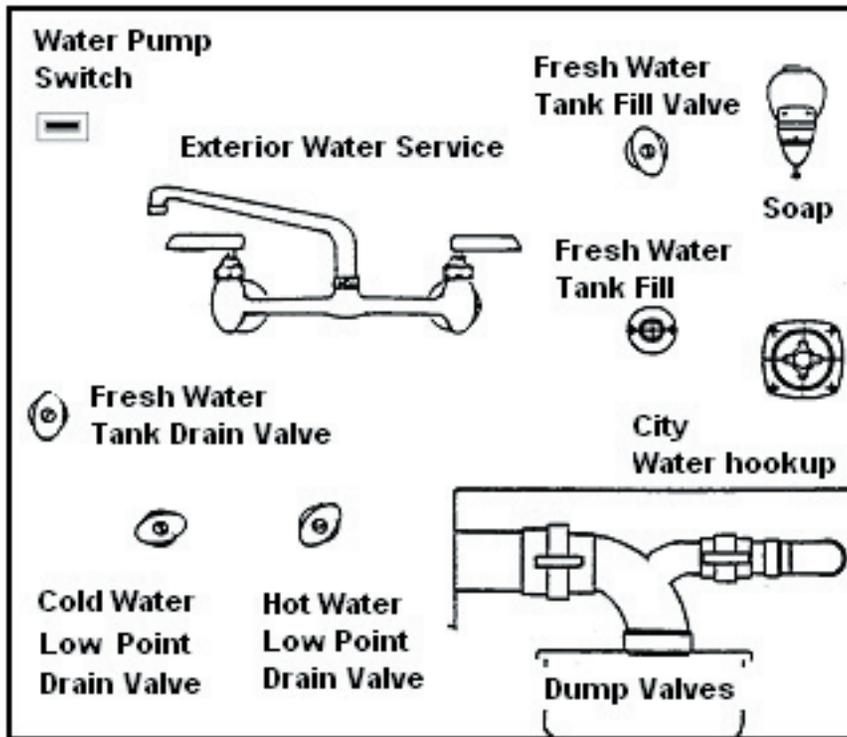
NOTES



# PLUMBING & HEATING

## UTILITY COMPARTMENT

In your utility compartment on the roadside of the motorhome are the city water hose connection and various other valves. They are clearly marked and your dealer should have explained the functions of each at time of purchase.



Use a high-pressure hose of at least ½" diameter. It should be one that is tasteless, odorless and non-toxic designed for RV use. The city water inlet is a standard garden hose thread. We suggest you carry two lengths of hose. This way you have the ability to reach hookups further away than normal, plus you have a spare hose should one fail or become damaged unexpectedly.

After hooking up the hose and turning on the city water valve provided in the park, slowly open a faucet. There will be a lot of spurts and sputtering until all the air is expelled from the motorhome system. If the Hydro-Hot System is empty it will take some time before all the air is expelled and you get a steady flow of water at the faucet. Once a steady flow is achieved at one faucet the others should be opened long enough to expel the air in the lines going to them.

Water pressure at some campgrounds may be low. The water pump can be turned on to assist the city water hookup pressure. Be sure there is some water in the fresh water tank. The pump will only use the water that is needed out of the tank to bring the pressure up to the usual standard. The water pump should be turned off when the motorhome is left unattended.

Your plumbing system has a built in pressure regulator to protect your lines and faucets from extremely high pressures on some city water systems.

Information on dump valve and black tank flush use can be found under DRAIN AND WASTE SYSTEM further back in this section.

# PLUMBING & HEATING

## STORAGE AND WINTERIZING

When storing your motorhome for a short or long period, use the same precautions as you would in your own home in regard to perishables, ventilation and rain protection.

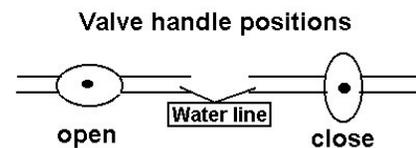
In addition, for a prolonged storage period, flush out all the drain lines and the holding tanks. Also, drain and blow out the entire fresh water water system, including Hydro-Hot Water/Heating System. Drain the water storage tank. Instructions for draining the water system are explained in the following paragraphs on winterizing.

The main consideration in winterizing is to guard against freezing damage to the hot and cold water systems, the waste drain system (including the traps), the waste holding tanks, and the batteries. To completely winterize your motorhome follow this procedure:

1. Level the motorhome from side to side and front to rear. Open all faucets.
2. Turn the water pump switch to the OFF position.
3. Open the two drain line valves in your utility compartment as well as the exterior water faucet. Open the water tank drain valve also located in the utility compartment.
4. The toilet water shutoff valve should be left in open position while draining water. It is located in the lavatory cabinet.
5. While the water is draining from the system, depress the button on all hand spray heads and drain all water. Unscrew the head on spray unit and store.
6. After the water has stopped running from the drain lines, apply at least 60 lbs. of air pressure at the city water inlet. Be sure the toilet valve and all drain valves and faucets are open and pump outlet hose is disconnected. This can be accomplished at a service station and will force any remaining water from the water heater and

remove any water which may be trapped in low areas.

7. Pour a cup of non-toxic antifreeze into the lavatory, sink, and tub drains to prevent freezing water in P-traps.
8. Be sure to open the waste holding tank drain valves, and drain and flush the tanks thoroughly. (This is very important, as the sewage in the tank, if frozen, could seriously damage the tank.)
9. Remove the batteries from your motorhome and store in a cool dry place where there is no danger of freezing. It is very important for optimum life of your battery to check it periodically and to keep it fully charged. This is especially true in winter months, when the temperature may drop below freezing. If the period of storage is for 30 days or less, you may turn off the "kill" switch rather than remove the batteries. Removing batteries is a big job, optionally the batteries should be checked monthly and be charged as needed by running the motorhome engine, starting the generator, or hooking the shoreline power cord to a 110 volt power supply.
10. Remove any items (food, cosmetics, etc.) from the interior that might be damaged by freezing, or might damage the motorhome if containers break.
11. Remove the water lines from the water pump and run the pump for a few seconds to clear it of any water.



# PLUMBING & HEATING

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You may normally keep the RV plugged into shore power during cold winter months and presume that it is unnecessary to maintain antifreeze levels within the hydronic heating system. Relying on continuous shore power supply to protect the Hydro-Hot system from freezing is risky when taking into account that the shore power supply may be interrupted due to a black out, or because the shore power cord has inadvertently disconnected from the source.

Evacuating the hydronic heating system of water when preparing the RV for winter storage by blowing out the lines with compressed air may not be effective in completely draining water out of the long length of tubes inside of the system. Moisture left within the tubes could collect and settle at the bottom loop. If temperatures during storage reach freezing, that moisture may expand and crack the tubes.

For additional winterizing protection, add non-toxic antifreeze (approved for drinking water systems) to your water lines using the following procedure:

1. Reconnect all lines except the hose to the pump inlet port. Close all drain valves, be sure all shutoff valves are open.
2. Attach a length of hose to the pump inlet port. This piece of hose should be long enough for the free end to be inserted into and reach the bottom of the antifreeze container.
3. Dilute the antifreeze solution in accordance with the manufacturer's instructions.
4. Open all water faucets.
5. Insert hose length into the antifreeze container, turn the pump switch on, and run the water pump until the antifreeze solution fills all water lines and is coming out of all faucets on hot and cold sides. Flush toilet and hand sprayer. Work shower hand spray while holding down in tub.

6. Shut off the pump and close all faucets.

7. Disconnect the hose length from pump inlet fitting and reconnect water system inlet line.

# PLUMBING & HEATING

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## WINTERIZATION FOR SPLENDIDE WASHER/DRYER COMBO

If currently pumping antifreeze through the fresh water system, follow these steps to winterize your machine:

With the machine power OFF, turn the Wash Temperature knob to HOT.

Turn the Program Selector knob to Regular Wash (located in the Cotton Heavy Duty section of the dial).

Turn the power ON for 1-minute.

Advance the selector to Reset.

With the machine power OFF, turn the Wash Temperature knob to COLD.

Turn the Program Selector knob to Regular Wash (located in the Cotton Heavy Duty section of the dial).

Turn the power ON for 1-minute or until you see antifreeze in the drum.

Advance the selector to Reset.

Turn the machine power OFF.

Now advance the Program Selector knob to spin.

Turn the power ON. Allow the drum to spin for 30 seconds.

Turn the machine power OFF.

Done!

Check the water inlet hoses and pump periodically.

Refer to Use & Care Guide supplied with the owner's packet.

For parts or technical assistance contact Westland Sales

Technical Phone: 503-655-2563

Fax: 503-722-9202

Email: [splendide@westlandsales.com](mailto:splendide@westlandsales.com)

Web Sites: [www.splendide.com](http://www.splendide.com)  
[www.westlandsales.com](http://www.westlandsales.com)

## WINTERIZATION FOR DISHWASHER

While running antifreeze through the lines, run a rinse and hold cycle, which will get the winterization product to the places it needs to be to winterize the dishwasher.

A large, white, stylized letter 'G' is centered within a dark gray rounded rectangular background on the right side of the page.

# PLUMBING & HEATING

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## DRAIN AND WASTE SYSTEM

The drain and waste system of your motorhome includes waste holding tanks made from molded plastic. The BLACK WATER HOLDING TANK enables you to use the toilet for several days away from disposal facilities. The wastewater from the sink, shower, and bath and lavatory drains into the GRAY WATER HOLDING TANK. Each tank has its own dump valve; however, both tanks drain through a common outlet. Therefore, you need to make only one connection when hooking up in an RV park with sewer facilities.

To empty both tanks, attach the sewer hose by pressing the bayonet fitting onto the outlet adapter and rotate clockwise until it feels solid and secure. Attach the outlet end of the hose to the sewage outlet; making sure that the hose is placed so that it will drain completely. The dump valves are located in the utility compartment on the roadside. Pull the dump valve handle out as far as it will go and wait until the tank is drained. If the gray water tank is drained after the waste tank, the soapy water will help keep the sewer hose and outlet clean.

### Monitor Panel

Check your monitor panel frequently. When the BLACK WATER HOLDING TANK is completely full, sewage cannot be emptied from the toilet bowl. If the GRAY WATER HOLDING TANK is overfilled, drain water will “backup” into the tub and cause an unpleasant cleaning job. Never drain the tanks at any place other than an approved dumping station.

### When Parked and Connected to Sewer Outlet

When you are in a park and connected to a sewer outlet, keep the black water holding tank dump valve closed and empty the tank every few days or whenever it becomes almost full. ONLY BY SENDING A LARGE VOLUME OF LIQUID THROUGH THE BLACK WATER HOLDING TANK AT A TIME WILL TOILET PAPER AND OTHER SOLIDS COMPLETELY WASH AWAY.

This practice will avoid the accumulation of solids in the black water holding tank, which could lead to an unpleasant cleaning job. Should solids accumulate, close the dump valve, fill the tank about half full with water, then drive the motorhome for a few miles. The turbulence and surging of the water will usually dissolve the solids into suspension so the tank can be drained. Keep the auxiliary tank valve open when connected to a sewer outlet.

Draining the tanks as described will protect them from freezing during storage. When traveling in sub-freezing temperatures, use a winterizing solution designed for RV use. Follow the directions on the container. As this is being written, heated tanks are being considered and may be on your motorhome.

**CAUTION:** Never put wet strength paper towels or tissues in your holding tank, since they won't dissolve and can “catch” in the mechanism of the dump valve. Colored toilet tissue is slower to dissolve than white. Most RV accessory stores offer tissue, designed for RVs that will completely dissolve.

# PLUMBING & HEATING

## BLACK TANK FLUSH

The black water holding tank must be flushed out until all paper and waste material is removed. Close the dump valve and refill the tank with 5 to 10 gallons of clean water and repeat until clean.

In the utility compartment on the left side is a water hose connector marked "Black Tank Flush." It allows water to flow only one way. To use, hook-up hose and turn on full force. Within the tank a spray head with a multiple- holed head will spray the interior surface of the tank.

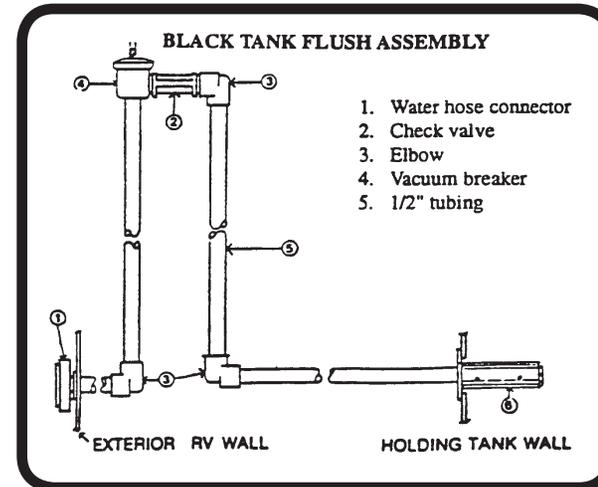
The gate valve should be closed for the first couple of minutes, and then opened to let the water out in a rush. Repeat as needed.

## Drain Systems Cleaning

There are many deodorizers on the market in tablet, liquid, and powder form. These not only combat odor, but also, stimulate the bacteria that works to dissolve the solids in your tank. Picking a deodorizer with lubricating qualities will ease slide valve operation.

The only cleaning agents that can be used without causing harm to the system are household ammonia and tri-sodium phosphate in small quantities. Do not use any product that contains any portion of petroleum distillates. This attacks the rubber seals of your toilet and dump valve. Also, do not use any dish detergent or abrasive cleaners. All products should be marked approved for ABS drainage systems.

When winterizing drains use only recreational vehicle plumbing type antifreeze. These are sold through your dealer.



# PLUMBING & HEATING

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## TOILET

Sealand Model 511 Traveler

Dometic Corporation – Sanitation Systems

13128 State Rt. 226, P.O. Box 38

Big Prairie, OH 44611-0038 USA

Phone: 330.496.3211

Fax: 330.496.3097

Product Hotline: 1.800.321.9886 (8 a.m. – 5 p.m. E.T.)

© Dometic Corporation

[www.sealandtechnology.com](http://www.sealandtechnology.com)

### Proper Cleaning and Maintenance

The Traveler toilet should be cleaned regularly for maximum sanitation and operational efficiency. You can clean it just as you would a household toilet. Do not use caustic chemicals, such as drain-opening types, as they will damage the seals.

**BOWL CLEANING:** For stubborn stains, use SeaLand Bowl and Seal Cleaner. It's manufactured especially for use with Traveler and Traveler Lite toilets. In certain locations where water is hard, a build-up of lime may dull the toilet bowl finish. Restore the shine with this SeaLand cleaner. If you cannot find it in your area, contact SeaLand for your nearest dealer. If the cleaner is not available, you can also use Bar Keepers Friend cleanser. It is not necessary to vigorously scrub with either product. Please follow label instructions.

**SEAL CLEANING:** After an extended time, mineral deposits from hard water can build up under the edge of the rubber bowl seal, resulting in a slow leak down of water from the bowl. To prevent this mineral build-up, periodically clean under the bowl seal with SeaLand Bowl and Seal Cleaner.

1. Shut off water supply.
2. Apply cleaner onto the seal cleaning tool (supplied with new toilet), open the flush ball by pressing on flush lever, and scrub under the seal. Make sure to push bristles between bottom of seal and top of flush ball surface to scrub all parts of seal that come into contact with flush ball.
3. Close ball and wait 2-3 minutes.
4. Open flush ball. Use brush and water to rinse away cleanser and loosened deposits.

### Winterizing

At the end of each season, the Traveler or Traveler Lite toilet should be winterized for storage, by either draining or using potable water-safe antifreeze in the system.

#### To drain:

1. Thoroughly flush system with fresh water.
2. Empty holding tank.
3. Shut off water supply to toilet, and remove inlet waterline. Do not remove brass cap on bottom of valve.
4. Press flush lever until all water is drained from toilet.

#### To use antifreeze:

1. Drain potable water tank.
2. Add freshwater antifreeze to potable water tank.
3. Flush potable water antifreeze and water mixture through toilet and into the waste holding tank.
4. Empty holding tank.

**NOTE:** Use nontoxic antifreeze designated for potable water systems.

**CAUTION:** Never use automotive-type antifreeze in freshwater systems.



# ELECTRICAL SYSTEM

## 12-VOLT SYSTEM

### BATTERY CONTROL CENTER

Your motorhome is equipped with six batteries. Two batteries will be for the engine and the other 4 batteries for the interior 12-volt circuits. Location of the batteries is explained in the Exterior section of this manual.

The Intellitec Battery Control Center is a centralized power switching, fusing, and distribution center. Power from both the chassis and the coach batteries are feed into the control center box. **All servicing with-in this box should be done only by a qualified Service Technician.**

### BATTERY DISCONNECT SWITCH

The BATTERY DISCONNECT switch on the panel just inside the main door acts as a master switch. When the coach switch is turned to **use** it opens the circuit between the coach batteries and the twelve-volt distribution panel. The chassis disconnect switch does not disconnect the chassis battery from the chassis systems. It only cuts off power from the inverter/converter charging system to the chassis battery. You must have the chassis battery disconnect switch on (**use**) for the inverter/converter to charge the engine batteries. The coach batteries are charged by the inverter/converter whether the coach battery disconnect switch is in the use or store position.

The engine batteries are used for starting the engine and operating the headlights, tail-lights, running lights, instrument panel lighting, automotive air conditioning and other accessories. The alternator charges all the batteries while the engine is running. The inverter/converter charges all the batteries when the unit is plugged into shoreline as long as the chassis battery disconnect switch is on (**USE**).

The coach batteries are used for interior lighting; exhaust fans, generator, water pump, central control panel, entertainment center, and optional 12-volt convenience outlets.

The generator also charges all batteries when it is running, through the 120-volt city power system that powers the inverter/charger. The Intellitec Battery Control Center manual is also in your packet. It has trouble-shooting and wiring information.

The battery disconnect switch is not intended for everyday use. But if you're going to be away from your coach for more than 3 or 4 days and it's not plugged into 110-volt current just flip the switch off on the way out and your assured of fresh batteries when you return.

### INVERTER W/AUTO GENERATOR START

With the inverter is installd the standard package of four batteries for the interior coach circuits. An inverter uses 12-volt battery power and changes it to 120 volt AC current.

The Inverter has a Automatic Generator Start option that automatically starts and stops the generator based on interior coach temperature (for running the roof air conditioner) and low battery voltage (to charge the coach batteries). Setting your personal preferences for this item is explained in the manual supplied by the inverter manufacturer. More information on this ssystem is explained later in this section.



# ELECTRICAL SYSTEM

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## 12-Volt Operation

The only thing you have to do is make sure the coach batteries don't run down. In normal usage there isn't any problem, since you would normally drive part of the day and be plugged into a campground at night. The alternator charges the batteries when you drive and when you're plugged into city power the converter charges the batteries and carries much of the load.

Some nights you may not find a place to plug into city power. No problem, the standard battery system gives you about 400 amp-hours so you can comfortably run your lights and vents in a normal fashion without depleting the batteries.

If you are not plugged into city power and you're not driving, you'll want to conserve your batteries by using as few lights and appliances as possible. The generator will start if the voltage becomes low in your house batteries.

Your motorhome is equipped with a two 50-watt solar panels. The controller is located on the wall.

There are two sets of 12-volt fuses and breakers in your motorhome. The main interior circuit fuses are in the Energy Management System Module located in the front passenger side basement compartment. The brightly colored fuses pull straight out from the face of the panel. Replacement fuses are available at automotive stores and most service stations. On the panel covering the fuses is a diagram showing the function of each fuse or circuit breaker. The chassis manufacturer provides the second set of fuses. Freightliner fuses are located in the lower compartment forward of the roadside front wheel.

Many interior lights have been included in your motorhome to give you almost infinite variable light intensity. The individually switched ceiling lights must be turned on before the wall switches will control them.

Just inside the main door are switches for the step, patio light, and forward ceiling lights.

The dinette lights and the curbside sconce lights two gang switches are located on the refrigerator cabinet panel.

In the galley area is a three gang switch for the galley spot lights, ceiling lights, and the galley indirect lights. Also located in the galley is the generator start and monitor system.

On the forward lavatory panel is the switch for the wardrobe closet light.

On the aft lavatory panel is a two gang switch for the bedroom fluorescent light and the bedroom ceiling spot lights. Also on the panel is a three gang switch panel controlling the vanity spot lights, water pump, and vanity make up lights.

In the bath area is a three gang switch panel for the bath ceiling lights, the ceiling exhaust fan, and the ceiling fan lid power lift.

The forward curbside bedroom panel has the switches for the two bedroom slide outs.

The bedroom roadside rear wall has switches for the bedroom fluorescent lights, ceiling spot lights, and the rear storage cabinet.

The bulbs in the interior lights are all easily replaced if they burn out.

To change the bulb in the round spot lights, first remove the lens assembly. The lens cap is threaded and screws off. The bulb inserts into the ballast by two wire prongs. Grasp the bulb with a piece of cloth and pull it gently straight out from its ballast. Insert the new bulb, and replace the lens. The lens assembly has two grooves that must be aligned to the light fixture before snapping the lens back into place.

# ELECTRICAL SYSTEM

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To gain access to the bulbs in the reading lights on the bottom of the overhead lockers you must remove the lens. The lenses are removed by turning counterclockwise about slightly. The bulb, like other flat base bulbs, pulls straight out of the socket.

The sconce light bulbs are removed by pulling them straight out of the ballast.



**WARNING:** If they are difficult to remove, use a folded rag to protect your hand when grasping the bulb in case it should unexpectedly shatter.

The fluorescent light lenses are removed by squeezing the sides of the lens in until they clear the frame. In cold weather it is helpful to leave the light on for a while to soften the plastic and avoid cracking. Incandescent bulbs are removed by depressing and turning to the left about 1/4 turn. Fluorescent bulbs are removed by turning in either direction.



**WARNING:** Always replace the light bulb on an interior or exterior light fixture with the correct bulb for that light. Failure to heed this warning could cause fire, property damage, personal injury, or death.



# ELECTRICAL SYSTEM

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## 110-VOLT POWER

The 110-Volt system works very much like your home. The circuit breakers, located behind the access door at the side of the rear bed, supply the power to the receptacles and appliances. If a circuit is over loaded or a short circuit occurs, the breakers will “kick” out. To reactivate the circuits, turn the breaker to off, reduce the load or correct the short, and tam the breaker back to on. One of the breakers is a GFI (Ground Fault Interrupter) breaker. The intent of this breaker is to sense any loss of ground before a harmful shock could occur, and kick the breaker out. These sensitive breakers are installed in the circuit feeding the bathroom, outside receptacle, and galley area. These are the areas where the use of water or the wet ground could put a person in danger of shock. Since the GFI breaker is so sensitive, it is not unusual to have it kick out for no apparent reason.

## GENERATOR

Using the generator is very much like plugging into an external power source. The generator has start switches located on the driver side armrest, on the galley end panel, on the bedroom rear wall, and on the generator located in the front nose slide-out compartment. Just touch and release the galley and bedroom switches and the generator will start in a few seconds. When you start the generator there is a built in delay of about 20-30 seconds before the circuits are switched and the generator is providing all the 110-volt power to your coach. The electrical device that has the delay and switching feature is called the generator switch over relay. The time delay feature allows the generator to reach full operating speed before it takes the “load”. It is normally closed so city power coming in goes through the switch and on to the main circuit breakers. When the generator is started and the delay feature is satisfied the switching device goes to the second set of points. This cuts the contact between the city power and the breaker box and makes the contact between the generator and the breaker box. A latch at the top of the front license plate area releases the generator slide out compartment Pull compartment straight out for service.

**The generator manufacturer provides an operators manual that should be reviewed prior to use.**

## POWER CORD

The power cord is located on an electrically powered reel in the first compartment behind the roadside rear wheels. A switch marked “in and out” controls the reel. You’ll find this feature especially helpful in cool weather when the heavy power cord becomes less flexible.

If adapters are required when you plug into city power, you may be using a 30 amp or less power source. You’ll be losing some power capabilities and won’t be able to operate all the appliances at the same time. The Smart Energy Management System will help control the usage of needed appliances.



**WARNING: If adapters are required to obtain 110-volt city power it's extremely important that the polarity (ground function) is not lost. With your motorhome a circuit analyzer was provided. It is usually yellow and triangular shaped with prongs shaped to fit a standard receptacle. Plug this into any receptacle in your coach and it will indicate any polarity or grounding problem. Loss of ground can be extremely hazardous. You might touch the motorhome and feel a slight tingle (your body has become the ground circuit) or you can receive a severe shock.**



**WARNING: Never plug the power cord into a 220-Volt power source.**

# ELECTRICAL SYSTEM

## SMART ENGERGY MANAGEMENT SYSTEM

Intellitec

131 Eisenhower Lane North  
Lombard, IL 60148  
630.268.0010/1.800.251.2408

The System senses when the coach is connected to a 50 Amp service, or operating from the generator and allows simultaneous operation of all the 120 volt loads. When 50 Amp service is not available and the coach is connected to a smaller electrical service, such as 30 or 20 Amp, the system automatically takes control of the loads to practically eliminate circuit breaker tripping. It constantly monitors the total amount of current drawn in the RV and controls the loads, as necessary, to keep the total current to a value less than, or equal to, the available power service.

There is no programming necessary and the unit will work with any load within the circuit breaker limits. The Smart EMS automatically “learns” the amount of current drawn by each of the controlled loads as it turns them on and off. In this way, it automatically adapts to differing loads, or loads whose current changes with line voltage or temperature.

### Smart EMS Operation

The Airstream A-Series motorhomes are equipped with 50 Amp electrical service and over-load is typically not a problem. However, 50 Amp service is often not available at campsites. It is then that energy management system is needed. The Smart EMS controls certain electrical loads to limit the peak demand, thereby almost eliminating nuisance circuit breaker tripping.

Large appliances, such as air conditioners, water heater, washer/dryer, coffee maker, etc., whose use can be temporarily postponed, are automatically controlled.

Temporarily postponing their use leaves enough power to operate the “on demand” appliances, such as the microwave, hair dryer, or toaster.

Smart EMS turns off each controlled appliance when the total current in the RV exceeds 30 amps. It will restore appliance power when the total current drops below a level connected to 20, or 30 Amp service that allows it to operate again.

## EMS REMOTE MONITOR PANEL

The optional remote monitor panel is located in the galley area and displays a digital readout of the total amount of current being drawn by all the loads in the coach. A series of LED's indicate the loads that have power applied. When the power is available, the LED will be on. The panel includes a switch to select operation from 30 Amp or 20 Amp service.

Please review the owner manual provided with your packet for detailed information on this system.



# ELECTRICAL SYSTEM

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## INVERTER

Magnum Energy, Inc.  
1111 80th Street SW  
Suite 150, Everett, WA 98203  
**Phone: 425 353 8833**

The inverter in your motorhome is located in a basement compartment.

### How an Inverter/Charger Works

An inverter takes direct current (DC) from your batteries and turns it into alternating current (AC), exactly like you use at home. It also takes Alternating Current when your motorhome is connected to shore power and transforms it into Direct Current to recharge your batteries.

There are two modes of operation associated with an Inverter/Charger:

#### Inverter Mode:

Direct current (DC) from the vehicles batteries is transformed into alternating current (AC) for use with your household appliances.

#### Charger Mode:

Alternating current (AC) is taken directly from shore power and passed directly to your appliances. At the same time, the incoming AC is also converted to DC to recharge your batteries.

There are three factors to consider when you select the appliances that you would like to operate with the inverter. Those considerations are: battery reserve capacity, maximum wattage and typical operating times of appliances. Good estimating of these factors will assure you have plenty of resources to operator your appliances.

## BATTERY RESERVE CAPACITY

Batteries store the energy necessary for the inverter to convert DC to AC power. Your Airstream motorhome has two 4-D batteries dedicated to the inverter's use. Battery performance is affected by temperature and age. Batteries operate best when the temperature is about 77° F. If the batteries are hotter than, or colder than this temperature, performance is reduced. As batteries age, they lose some of their performance, or ability to store energy.

### Appliances and Run Time

The ME Series inverter/charger can power a wide range of household appliances including small motors, hair dryers, clocks and other electrical devices. As with any appliance using batteries for power, there is a certain length of time that it can run - this is called "run time." Actual run time depends on several variables including the size and the type of appliance, the type of batteries installed in your recreational vehicle, as well as the battery's capacity and age. Other factors such as the battery's state of charge and temperature can also affect the length of time your appliances can run.

Appliances such as TVs, VCRs, stereos, computers, coffee pots, incandescent lights and toasters can all be successfully powered by your inverter. Larger electrical appliances, however, such as stoves, water heaters, etc., can quickly drain your batteries and are not recommended for this application.

All electrical appliances are rated by the amount of power they consume. The rating is printed on the product's nameplate label, usually located on its chassis near the AC power cord. Even though it is difficult to calculate exactly how long an inverter will run a particular appliance, the best advice is trial and error. Your ME Series inverter has a built-in safeguard that automatically protects your batteries from over discharge.

Please read and review the manufacturers owners/operators manual for specific instructions, warnings, and cautions on you inverter/charger.

# ELECTRICAL SYSTEM

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## REMOTE CONTROL FOR INVERTER/CHARGER

The remote for your Magnum Energy inverter/charger allows you to customize the operating parameters of the inverter/charger, thus maximizing performance and increasing the life of your batteries.

The remote control has all of the programming and operation functions included in an easy-to-use package. The remote features soft keys as well as a rotary knob, LEDs and a two-line LCD readout.

To help save energy, the automatic power saver mode turns off all LEDs as well as the LCD display five minutes after the last soft key has been pushed. The display will “wake up” with any keystroke or whenever a change in operational status occurs.

Please read and review the manufacturers owners/operators manual for specific instructions, warnings, and cautions on you inverter/charger.

## INVERTER AUTO GENERATOR START

The Auto Gen Start (AGS) for coach generators is designed to automatically start your coach generator, based on the inside temperature of the coach or a low battery condition. There’s nothing better than returning a nice cool coach while dry camping in hot weather. Plus, you will always have charged batteries -no more worrying about dead batteries.

The AGS also includes settings for “Quiet Time” so you can comply with park and rally rules.

The AGS does not interfere with your air conditioner controls or the manual generator start/stop switches in your coach.

Please read and review the manufacturers owners/operators manual for specific instructions, warnings, and cautions on you inverter/charger.



# ELECTRICAL SYSTEM

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## ENTERTAINMENT

The standard Dash Radio AM/FM/CD/DVD w/7" Monitor includes a Home Theater Speaker Source Selector. This allows the dash radio and standard Home Theater System to share a common speaker system. The monitor is used for the rear viewing system. The dash system take priority on all other systems on speaker use. If you are watching the front TV and turn on the dash radio then the sound from the speakers will be from the dash system. The optional rear monitor and navigation System is incorporated into the Dash Entertainment System.

The standard home entertainment system is a DVD/VHS player located in the overhead cabinet above the drivers seat.

A video control center in the cabinet beside the player controls the input to the speaker system. The front TV (TV 1) can be sourced to the Antenna/Cable system or VCR.

The VCR on the control center can be turned to ANT to record to the VCR.

TV 2 on the control center is used for the rear TV and the optional exterior entertainment center TV.

The antenna and cable feed to the control center is controlled by the TV antenna booster/12 Volt outlet located above the Video Control Center. Moving the button switch on the booster to where the red light comes on activates the TV antenna. Moving the button to where the light is off enables the cable TV feed.

For example, to watch programing on the front TV from the antenna feed turn the antenna booster on and switch the Video Control Center to ANT under TV 1. To watch from a cable hook up turn the TV booster off.

To watch a VCR tape turn the video Control Center turn to VCR.

Please review all Owners manuals supplied by entertainment systems manufacturers.

## EXTERIOR ENTERTAINMENT CENTER (OPTION)

The exterior entertainment center is located in the passenger side basement compartment. It consists of AM/FM/CD/DVD player, 110 volt outlet, 12 volt outlet, telephone hook up, two onboard speakers, and television.

There is a separate amplified AM/FM radio antenna in this compartment activated by turning the radio on.

# ELECTRICAL SYSTEM

## MONITOR PANEL

Micropulse Systems Monitor

CATCON PRODUCTS INC.

817-921-2188

techsupport@catconproducts.com



The MicroPulse System makes use of a single solid-state sensor per tank. The MicroPulse sensor measures the static (head) pressure at the bottom of the tank and transmits this information to the MicroPulse System Monitor. Knowing this pressure value, after a one-time calibration has been performed, the MicroPulse System will calculate and accurately display the tank level in 1/8 increment.

A single sensor is installed on the sidewall of each tank, near the bottom, via a 3/4" female NPT spin-in thread. The sensor is solid state, there are no moving parts to wear or maintain. Because the principle of operation does not involve any electrical current flow through the tanks contents (conducted or induced), the nature of the fluid in the tank is unimportant.

The monitor system has been calibrated at the factory and should never need another calibration. If you feel the system is not operating correctly, please contact CATCON Products or a local Airstream dealer.



# ELECTRICAL SYSTEM

## MICROPULSE SYSTEMS MONITOR OPERATION INSTRUCTIONS

This example shows the monitor reporting the following:

Fresh Water = 1/8 to Empty  
Gray Water 1 = Empty to 5/8  
Gray Water 2 = 3/4  
Black Water = Empty to 5/8  
Battery = Empty to 5/8

*On all diagrams the Letters R=Red, Y=Yellow, G=Green, Blank=no LED lit.*



## NORMAL OPERATION

The MicroPulse Monitor will display the condition of each system at all times. The tri-color LED beside the system will indicate the condition of the system using the following color code.

Fresh Water and Battery are as follows:

Green LED = 3/8 to Full  
Yellow LED = 1/4  
Red LED = 1/8 to Empty

Gray Water, Black Water are as follows:

Green LED = Empty to 5/8  
Yellow LED = 3/4  
Red LED = 7/8 to Full

## TO OBTAIN EXACT READING

To obtain an exact reading of all systems press and release the status button one time. The monitor will flash the LED beside the system it is about to report. It will then display the exact condition of that system by lighting the bar graph from Empty to Full. The monitor will display the exact condition of each system and then return to normal operation mode.

To obtain an exact reading of an individual system press and release the status button until the LED beside the system that you want the condition of is lit. Release the status button and the monitor will display the exact condition of that system by lighting the bar graph from Empty

# ELECTRICAL SYSTEM

## TV ANTENNA

Manufacturer:

Winegard Company  
3000 Kirkwood Street  
Burlington, Iowa 52601  
Phone: 800-843-4741

### Raising Antenna to Operating Position

Turn elevating crank in "UP" direction until some resistance to turning is noted. Antenna is now in operating position. Check to make sure switch on front TV jack is on.

### Rotating Antenna

Make sure antenna is in "UP" position. Pull down on directional handle with both hands until it disengages ceiling plate and rotate for best picture and sound on television set.

### Lowering Antenna to Travel Position

Rotate antenna until pointer on directional handle aligns with pointer on ceiling plate.

 **WARNING:** Antenna must be in "down" position while traveling to prevent damage.

Turn elevating crank in the "Down" direction until resistance is noted. Antenna is now locked in travel position.

### Checking Operation

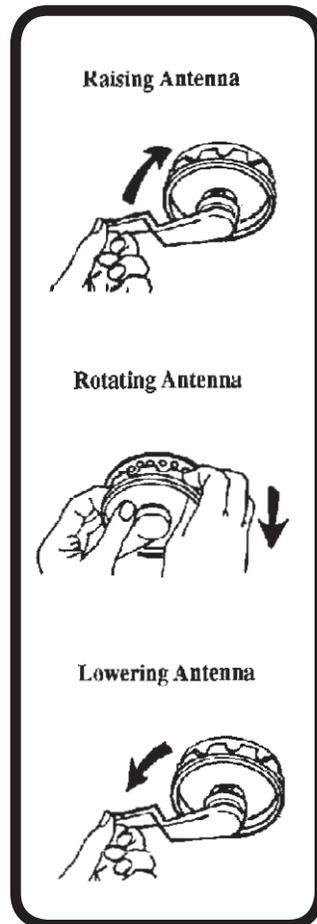
1. Tune TV receiver to nearest station and rotate antenna for best picture and sound.
2. Turn off switch on power supply. Picture on TV receiver should be considerably degraded with the power off.

### DO'S

1. Do check parking location for obstructions before raising antenna.
2. Do carefully raise, lower and rotate - if difficult, check for cause.
3. Do rotate slowly when selecting station and check fine-tuning on TV set to make sure it is properly adjusted.
4. Do lower antenna before moving vehicle.

### DON'TS

1. Don't force elevating crank up or down. Check for cause of trouble.
2. Don't rotate directional handle hard against stops.
3. Don't travel with lift in up position.
4. Don't leave lift part way up or down.
5. Don't apply sealing compound or paint over top of base plate or anywhere on lift.



# ELECTRICAL SYSTEM

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## TV Antenna Maintenance

### Lubrication

To lubricate the elevating gear apply a liberal amount of silicone spray lubricant to the elevating gear with the lift in the down position, then run the lift up and down a few times to distribute lubricant over gears.

### Lubricating Rotating Gear Housing

In the event that rotating the antenna becomes difficult, lubricating the bearing surface between the rotating gear housing and the base plate can restore normal operation. Any spray type silicone lubricant may be used.

Elevate antenna and remove setscrew from rotating gear housing as shown. Spray lubricant into hole and around edges of gear housing. Rotate gear housing until lubricant coats bearing surfaces and antenna rotates freely.

For details and diagrams on the antenna please read the antenna manual supplied in the owner's case.



# ELECTRICAL SYSTEM

## **SATELLITE, RADIO, AND CB ANTENNA**

The motorhome may have as several other antennas, including ones for the GPS, XM radio, CB, optional exterior entertainment radio, and roof AM/FM radio antenna. All except the exterior entertainment radio are mounted on the roof.

The **AM/FM radio** antenna is a solid whip type with a flexible coil base. The coil base certainly helps extend the life of the antenna but hitting low branches and other objects at high speed can lead to severe damage.

The **CB** antenna lead-in wire is located up under the dash left of the steering column. It will be coiled along with ground and 12-volt positive wires for CB radio hook-up.

## **SATELLITE ANTENNA PRE-WIRE (Standard)**

In order to facilitate the installation of either roof mount or portable satellite dish antennas Airstream has pre-wired your motorhome. On the drawing on the following page please note the two coaxial cables drawn with heavy double lines. One is labeled PREP WIRE, CEILING and the other is PREP WIRE, PORTABLE.

PREP WIRE, CEILING is used for a roof mounted satellite dish. The end of the cable for the dish is located in the roof, centered side to side and about four inches behind the front roof cross member. Under the outer roof sheet, in this same area, is a stiffener plate about a foot square to help support the dish and it's attachments.

The other end of the cable is located in the roof locker behind the Video Control Center and is labeled.

PREP WIRE, PORTABLE is used for the satellite dish antenna that is portable and set next to your vehicle when you park. The end of the cable for the dish connection is under the front hood on the curbside. You'll need to bend down and look up to see the coiled coax cable.

The other end of the cable is located in the roof locker behind the Video Control Center and is labeled.

## **AUTOMATIC SATELLITE SYSTEM (Option)**

Manufacturer:

KING DOME SATELLITE SYSTEMS

Technical Support: 1-800-982-9920

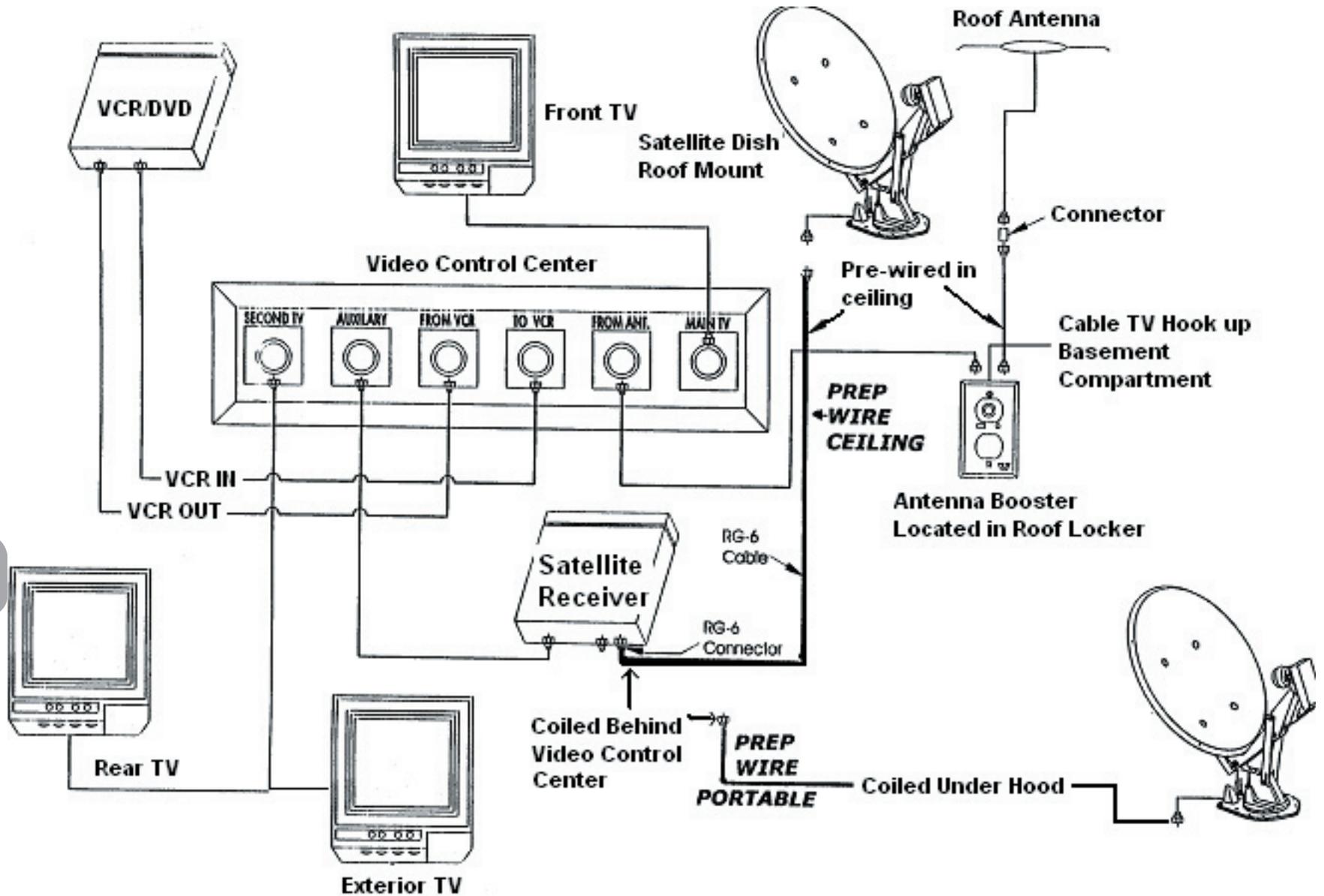
Website: [www.kingcontrols.com](http://www.kingcontrols.com)

According to the option ordered on your motorhome you will have the roof mounted satellite dish with or without a receiver installed.

The dish and receiver manufacturer has supplied a Owner Manual which is included in the owners packet supplied by your dealer upon delivery. Please read the manual and follow all operating and care instructions.



# ELECTRICAL SYSTEM



# ELECTRICAL SYSTEM

## SOLAR PANELS

Manufacturer:

SOLAREX

630 Solarex Court

Frederick, Maryland 21703

Customer Service 1-800-521-7652



**WARNING: Electrical Shocks and Burn Hazards:**

**Photovoltaic (PV) modules generate direct current (DC) when exposed to sunlight or other light sources. Even though a single module generates low voltage and current, shocks and burns can result from contact with module output wiring. These hazards are increased when multiple modules are inter-connected to increase array output current or voltage.**

**PV modules do not have to be “connected” (i.e. powering a load) to generate electricity. Since modules produce electricity whenever light is present, the module front surfaces should be completely covered by an opaque cloth or other material before electrical connections to the modules or other system components are handled.**

## System Components

The PV power system includes other components (batteries, charge controllers, inverters, etc.) be one to follow the safety recommendations of the manufacturers of these devices.

## General Handling and Use

- The module is rugged, but it should be handled carefully. In particular, impact on the front or rear surface can damage it.
- For protection against electrical shock, use properly insulated tools and follow appropriate safety procedures. This may involve the use of additional approved safety equipment (such as insulating gloves, mats etc.)
- Do not bend the module.
- Do not disassemble the module.
- Do not attempt to increase module output by concentrating light on its surface.

## Maintenance

- Inspect the module as necessary for mechanical integrity.
- Ensure that electrical connections are tight and free from corrosion.
- If the module surface is dirty, gently clean it with a soft cloth or sponge using water and mild detergent. Do not use a scrub brush; it may damage the module surface. Wear appropriate rubber gloves for protection against electric shock.



# ELECTRICAL SYSTEM

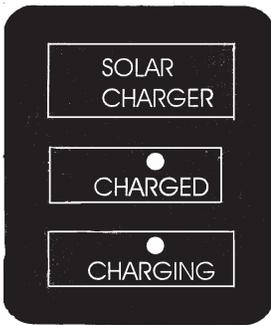
## Solar Panel Remote Charge Controller and Monitor

Manufacturer:

Intellitec

131 Eisenhower Lane North

Lombard, Illinois 60148



The solar charger monitor is used to control the output of rooftop-mounted solar panels to the coach and chassis batteries. When the batteries are below 13 volts and there's output from the panels, the controller will operate in full charge mode, applying the full output of the panels to the batteries through a relay mounted on the printed circuit board. When the voltage on the batteries reaches 14.4 volts, the controller switches into a current limited, constant voltage mode. In this mode, the battery voltage is maintained at 13.6 volts at a maximum of one amp. In either of first two models, the "CHARGING" LED on monitor panel will be lit.

When the current falls below 0.25 amps, the "CHARGING" LED goes out and the "CHARGE" LED will come on. (See figure on this page.)

The voltage thresholds are temperature compensated to ensure proper charge on the batteries.

### Problem

### Possible Cause/Solution

#### CHARGING LED

**Does not come on.**

Solar panel not putting out sufficient power.

Check for sunlight on panel.

Check voltage coming along from panel CNE1. If low, check panel wiring.

Replace printed board.

**Charged LED does not come on.**

More than 0.25 amps drain on batteries.

Turn off battery disconnect relays.

**Batteries not charging.**

Check voltage from solar panel when in sunlight.

Should be more than 15 volts.

If less, check solar panel for damage.

Check wiring from panel.

Relay K4 on board should be closed.

If not replace board.

Check for excessive drain on batteries.

Turn off battery disconnect relays to see if charging occurs.

# APPLIANCES

**NOTE: Please read all manuals supplied by the appliance manufacturer, fill out all warranty cards, and register your appliances as instructed. In many cases a repair center for a specific appliance may be closer than your dealer and able to handle repairs in a quick, convenient manner. Contacts and service instructions are supplied in the manufacturer's manual listed in this manual. If you did not receive a manual, please contact your Airstream dealer or Airstream Customer Service and request one. Some appliances may be optional and not included with your motorhome.**

## AIR CONDITIONER

Manufacturer:

Dometic Sales Corporation  
2320 Industrial Parkway  
P.O. Box 490  
Elkhart, IN 46515  
Phone: 219-295-5228

**Note:** Review the air conditioning literature supplied in your Owner's Packet before proceeding.

The roof air conditioner used on Airstream motorhomes is one of the most popular on the market today. In your Owner's Packet is a set of literature covering all operating and maintenance instructions. If the literature is misplaced, please contact the air conditioner manufacturer or your Airstream dealer for replacement. A detailed service guide may be ordered from the manufacturer.

The voltage to the air conditioner is critical. We commonly refer to 110 or 120 volts, but a check with a voltmeter may find voltage much lower. Your air conditioner will probably not function if the current drops below 105 volts. Low voltage is usually associated with older or poorly maintained RV parks, but many people have found their

homes, built only twenty or thirty years ago, may not be capable of operating the air conditioner on some receptacles. Parking your motorhome so the power cord can be plugged into a receptacle close to the fuse or circuit breaker box can alleviate the problem. Avoid extension cords and adapters whenever possible. If an extension cord must be used, it should be as short and heavy as possible to provide the most current to the air conditioner.

If high temperatures are expected, you should make an effort to park in a shaded area. Starting the air conditioner early in the morning also helps. It is much easier to hold a comfortable temperature than it is to lower the temperature after the interior of the motorhome is already hot.

## DISHWASHER

**Note:** Review the dishwasher literature supplied in your Owner's Packet before proceeding.

Fisher & Paykel Appliances, Inc.  
27 Hubble, Irvine, CA 92618  
www.usa.fisherpaykel.com  
1-888-9-FNP-USA (1-888-9-367-872)

## SPLENDIDE WASHER/DRYER COMBO

**Refer to Use & Care Guide supplied with the owner's packet.**

For parts or technical assistance contact Westland Sales

Technical Phone: 503-655-2563  
Fax: 503-722-9202  
Email: splendide@westlandsales.com  
Web Sites: www.splendide.com  
www.westlandsales.com

# APPLIANCES

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## REFRIGERATOR

Manufacturer: Amana  
[www.amana.com/](http://www.amana.com/)

Maytag Customer Service  
403 W 4th St N  
Newton, IA 50208

By Phone:

Consumer affairs: 800-843-0304  
National Service: 800-628-5782  
National Parts: 877-232-6771

The refrigerator manufacturer has supplied a Owner Manual which is included in the owners packet supplied by your dealer upon delivery. Please read the manual and follow all operating and care instructions.

Amana has a website, address above with information helpful to care and trouble shooting questions.

## RANGE

Manufacturer:  
Seaward Products  
3721 Capitol Avenue  
Whittier, CA. 90601-1732  
Phone: 562-699-7997  
Fax: 562-699-0908  
[www.seawardproducts.com](http://www.seawardproducts.com)

The range manufacturer has supplied a Owner Manual which is included in the owners packet supplied by your dealer upon delivery. Please read the manual and follow all operating and care instructions.

### Range Exhaust

The range exhaust is incorporated into the microwave oven and the switch is located on the front. The exhaust fan has an exterior door that must be unlatched for the fan to be effective. You will see two small twist latches on the vent door on the outside of the motorhome. In most circumstance you can leave the door unlatched. During storage or adverse weather conditions, latching the door is recommended.

## MICROWAVE OVENS

Only federally certified technicians are permitted to service microwave ovens.  
If you have a microwave problem please contact the appropriate manufacturer.

### MANUFACTURER:

Amana  
[www.amana.com/](http://www.amana.com/)

### By Mail:

Maytag Customer Service  
403 W 4th St N  
Newton, IA 50208

### By Phone:

Consumer affairs: 800-843-0304  
National Service: 800-628-5782  
National Parts: 877-232-6771

The microwave manufacturer has supplied a Owner Manual which is included in the owners packet supplied by your dealer upon delivery. Please read the manual and follow all operating and care instructions. All warranty operations should be performed by Amanna service centers.

## GENERATOR

### MANUFACTURER

Power Technology Southeast, Inc.  
623 State Road #44  
Leesburg, FL 34748-8103  
Phone: 352-365-2777  
Fax: 352-787-5545

The generator manufacturer has supplied a Owner Manual which is included in the owners packet supplied by your dealer upon delivery. Please read the manual and follow all operating and care instructions.

All warranty operations should be performed by Power Technology Authorized service centers.

# APPLIANCES

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## HIGH VOLUME ROOF VENT

Manufacturer:

FAN-TASTIC VENT CORP.

4349 S. Dort Hwy.

Burton, MI 48529

1-313-742-0330

1-800-521-0298

The optional high-volume roof vent system is designed to quickly exhaust stale, hot air and draw in fresh air. It's great to use when the outside temperature really doesn't call for air conditioning, but heat has built up in your coach.

### OPERATING INSTRUCTIONS:

1. Rotate 3-speed switch to desired position, 0-off, 1, 2, and 3. The 3-speed switch must be set at 1, 2 or 3 to activate appliance.
2. Rotate thermostat knob toward 40° (cooler) until dome begins operating.
3. When equipped with reverse switch, there is a neutral (off) position. Fan motor will not operate when in/out switch is in its center "off" position. The dome will, however, operate up and down automatically as long as the 3-speed switch remains on.
4. To determine desired temperature setting:
  - a. Use the wall thermometer on furnace thermostat, or any interior temperature indicator.
  - b. Operate fan until interior comfort level is achieved. Rotate thermostat knob toward 110' symbol on label until dome begins closing. You now have the location for normal setting.

The thermostat sensor is calibrated approximately 4°. This minimizes rapid recycling of the unit, once desired temperature level is achieved.

5. The rain sensor built into your fan will prevent excessive rain from entering coach through the open dome. Maintain a setting above (to the right of) "rain override" zone and the dome will close when the sensor becomes wet.



**WARNING: Do not leave coach unattended with thermostat knob set in the "rain override" zone.**

6. A rain sensor override is built into this system so you can operate your fan during light to moderate rains. When sensor is wet, rotate fan thermostat knob to coolest position to override sensor. Dome will open and fan motor will start. When sensor has completely dried, rotate thermostat knob back to desired setting for automatic operation.
7. To close dome in extremely hot conditions, rotate thermostat knob right, past 110' symbol to off. Dome will come down.
8. Always allow dome to completely cycle up and down. If dome "hangs up" in partially open/close position, rotate thermostat knob to extreme right and then left position allowing complete cycles down and up. Now reset to original comfort level.
9. When vehicle is in storage, rotate thermostat knob to right (off), after dome closes, turn 3 speed switch to "O" (off).

### CLEANING INSTRUCTIONS:

- 1) Turn fan motor OFF.
- 2) Remove 8 painted flat head Philip screws around perimeter of screen insert only.
- 3) Clean screen with soap & water solution and reinstall.

# SPECIFICATIONS

Airstream constantly strives to improve its product. All specifications are subject to change without notice. Note: all weights and measurements were made on prototype vehicles. Your production motorhome may vary slightly. **Please refer to the weight label in your motorhome for weights specific to your unit.** The Unit Base Weight (UBW) and the Net Carrying Capacity (NCC) is not the same as the Unloaded Vehicle Weight (UVW) and the Cargo Carrying Capacity (CCC) shown on the Motorhome Weight Information tag in your vehicle. The UBW and NCC weights are for the base unit with no options and fluids except for fuel on motorhomes. The UVW and CCC on the motorhome Weight Information tag are weights for the individual vehicle as built with its options and certain water capacities.

DIMENSIONS	A-37	A-39
Exterior Height with Penquin A/C	11' 10"	11' 10"
Interior Head Room	78 ½"	78 ½"
Interior Width	95"	95"
Exterior Length	37' 4"	39' 4"
Exterior Width	101"	101"
Exterior Storage Volume (CU. FT.)	90	115

CAPACITIES	A-37	A-39
Fresh Water Tank	105 Gal.	105 Gal.
Grey Water Holding Tank	79 Gal.	79 Gal.
Black Water Holding Tank	55 Gal.	55 Gal.
Fuel Tank, Freightliner	100 Gal.	150 Gal.

The Unloaded Vehicle Weight (**UVW**), listed on the chart in your coach, is the weight of this motorhome as manufactured at the factory with full fuel, engine oil, and coolants.

Unit Base Weight (**UBW**) is the dry weight of the base unit with bedroom group and full fuel tank, and w/o options or fluids.

Net cargo Carrying Capacity (**NCC**) is **GVWR-UBW**.

## CHASSIS COMPONENTS (Please read loading section in this manual.)

Please refer to the weight tag in your motorhome for weights specific to your unit.

Trailer Hitch is rated at 10,000 lbs. Gross Vehicular Weight - 1000 lb. hitch weight  
The 10, 000 pound GVW hitch requires a 2.5" x 2.5" draw bar.

	A-37	A-39
GCWR	42, 000 LBS.	42, 000 LBS.
GVWR	32, 000 LBS.	32, 000 LBS.
GAWR, Front	12,000 LBS.	12,000 LBS.
GAWR, Rear	20,000 LBS.	20,000 LBS.
UBW	26760 Lbs.	N/A
NCC	5240 Lbs.	N/A
Seating Capacity	4	4
Seating Capacity	616 lbs.	616 lbs.
Sleeping Capacity	5	5
Sleeping Capacity	770 lbs.	770 lbs.

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

Gross Combination Weight Rating (**GCWR**) means the maximum allowable loaded weight of this motorhome and any towed trailer or towed vehicle.

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

Gross Axle Weight Rating (**GAWR**): is the value specified as the load carrying capacity of a single axle system, as measured at the tire-ground interfaces.



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A-Series Motorhome Owner Manual  
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