# Excellasoo

This manual is your key to carefree travel fun. It contains the information you need to avoid problems. Please pass it on if ever you sell your Airstream.

# **CONTENTS**

WALLY BYAM CARAVANS/CLUBS	1-2
WARRANTY/SERVICE	3-6
WALLY BYAM STORES	
TOW CAR EQUIPMENT	
CHASSIS	
TIRES	
HITCHING UP	
TOWING TIPS	13-15
OVERNIGHT STOP	16
EXTENDED STAY	17-20
WINTER AIRSTREAMING	21
STORAGE/WINTERIZING	
EXTERIOR	
FLOOR PLANS/ INTERIOR	27-34
L.P.G. SYSTEM	
REFRIGERATOR	
RANGE/OVEN	38-40
HEATER	41-42
WATER HEATER	
WATER SYSTEM	
DRAIN/WASTE/VENT SYSTEM	47-49
THERMASAN	50-51
BATTERY	52
ELECTRICAL SYSTEM	53-57
SPECIFICATIONS	
PRE-TRAVEL CHECK LIST	
INDEX	63







# WALLY BYAM CARAVANS/CLUBS

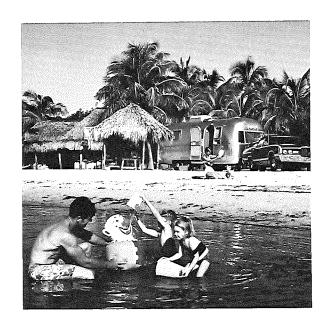
When you bought your Airstream, you bought a whole new way of life. Airstream owners enjoy endless opportunities for friendship, fun and adventure. You may join every Airstream Wally Byam Caravan and Airstream Company Rally. We arrange for such rallies each year: one in the North West, South West, North East and South East. You also become eligible to join the Wally Byam Caravan Club International, the largest single make trailer club in the world. The WBCCI is made up of 23,000 family memberships and 120 local chapters or units throughout the United States, Canada and Mexico. They meet at monthly rallies, or where weather conditions prevent year round rallies, Caravanners come together for pot luck dinners to plan events for the good seasons.

Since the first Wally Byam Caravan in 1951, 83 Airstream Caravans have gone to most parts of the world. Caravans to Canada and Mexico are now so popular that there are eight each year. Many a lifelong friendship was started on these trips. Old-timers and new owners share experiences and find a new kind of fellowship, and there is no better way to learn to use your Airstream. Caravanners enjoy many advantages: the security of traveling in a group, planned entertainment and exceptional sight-seeing opportunities. The prestige and good will established over many years by our Caravans adds further benefit to caravanner membership.

The "Caravanner" and the "Blue Beret" are the official Caravan Club publications. The bimonthly "Caravanner" is for general distribution to owners and prospective buyers, while the monthly "Blue Beret" is for WBCCI members only.

Several months before a Caravan rolls, the "Caravanner" and the "Blue Beret" publish a description and a registration coupon. Everyone who registers receives a detailed bulletin with complete information on the caravan. When going abroad, all official matters such as insurance, tourist cards and border crossing formalities are handled for you by the Caravan Staff.

On every Airstream Caravan, the route is carefully planned, and a day by day itinerary, including mail stops, is given to all Caravanners in advance. Our staff also makes all the arrangements for parking, entertainment, tours, etc. well ahead of the starting date. Airstream Caravan Programs always take caravanners of all ages into account. Airstream provides the Caravan Staff: a leader, a recreation director, a service representative and an advance representative. This staff is backed by committees composed of interested Caravan members who





Wally Byam, pioneer trailer traveler, and founder of the Airstream Company, was born on July Fourth and the first International Rally was in the form of a huge birthday party for him at Bull Shoals, Arkansas. It was patterned after the International Rallies in Europe which Wally and his wife Stella had attended for many years. Everyone enjoyed this first big rally so much that the club decided to make it an annual event. Since then, International Rallies have grown and grown. Some 3400 Airstream Travel Trailer families recently gathered at Hershey, Pennsylvania with a total of more than 10,000 people. The 1971 International Rally was held in Salem, Oregon.

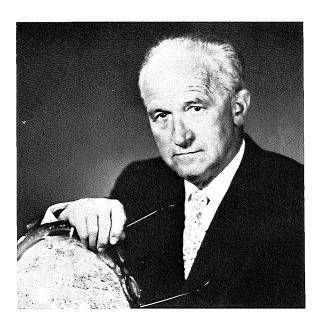
Only Wally Byam Caravanners and WBCCI members are entitled to have an official Trailer Number and be listed in the Annual Directory.



The Annual Directory contains a schedule of all major rallies and Airstream Wally Byam Caravans for the year, and announces the activities of the Ham Radio, C.B. Radio, Square Dance and the many other WBCCI special interest clubs.

Along with the fun, Airstream Owners recognize the need for better legislation, more and better overnight parking facilities, more sanitary stations and other travel conveniences. They are alert to adverse bills governing travel trailers and have achieved much through the actions of the strong WBCCI National Legislative Committee.

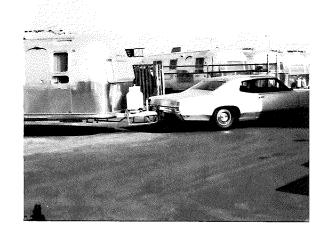
The Way of Life Department, of the Airstream Company dedicates its full time staff to improving the owners' fun and makes use of all the information and experience gained by owners over the years to help develop even

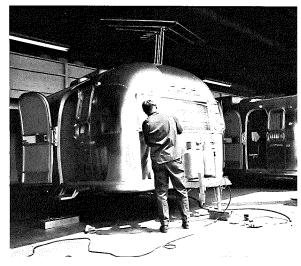


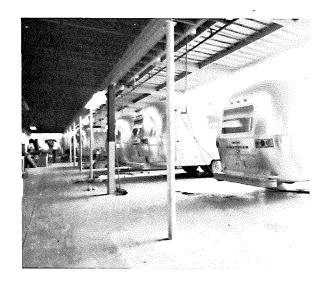
better Airstreams.

Become part of the Airstream Way of Life. Join our WBCCI activities and we believe you will enrich your life. Owners join through a local unit of WBCCI. All operate autonomously, elect their own officers and fix their own dues. Annual International dues are paid with the unit dues at the time of application. These are at present: International dues, \$5.00 per trailer and unit dues from \$1. to \$5. If you are interested, please write to the following address and we will forward your letter to the unit nearest you:

WBCCI Headquarters Office 15939 Piuma Avenue Cerritos, California 90701







# WARRANTY/ SERVICE

Airstream offers the most complete and explicit warranty in the industry. Please read the facsimile warranty carefully. As soon as the factory has received your signed check-out and acceptance sheet, a formal warranty is issued to you, together with an owner's identification card. As soon as you receive your warranty, please attach it over the facsimile for safekeeping. In order to qualify for service without charge under the Airstream Lifetime Warranty Program, your owner's identification card or warranty must be presented to the service representative.

The Airstream Certified Performance Check-out, or C.P.C., is an exclusive Airstream program. Before leaving the factory, each and every vital part of an Airstream is tested for performance. Each test is signed and certified

by an inspector. After the Airstream arrives on your dealer's lot, all of these vital parts and systems are again tested. When you take delivery of your new Airstream, a factory trained trailer expert personally gives you a complete check-out on the trailer.

C.P.C. does not stop here. After you have traveled with your Airstream for 1000 miles (or 60 days, whichever comes first) you can make an appointment with any one of the 175 Airstream dealers or service centers for still another checkout of your trailer. At that time, a specified list of performance checks on your trailer equipment will be conducted and any deficiencies you have experienced since taking delivery will be corrected. Give the C.P.C. card overleaf to the dealer when you take your Airstream for the 1000 mile check.

Please contact your dealer if you need service. Minor service and adjustments will be done by him. If necessary when an appliance is affected, he may suggest one of the relevant service and repair locations where appliance warranties are handled. Major service under your Airstream warranty is promptly given by the nationwide network of factory trained specialists at the Airstream authorized service centers listed on pages 5 and 6 of this manual. All centers operate on an appointment basis for the utmost efficiency. When you require service from the Airstream factory or a certified 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.

Airstream factory service may be arranged by contacting the service manager:

Airstream, Jackson Center, Ohio 45344..... (513) 569-6129

Airstream, 15939 Piuma Avenue Cerritos, California 90701 . . . . . (213) 860-4411 Please place your Registered Warranty over this Facsimile within the line, the folded edge on top. There is a glue strip on the back for the purpose.



# AITRSTURIDAM WARRANTTY



For the lifetime of the Registered Warranty Holder, or so long as he continues as the original owner of the Airstream Travel Trailer, Airstream warrants the metal shell, frame, axle and axle assembly to and including spindle (excluding shock absorbers) to be free from defects in material and workmanship; all other component parts, including shock absorbers (excluding tires and batteries) are likewise warranted for a period of two years from the date of purchase. Any warranty defects will be corrected without cost upon return of the trailer, or defective part, to any Airstream factory or authorized Airstream service center.

This warranty is in lieu of all other warranties of merchantability or fitness expressed or implied, there being no warranties which extend beyond the description on the face hereof and expressly excludes conditions resulting from normal wear, accident, abuse, exposure or overload.

### AIRSTREAM

Ohio factory: 177 West Church Street, Jackson Center, Ohio 45334 California factory: 15939 Piuma Avenue, Cerritos, California 90701



# AIRSTREAM WARRANTY



### ALABAMA

Alabama Auto Carriage Company 2359 West Fairview P. O. Box 1695 Montgomery, Alabama 36108

The New Camper City, Inc. 7320 First Avenue, North Birmingham, Alabama 35206

### **ARKANSAS**

Fred & Jack Trailer Sales 10318 New Benton Highway (I-30W) Little Rock, Arkansas 72209

### ARIZONA

Robert Crist & Company 2025 East Main Street Mesa, Arizona 85201

### CALIFORNIA

Bob Belknap Trailer Sales, Inc. 420 South Harbor Boulevard Santa Ana, California 92704

Caswell Trailer Sales 950 West Foothill Boulevard Claremont, California 91711

Coastline Trailer Sales 303 North Ventura Avenue Ventura, California 93001

Haller Trailer Sales 15711 S. Lakewood Blvd. Paramount, California 90723

Nelson's Trailer Sales 28001 Mission Blvd. Hayward, California 94544

Ralph's Trailer Sales & Supply 1025 East Main El Cajon, California 92021

Valley Trailer Sales, Inc. 1650 El Camino Avenue Sacramento, California 95815

### COLORADO

Chisman Trailer Sales 2501 East Boulder Street Colorado Springs, Colorado 80909

### CONNECTICUT

Camperama, Inc. Mill Plain, Rte. 6 Between Exit 1 & 3, I-84 Danbury, Connecticut 06810

### **DELAWARE**

Richard Rice Trailer Company, Inc. 2343 South Dupont Hwy. Dover, Delaware 19901

### **FLORIDA**

Bell's Trailer Park & Sales R.R. No. 4, Box 382 Highway 90, West Tallahassee, Florida 32310

Camptown U.S.A., Inc. 16500 S. Dixie Highway Miami, Florida 33157 Cribb<sup>3</sup>s Campers 5408 San Juan Avenue Jacksonville, Florida 32210

Indian River Trailer Sales 5855 U. S. Highway No. 1 Cocoa, Florida 32922

Indian River Trailer Sales, Inc. 5001 Sand Lake Road Route 528 Orlando, Florida 32809

C. J. Stoll, Inc. 5985 34th Street, North U. S. 19 St. Petersburg, Florida 33714

### **GEORGIA**

Airstream By Davis, Inc. 9726 Tara Boulevard US 41-19 Jonesboro, Georgia 30236

Biltmore Gardens Mobile Homes 4707 Ogeechee Road US Highway 17 South Savannah, Georgia 31405

### IDAHO

Dorm & Paul's Mobile Homes 215 West Cedar Pocatello, Idaho 83201

### **ILLINOIS**

Ted Christman Trailer Sales 1200 Bloomington Road, West P. O. Box 851 Champaign, Illinois 61820

Robert Crist & Company 9100 South Stony Island Avenue Chicago, Illinois 60617

Crystal Valley, Inc. 4220 Northwest Highway US 14 at Route 31 Crystal Lake, Illinois 60014

Mann's Trailer Sales 1600 North Main Normal, Illinois 61761

### INDIANA

Berning Trailers Sales 5220 New Haven Avenue Fort Wayne, Indiana 46803

Bert's Trailer Sales, Inc. R. R. No. 3, Box 17 (East U.S. 20) Michigan City, Indiana 46360

Brown County Travel Trailers R. R. 4 Nashville, Indiana 47448

Draper's Auto & Trailer Sales, Inc. 912 State Road, 67 East Anderson, Indiana 46013

Elkhart Travel Center, Inc. 3008 S. Nappanee Street Elkhart, Indiana 46514 Four Seasons Trailer Sales Corp. 8225 W. Washington Street Indianapolis, Indiana 46231

### **IOWA**

Bill Brown Trailer Sales 3700-3708 East 14th Street Des Moines, Iowa 50313

Ace Fogdall, Inc. 5324 University Avenue Cedar Falls, Iowa 50613

Bob La Veine Trailer Sales 890 West Mt. Pleasant Road West Burlington, Iowa 52655

### **KANSAS**

Boulevard Trailer, Inc. 5617 West Kellogg Wichita, Kansas 67209

### KENTUCKY

Crouch Campers & Trailers 4450 Clarks River Drive Hwys. 60-62-68 SE Paducah, Kentucky 42001

Murphy Sales Company, Inc. Winchester Road (U. S. 60W) Mt. Sterling, Kentucky 40353

Murphy Sales Company, Inc. Benson Road Shelbyville, Kentucky 40065

### **MARYLAND**

B & J Trailer Sales 113 South Philadelphia Blvd. Aberdeen, Maryland 21001

### **MASSACHUSETTS**

Mosher Travel Trailer Center, Inc. Blue Jay 4 Corners Sutton, Massachusetts 01527 Mail to - P. O. Box 228 Milbury, Mass. 01527

Donahue's Trailer Sales 88 Mountain Road, Box 126 Burlington, Massachusetts 01803

### **MICHIGAN**

Bob Frank Trailer Sales, Inc. 1416 West Columbia Battle Creek, Michigan 49015

Kolbe Trailer Sales 5785 East Eight Mile Road Warren (Detroit) Michigan 48091

Mid-State Trailer Sales, Inc. 5103 Eastman Road 1/2 Mile South of I-75 on U.S. 10 Midland, Michigan 48640

Northwoods Trailer Sales G-6369 North Dort Highway Mt. Morris, Michigan 48458

Osborne Camping Center 6939 South Cedar Lansing, Michigan 48910 Schultz Chevrolet U.S. 23, North Alpena, Michigan 49707

Shirey's Trailer Sales, Inc. 605 Ann Arbor Road Plymouth, Michigan 48170

Warner Trailer Sales, Inc. 3098 West Huron Street Pontiac, Michigan 48054

Woodland Travel Center, Inc. 5190 Plainfield Road Grand Rapids, Michigan 49505

### MINNESOTA

Hart Trailer Sales, Inc. Highway 71 Long Prairie, Minnesota 56347

Minnesota Trailer Sales, Inc. 11350 Highway 65, N. E. Minneapolis, Minnesota 55434

Pioneer Trailer Sales Highway 218, South Box 12, R.R. No. 2 Austin, Minnesota 55912

Benson's Trailer Sales 3140 Miller Trunk Highway Duluth, Minnesota 55811

### MISSISSIPPI

Gulfport Trailer Sales, Inc. U.S. Hwy. 90 & Cowan Road Gulfport, Mississippi 39501

### **MISSOURI**

Bill Thomas Camper Sales, Inc. 5217 N. Lindbergh Blvd. Bridgeton (St. Louis), Missouri 63042

I-44 Recreational Vehicles, Inc.
P. O. Box 93
S. Side Halltown Exit on I-44
14 Mi. W. of Springfield, Mo.
Halltown, Missouri 65664

Kansas City Trailer Sales, Inc. 14817 South 71 Highway Grandview, Missouri 64030

### **MONTANA**

Northland Travel Center 5124 Laurel Road Billings, Montana 59101 Modern Equipment Company, Inc. 4025 10th Avenue, South Great Falls, Montana 59401

### **NEBRASKA**

Autosport RV Center 6101 "L" Street Omaha, Nebraska 68117

### **NEVADA**

*Johnnie Walker Trailers* 3676 Boulder Highway Las Vegas, Nevada 89109

Webb's Travel Trailers 295 Kietzke Lane Reno, Nevada 89502

### **NEW HAMPSHIRE**

Currier Travel Trailer Sales, Inc. R.F.D. Havehill, New Hampshire 03765

**NEW JERSEY** 

South Jersey Travel Trailer Center, Inc. Route 47 Franklinville, New Jersey 08322

NEW MEXICO

Gunn's Recreational Vehicles, Inc. 12020 Central Avenue, S. E. Albuquerque, New Mexico 87123

**NEW YORK** 

Atlantic Trailer Sales 1226 Fairport Road Fairport, New York 14450

Callahan's Trailer Sales R. D. No. 1, Route 15 Lindley, New York 14858

Carson Rotary Service 321 Bridge Street Vestal, New York 13850

Eddy's Trailer Sales, Inc. 4005 Jericho Turnpike East Northport, New York 11731

Maroone Family Travel Center, Inc. 2550 Walden Avenue Exit 52, East N. Y. Thruway Buffalo, New York 14225

Niblack Trailer Sales 691 McLean Avenue Corner N. Y. Thruway Yonkers, New York 10704

O'Malley Enterprises, Inc. P. O. Box 116 Traffic Circle, Rt. 9 & 7 Latham, New York 12110

### NORTH CAROLINA

College Park
North Church Street Ext.
U.S. 301 & 301A, North
Rocky Mount, North Carolina 27801

Out Of Doors Mart, Inc. Drawer 799 Kernersville, North Carolina 27284

Faires, Inc.
3217 North Tryon Street
Box 5205, Routes 29 & 49
Charlotte, North Carolina 28206

### OHIO

Avalon Travel Center, Inc. 11761 Portage Road Canal Fulton, Ohio 44614

Buckeye Airstream Service & Sales, Inc. Baltimore Road — Box 13 North of East I-70 on 310 at Route 40 Etna, Ohio 43018

K & B Airstream 8641 Mentor Avenue Mentor, Ohio 44060

Lew's Motor Sales 487 Cleveland Street Elyria, Ohio 44035 Marine Mart Trailer Sales 8750 Harrisburg Pike 3 mi. S. of I-71 on U.S. 62 & 63 Harrisburg, Ohio 43126

Murphy Travel Trailers of Ohio, Inc. 11526 Chester Road I-75 at Howard Johnson Cincinnati, Ohio 45246

P J Airstream Sales, Inc. 5247 Alexis Road Sylvania, Ohio 43560

Richland Travel Trailers 2607 Emma Lane I-71 & Route 30 Mansfield, Ohio 44903

Frank B. Ricketts Mobile Homes -Travel Trailers

P. O. Box 583 Clark Street & Maple Road Cambridge, Ohio 43725

Stony's Travel & Recreation Ctr., Inc. 11550 Akron-Youngstown Road North Jackson, Ohio 44451

### **OKLAHOMA**

Brassfield Mobilhomes 7207 N. W. 39th Expressway Bethany, Oklahoma 73008

### **OREGON**

Casade Trailer Sales 1876 Highway 99 North Eugene, Oregon 97402

Spencer Mobile Homes 9341 S. E. 82nd Avenue Portland, Oregon 97266

### **PENNSYLVANIA**

Farnsworth Camping Center Route 54 Elysburg, Pennsylvania 17824

Walter H. Glasgow 1650 Lincoln Way, East Chambersburg, Pennsylvania 17201

Turner Airstream Sales 412 Lincoln Highway, West Jeannette, Pennsylvania 15644

Universal Motor Sales 1024 North Main Street Butler, Pa. 16001

F. W. Wise Gas Company, Inc. 209 Bridge Street Clearfield, Pennsylvania 16830

### RHODE ISLAND

Arlington Trailer Sales 966 Quaker Lane, Rte. 2 Warwick, Rhode Island 02818

### **SOUTH CAROLINA**

Dixie Lee Trailer Sales Highway U. S. 1 & 78 P. O. Box 306 Clearwater, South Carolina 29822 Skyway Mobile Homes Box 262 - U.S. 25 at 276 4 Mi. N. of Greenville Travelers Rest, South Carolina 29690

Superior Travel Trailers 7660 Garners Ferry Road Columbia, South Carolina 29209 P. O. Box 9163

### **SOUTH DAKOTA**

Capital City Trailer Sales 801 North Euclid Avenue P. O. Box 116 Pierre, South Dakota 57501

### **TENNESSEE**

Cullum & Maxey Sales & Servicenter 160 McGavock Pike Donelson (Nashville), Tennessee 37214

Tri-City Travel Trailer Sales Route 1, East Stone Drive Bristol-Kingsport Highway 11W Kingsport, Tennessee 37660

### TEXAS

Abbott Trailer Sales 408 Avenue Q Lubbock, Texas 79401

Baker Travel Trailers 4200 East Belknap Fort Worth, Texas 76117

D & M Trailer Sales 1720 South Nelson Amarillo, Texas 79103

Finn's Trailer Sales 118 Arnold Blvd. Abilene, Texas 79605

Land Yacht Trailer Sales, Inc. 4616 Titanic Avenue El Paso, Texas 79904

Lloyd's Trailer Sales, Inc. 350 Twin City Highway Port Neches, Texas 77651

South Texas Trailers & Supplies Highway 77, South P. O. Box 1051 Sinton, Texas 78387

Sportsman Travel Trailer, Inc. 7935 Gulf Freeway, Exit 12 Houston, Texas 77017

Stabmann Sales Company 3336 Austin Highway San Antonio, Texas 78233

Texas Trailercoach of Dallas, Inc. 1715 N. Stemmons Freeway Lewisville, Texas 75067

### UTAH

Intermountain Trailer Sales 3776 Wall Avenue P. O. Box 1503 Ogden, Utah 84401

### **VIRGINIA**

American Trailer Sales Co., Inc. 7904 Richmond Highway Alexandria, Virginia 22306 Bay Camping, Inc. 3757 Bonney Road Virginia Beach, Virginia 23452

McGeorge Travel Center 6200 W. Broad Street Richmond, Virginia 23230

Travel Trailers of Va., Inc. P. O. Box 807 2211 South Main Street Harrisonburg, Virginia 22801

### WASHINGTON

Central Trailer Exchange, Inc. 14433 Pacific Highway, South Seattle, Washington 98168

Don's Trailer Sales E. 7217 Sprague Avenue Spokane, Washington 99206

Tveten Motor Company 45th & Pacific Avenues Tacoma, Washington 98408

### WEST VIRGINIA

Don's Travel Trailers 459 Winfield Road U.S. 60 at 17 St. Albans, West Virginia 25177

### WISCONSIN

J & M Homes 1360 Velp Avenue Green Bay, Wisconsin 54303

Mauston Home Sales, Inc. 101 Prospect Mauston, Wisconsin 53948

Northside Trailer Sales, Inc. N56 - W13180 Silver Spring Rd. 1 Mile W. of Highway 100 Menomonee Falls, Wisconsin 53051

Swee Trailer Sales U.S. 51 and U.S. 2 Hurley, Wisconsin 54534

### WYOMING

Burman Airstream Company 158 North 3rd Street Laramie, Wyoming 82070

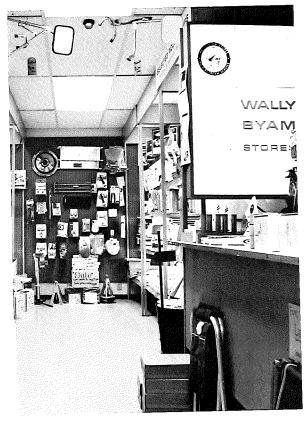
### **CANADA**

Can-Am Trailers, Ltd. P. O. Box 370 Highway 4, ½ mile N. 401, Exit 19 Lambeth, Ontario, Canada

Totem Trailers, Ltd. 85 Plains Road, West Burlington, Ontario, Canada

Travel Trailers Western, Ltd. 5804 - 104 Street Edmonton 70, Alberta, Canada

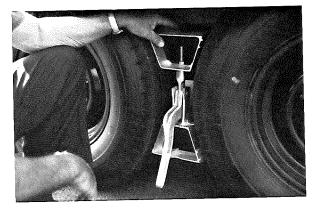
Twin City Trailer Sales, Ltd. P. O. Box 395 Dartmouth Highway Bedford, Halifax Co., Nova Scotia

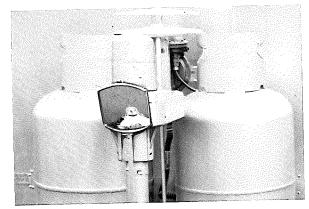


# WALLY BYAM STORES

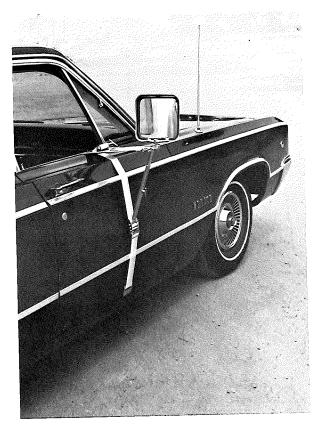
To make trailering more enjoyable, there are now Wally Byam stores at both Airstream factories and at many authorized dealers throughout the United States, stocking hundreds of items tested and approved by travelexperts. Be sure and get a Wally Byâm Store Catalog from your dealer or the Airstream factory.

The following is a list of equipment we recommend:





- 1. First aid kit
- 2. Tool box of small hand tools such as: screwdrivers, pliers, crescent wrench, etc.
- 3. Crosstype lug wrench for trailer wheels
- 4. Hydraulic jack for trailer axle
- 5. Four stabilizing jacks
- 6. Spare tire for single axle trailers
- 7. Fire extinguisher (B:C-type)
- 8. Two plastic pails for carrying fresh water
- 9. Wheel chocks to fit against tires and prevent the trailer from moving while parked
- 10. Two 50 ft. lengths of 5/8" high pressure water hose, and a "y" connection which enables two trailers to be hooked up to



one faucet

- 11. One 6 ft. and one 10 ft. sewer hose and coupler
- 12. 75 ft. electric cord with a 30 amp. capacity
- 13. Small bi-directional spirit level
- 14. Flashlight
- 15. Short handled shovel (G.I. type, Army surplus)
- Cleaning equipment: broom, sponges, mop, etc.
- 17. Road emergency flares
- 18. Spare 20 and 50 amp. cartridge fuses



# TOW CAR EQUIPMENT

If you plan to buy a new car to tow your Airstream, we suggest that you include in your purchase the trailer towing options offered by most automobile manufacturers. These include such things as an oversized generator and radiator, heavy duty springs and shock absorbers, transmission cooler, oversized fan, heavy duty blinker and others, depending on the make of the vehicle.

Transmissions may be manual or automatic, but an automatic transmission will prolong your car's engine life and does a better job of controlling engine loads than the average driver using a manual shift.

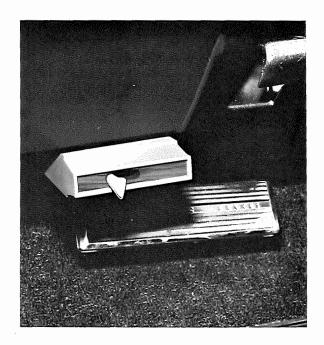
The weight to horsepower ratio is very important when considering the purchase of a new car or the trailer towing capabilities of your present one. The practical upper limit for most road conditions is 60 lbs. per hp. Anything between 30–40 lbs. is considered optimal.

To work out your ratio, add the weight of the trailer to the advertised weight of your car, and divide by the advertised horsepower. For example: A 31 ft. Airstream weighing 6000 lbs. plus an automobile weighing 4000 lbs. would equal 10,000 lbs. Dividing the weight by a rated 300 hp. for the car would result

in 33 lbs. per hp., a figure well within the acceptable weight to horsepower ratio.

The majority of new trailerists carry more food and other supplies than really needed. Remember that every item you take along is one more thing to stow and adds weight to the total load you must pull. Consolidate items in shelves, lockers, and in the refrigerator. It is better to have one full and one empty locker than two half empty ones. Special care must be taken not to overload the front and rear ends of the trailer.

See tire section for correct tire sizes and pressures for your trailer and load on page 10.



# **CHASSIS**

The Dura-Torque axle is designed to last the life of your trailer without service, except for lubrication of the wheel bearings. Under no circumstances should welding be done on or near the axle.

The Kelsey Hayes Brakes are operated by 12 volt current from your car and must be hooked up so that you have an integral system with your car brakes. To prevent problems and insure satisfactory braking action, install a Kelsey Hayes Controller (or equivalent) and selective resistor in line with the controller in your car.

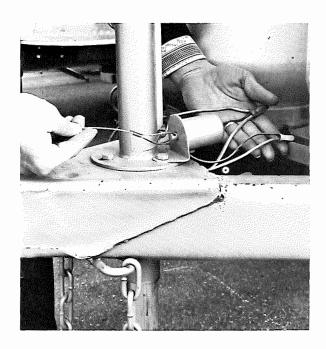
A Kelsey Hayes Controller (or equivalent) installed in your car will synchronize the trailer brakes with your car brakes. It is designed to apply the trailer brakes just before your car

# SELECTIVE RESISTOR All settings shown are for 12 volt tow car with 12 volt brakes, and trailers with 2 axle – 4 brake arrangement Model Trailer Weight Resistor (lbs.) Setting 31 Ft. 6500 – 7000 7000 – 7500

brakes. To adjust, turn the handle counter clockwise to apply trailer brakes earlier and clockwise to apply trailer brakes later. The controller will hold this setting.

A selective resistor to match the weight of your trailer to the controller has been installed on the fire wall of your engine compartment. It should be correctly adjusted during installation. However if you wish to change the action of your brakes proceed as follows.

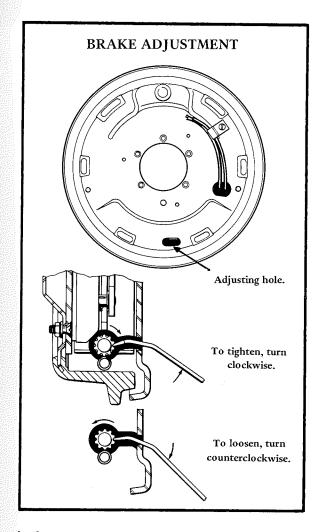
Check the initial trailer brake application with the controller fully applied (clockwise). If the resistor setting is correct, the controller full "on" position should provide firm braking action just short of skidding on dry pavement. Follow the chart below and change the setting to achieve greater or less braking, as required. The adjustment setting of the controller and the selective resistor should be checked by your dealer during regular maintenance inspection.



In the event of an accidental separation of the tow car and trailer, the **break-away switch** is a device which will set and lock the trailer brakes for a sufficient length of time to stop the trailer. The switch is activated when the small plug in the front of the unit is pulled out by the wire attached to it and to the car.

When the trailer is connected to the tow car, the break-away switch loop should be attached to the permanent frame of your hitch. When disconnecting trailer from tow car, remove wire loop from the frame, do not remove pull-pin from switch, because this will apply the trailer brakes.

Airstream recommends that your brake system be checked and adjusted by a Certified Service Center. However, in emergencies, to adjust



### brakes:

- 1. Remove the small rubber plug at the base of the backing plate on the brake drum.
- 2. Jack the wheel up so that you can spin it by hand. Tighten the brakes (using a brake adjusting tool or a screwdriver that has been bent to a 90° angle) until the wheel is locked, then back off until you have a free spinning wheel, which will be approximately 8 notches.
- 3. Repeat this operation with all trailer wheels.

# TIRES

Your Airstream is equipped at the factory with Michelin radial steel belted tires. Airstream dealers cannot make adjustments to tires. This must be done by a dealer who handles that particular brand. If you ever have tire problems, check the local telephone directory for the nearest dealer.

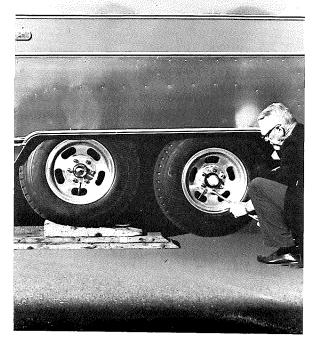
To get the maximum performance from your tires check the air pressure often, but only when the tires are cool and never bleed out air immediately after driving. Recommended tire pressures vary with load conditions. For specific pressures refer to the table below.

## TIRE PRESSURE

7:00 X 15 6 ply 55-60 p.s.i.

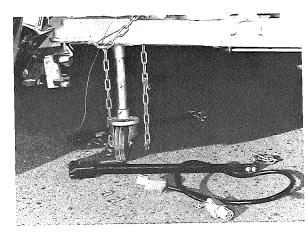
It is also important to periodically check on the tightness of the lug nuts. They should be tightened to a torque of 70 ft.—lbs. If you do not have your own torque wrench, this should be done as tightly as possible with a cross type lug wrench and then verified at a service station.

Park out of the sun in warm climate whenever possible. In desert regions use tire covers to prevent ultra-violet deterioration.



To change a tire with a jack, a 3" aluminum pad is provided on all trailers just to the rear of the wheels and beneath the frame to indicate the proper jack placement position. A flat tire may be changed without the aid of a jack by driving the unit up a ramp of 2" x 6" boards about 4 feet long and tapered at the ends (see photo)

In an emergency remove the flat tire and the independent suspension of the Dura-Torque Axle allows a four wheel unit to be safely towed on three wheels for a short distance (100 miles maximum) and only at a low speed (30 MPH). Be especially cautious in crossing holes or dips in the road. It is good practice to set your rear view mirrors so that you can observe your tires at all times.

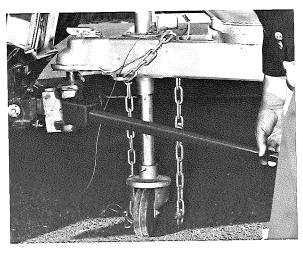


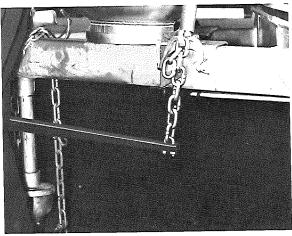
# HITCHING UP

Hitching your Airstream trailer is something that will become almost second nature with practice, however, there are a few tips, learned from experience, which will help you.

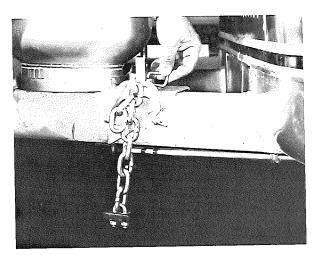
The electric jack is strongly recommended for anyone who, for any reason, should not physically exert himself. Available as a factory option or through the Wally Byam Stores, the electric jack makes hitching and unhitching a much easier operation, even for the wife.

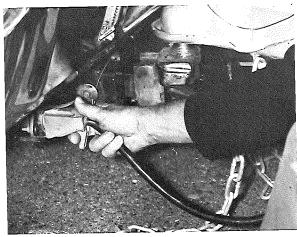
- 1. Jack up the trailer hitch until there is clearance for the hitch ball to slide under, and raise the locking lever.
- 2. Back the car straight back to the hitch. This can best be accomplished through the use of pre-arranged hand signals with the help of another person, but if you are hitching up by yourself we recommend the use of a hook-up view mirror.
- 3. Lower the trailer hitch onto the hitch ball then close the locking lever. Note the height of the hitch ball.





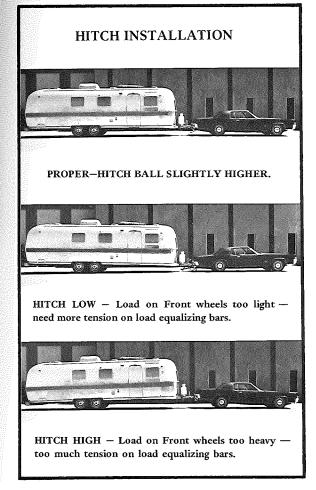
4. Now raise the trailer and car to the full height of the hitch jack and then attach the leveling bars. Lower the car and trailer and note the height of the hitch ball. The object is to adjust the tension on the load leveling bars so that the car and trailer are held up about 1" higher at the hitch ball than before the bars were attached. This will result in the best balance for towing and steering control as the weight equalizing hitch transmits the hitch weight of the trailer via the load leveling bars onto all four wheels of the car. A little practice





with your rig will teach you how far to pull up the bar, and you may wish to mark the chain links that match your rig. Always choose level ground for checking correct hook-up. For further information see hitch manufacturers' literature.

Note: If your car is equipped with adjustable load leveling air shocks, you must load the car first with typical luggage and passengers and bring it back to level. Then attach the trailer and adjust the load leveling bars. Otherwise the air

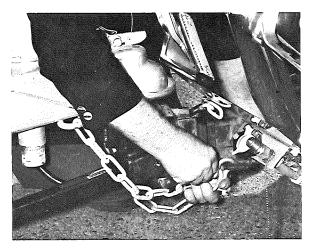


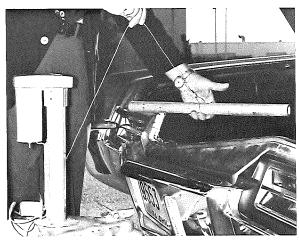
shocks on your car will overload the rear wheels.

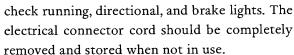
The hitch ball on your car should be installed at a height of 19-1/2" to the top of the hitch ball, measured when the car is unloaded.

A low hitch ball increases tailwagging tendencies by lowering the nose of the trailer thus changing the center of support for the trailer and reducing the weight on the front wheels of the car.

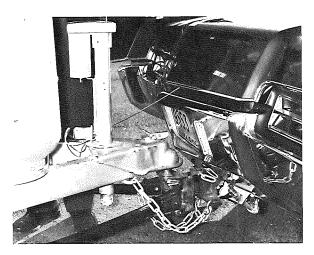
5. Plug in the electrical connector cord and

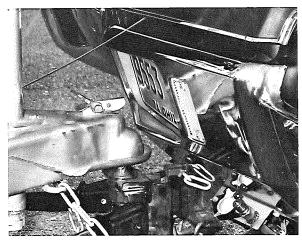






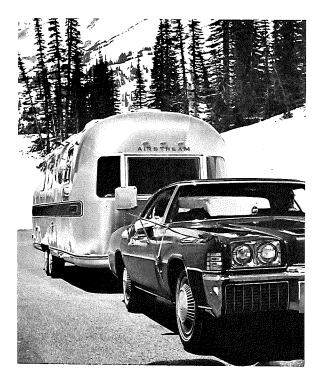
- 6. Attach the break-away switch cable and the safety chains to the welded portion of the hitch or the car's frame, but never to the removable ball mount. Cross the safety chains under the hitch.
- 7. Retract the hitch jack completely for maximum ground clearance. Remove the dolly wheel and jack pad, and stow them in the car's trunk, along with leveling jack and other gear used

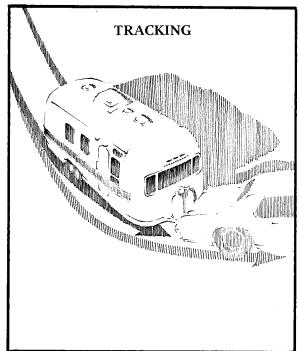


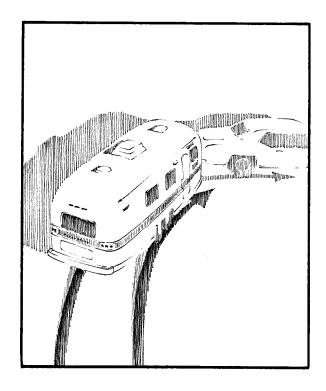


when stopped. Never tow your trailer with the jack down or the dolly wheel on. Check that the fold-away step is up and that the main door is completely closed and locked for towing. If it is not locked the constant vibration of travel may cause it to open with possible damage.

8. Move the rig ahead about 50 feet and test the trailer brakes, then check the ground for forgotten objects. Regularly check the condition of your tires, air pressure, and the tightness of the lug-nuts. For specific tire pressures refer to page 10.







# **TOWING TIPS**

A few hours of towing practice in a large empty supermarket parking lot will make pulling your Airstream over the road much easier. Line out two corners for both left and right turns. You may also use these corners to practice backing and parking. Observe that the tracks made by the trailer wheels are distinctly different from those made by your car. Studying this will make it easier for you to correct mistakes. Truck or trailer type fender or door grip rear view mirrors are a must for maximum visibility and in most States they are required by law.

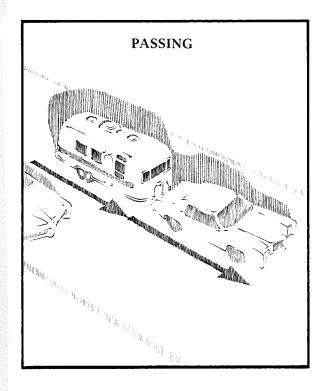
You are now ready to tow. After checking the traffic, signal that you are about to pull away and start slowly. Look often in your mirrors, and

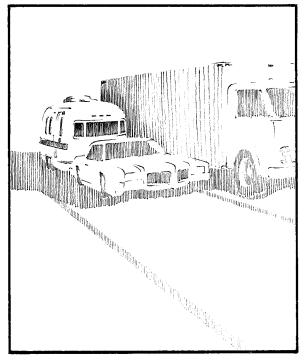
observe the action of the trailer, then carefully move into the proper lane of traffic. Remember that the trailer wheels will not follow the path of the car's wheels, therefore, wider turns are necessary when turning to the left or to the right.

On freeways or expressways try to pick the lane you want, and stay in it. Always maintain plenty of space between you and the car ahead, at least the length of the car plus trailer, for every ten miles per hour. Remember that in order to pass another vehicle, you will need longer to accelerate. You must also allow for the length of the trailer when returning to the right hand lane. On a two lane road, cars will be lining up behind you because you travel at a lower speed. It is both courteous and sensible to signal, pull onto the shoulder, and let them pass. Your Air-

stream is designed to be towed easily at any legal speed, so if you are not careful you may be inclined to forget it is there. Your car brakes will automatically apply the trailer brakes first if properly adjusted. This will make you stop as if you were driving the car alone and keep your car and trailer in a straight line.

When trailering, you might encounter a temporary cooling system overload during severe conditions - such as hot days when pulling on a long grade, when slowing down after higher-speed driving, or driving long idle periods in traffic jams. If the hot light comes on and you have your air conditioning turned on, turn it off. If the light doesn't go off in about a minute, pull over in a safe place and put on your emergency brake. Don't turn off the engine. Increase the





engine idle speed. Lift the engine hood and check for fluid leaks at the radiator hoses, radiator or radiator overflow outlet. Check to see that all drive belts are intact and the fan is turning. Light should go off within one minute. When the light is out, proceed on the highway a little slower. Ten minutes later resume normal driving. Caution: Never open a radiator cap when the car is hot! Check the car coolant level when the car is cool.

When going downhill in dry weather, down shift so that engine compression will slow the whole rig down. Take dips and depressions in the road slowly and do not resume normal driving speeds until you are sure that the trailer wheels are clear of the dip.

On slippery pavement do not use engine drag to help slow down as this may cause the rear wheels of the car to skid. On icy pavement drive slowly and if you feel the car is skidding, gently apply the trailer brakes only. This will bring the car and trailer back into a straight line. Chains do not help trailer wheels.

When driving in mud and sand let the momentum carry the rig through. Apply power gently and use as little as possible. Stay in the tracks of the vehicle ahead and keep the car in the highest possible gear. If you do get stuck it is best to tow out both car and trailer together without unhitching.

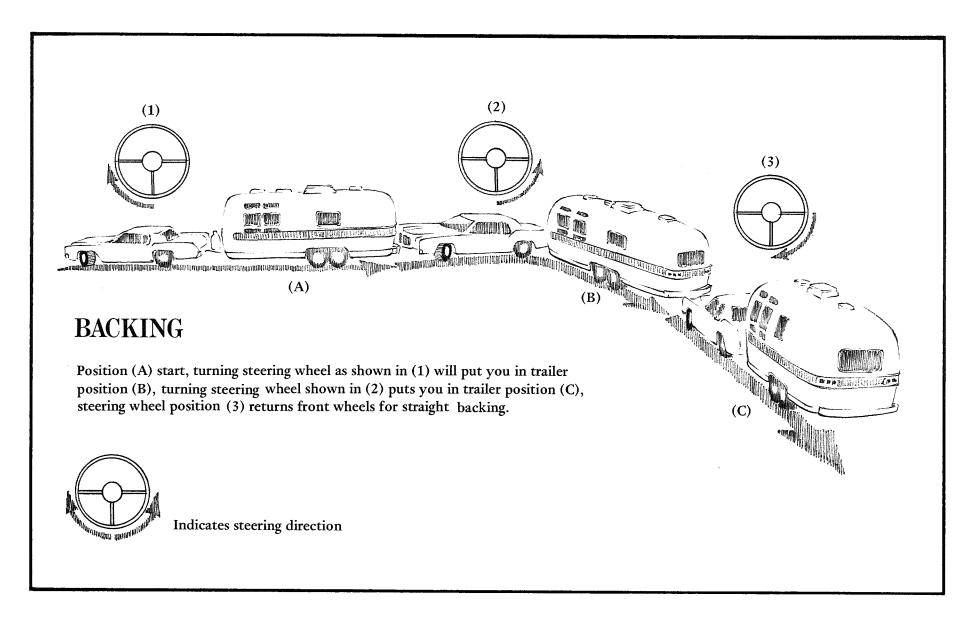
If you have to tow long distances over bad roads, the stones and gravel thrown back by



your tires will dent and scratch the aluminum finish of your Airstream. To prevent this, use masking tape to secure heavy sheets of cardboard to the lower front end of the trailer.

Despite the best hitch, you will notice that whenever a large bus or truck overtakes your rig the displaced air first pushes the trailer rear to the right and then affects the front. **Do not apply the brakes**. Steer very slightly, momentarily, toward the bus or truck. This will compensate for the sway induced by the passing vehicle.

When stopping on a hill or slope, leaving your car in gear is not enough for stand-still-safety. Chock the trailer wheels to be doubly sure. Never use the break-away switch as a parking brake because it will burn out the magnets and drain the trailer battery.



In backing up, the important thing to remember is to do everything slowly and to correct immediately if you see the trailer turning the wrong way. Concentrate on the rear of the trailer. With your car and trailer in a straight line, back up slowly and turn the bottom of the steering wheel in the direction you want the trailer to go.

Watch out the window or in the mirror until the rear of the trailer is pointing in the desired direction. Then turn the steering wheel in the opposite direction. Your car will be following the trailer in an arc. Straighten the car and trailer by turning the steering wheel more sharply, then when they are in line, straighten the steering

wheel. Always try to back to your left because the visibility is much better. (See illustration). When you don't make it on the first try it is usually much easier to pull forward to your original position and start over.







# **OVERNIGHT STOP**

Airstream owners have parked virtually every place imaginable from filling stations to farm lands. In time you will develop a knack for spotting wonderful little roadside locations by turning off the main highway and exploring. See the end of this section for applicable state laws.

There are many modern trailer 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 battery which supplies the 12 volt current.

On a longer trip, when you have stayed where sewer connections and utility hook-ups 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 stopping for the night your Airstream 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. Unless the car is needed for transportation, it is not necessary to unhitch. Try to pick as level a parking spot as possible. Stabilizing jacks or blocks probably won't be required for an overnight stay; however if you put the jack pad on the hitch jack and run the hitch jack down to take the weight off the car's springs this will

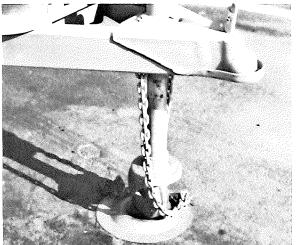
provide some stability. If you must park on a slope, park facing downhill; it is easier to level the Airstream this way.

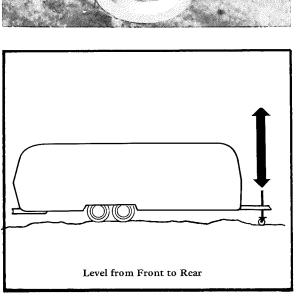
All you need to do to enjoy the self-contained luxury of your Airstream is to:

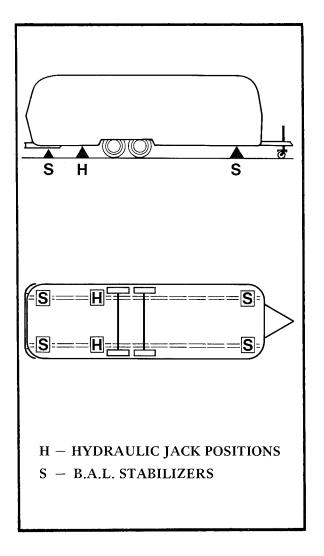
- 1. Light the water heater, refrigerator and furnace pilots if required. See page 35 for complete details on LPG system and gas operated appliances.
- 2. Turn on the gas supply at the range and light the pilot.

Before moving on, check your campsite, both for cleanliness and also to be sure you haven't left anything behind, turn off the gas supply petcock to the range and make sure everything is properly stowed. Use your Hitching Up check list on page 60 and you are ready for more travel adventure.









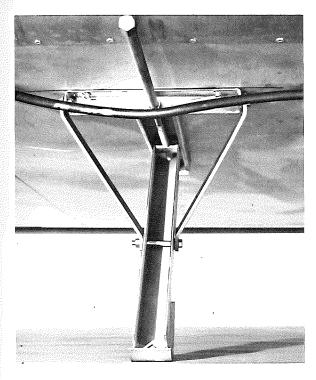
# **EXTENDED STAY**

Level from Side to Side

Making a long trip in your Airstream 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.

When you plan to stay in the same place for several days, weeks, or months, you will want your trailer to be as level and steady as possible. Check the attitude of your Airstream with a small spirit level set on the inside work counter or the trailer hitch "A-Frame." If a correction

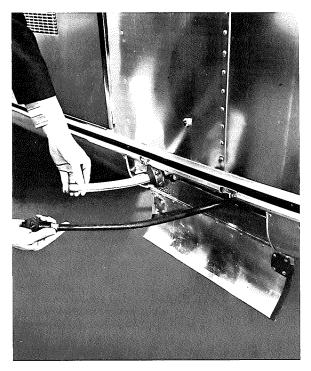
is necessary then you must level from side to side first. This can be done most easily up a small ramp consisting of 2" x 6" boards about four feet long and tapered at both ends. (See photo) We do not recommend placing tires in a hole for leveling.



Level the front and rear by disconnecting the hitch, putting the jack pad under the hitch jack and adjusting the jack up or down until you are level. Block or chock the wheels to keep the trailer from rolling. Use the wrench located in the hose carrier to lower the two B.A.L. stabilizing units on the low side. Bring trailer to a level position side to side. Lower opposite stabilizing units to a firm position.

Note: Whenever a jack is required for changing a tire, always place the jack under the main frame rail. A three inch aluminum pad is provided to indicate the proper position.

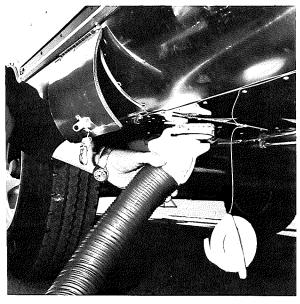
The water line connection for city water and electrical connection for 120 volt, 60 cycle city power is located on the roadside of the trailer in



back of the wheels. Unlatch the access cover and pull the connections out to the desired length. They will automatically lock in this position. The access door can now be closed to prevent the entry of any foreign objects. On the electrical connection, be sure you have the wire grounded and have the proper polarity (see page 44 and 53 for water and electrical system details).

To stow the electrical and water cable when leaving, unlatch the access cover, unhook the electrical cable from its connection, give a slight pull on the cable, and it will automatically wind up. Caution: Keep a light hold on the cable as it is winding up so that it does not whiplash against the side of the trailer. Repeat this procedure on the water hose.





Hook your waste drain hose into the sewer disposal facility and attach to the drain outlet in your trailer. For details on this procedure refer to page 47.

Turn on gas supply; light the range and oven pilots, light the water heater, refrigerator and furnace pilots.

### STATE LAWS

Trailer traveling through our United States requires a knowledge of many state regulations. Here through the cooperation of Trailer Life Magazine, North Hollywood, California is a brief summary of three of these regulations.

(1) Maximum Speed Limit (MSL) of vehicles towing a trailer. (2) Permissibility of making Overnight Stops (OS) on highways or roadside rest areas. (3) Permissibility of keeping a DOG overnight in State or County parks.

NOTE: State laws may change after the printing of this manual. Watch carefully for posted signs.

### **ALABAMA**

MSL: 60 mph days, 50 mph nights on open highway. OS: Parking off highway is not

permitted.
DOG: Not allowed.

### ALASKA

MSL: 50 mph. OS: Permitted off highway. DOG: Permitted in state parks at night.

### **ARIZONA**

MSL: As posted.
OS: Permitted at roadside rest areas unless otherwise posted.
DOG: Permitted if leashed in state and county parks.

### **ARKANSAS**

MSL: 60 mph.
OS: Permitted off highway unless posted.
DOG: Permitted if leashed in state and county parks.

### CALIFORNIA

MSL: 55 mph. OS: Permitted off highway. DOG: Allowed if leashed.

### **COLORADO**

MSL: 60 mph open highway, 40 mph open mountain highway. OS: Not permitted. DOG: Permitted if leashed in state and county parks.

### CONNECTICUT

MSL: As posted. OS: Not permitted.

DOG: Permitted if leashed in state and county parks, one pet per campsite. Not permitted on beaches at any time.

### **DELAWARE**

MSL: 60 mph.
OS: Permitted off highway.
DOG: Allowed if leashed

### DISTRICT OF COLUMBIA

MSL: As posted. OS: Not permitted.

### FLORIDA

MSL: On turnpikes, 70 mph. On interstate highways, 65 mph days, 60 mph nights. Other highways, 50 mph days, 45 mph nights. OS: Not permitted. DOG: Daytime only on leash.

### **GEORGIA**

MSL: 60 mph days, 50 mph nights. OS: Permitted at roadside park or rest area if not posted otherwise. DOG: Small, housebroken dogs; notify Park Superintendent.

### HAWAII

MSL: Set by local ordinance. OS: Permitted off highway.

### IDAHO

MSL: 60 mph, 55 mph nights. OS: Permitted in roadside parks or rest areas unless posted otherwise. DOG: Permitted in state and county parks if leashed.

### ILLINOIS

MSL: 55 mph. Pickups over 8000 lbs. towing trailer, 50 mph. OS: Permitted. DOG: Permitted in state parks if leashed.

### **INDIANA**

MSL: 65 mph. 70 mph on interstate highways.
OS: Not permitted.
DOG: Permitted if licensed and attended.

### **IOWA**

MSL: Trailer under 4500 lbs., 55 mph. Trailer over 4500 lbs., 40 mph.
OS: Not permitted.
DOG: Permitted on 6 foot leash.

### **KANSAS**

MSL: On turnpike, 80 mph. In interstate highway, 70 mph days, 60 mph nights.
OS: Permitted off highway.
DOG: Permitted if leashed, except on beaches.

### KENTUCKY

MSL: 60 mph days, 50 mph nights. OS: Not permitted. DOG: Permitted in state and county parks if leashed.

### **LOUISIANA**

MSL: 60 mph days, 50 mph nights. OS: Not permitted. DOG: Permitted in state parks if leashed.

### MAINE

MSL: 45 mph.
OS: Not permitted.
DOG: Permitted if leashed.

### MARYLAND

MSL: 55 mph.
OS: Allowed.
DOG: Permitted in state forests, but not state parks.

### **MASSACHUSETTS**

MSL: Divided highways, 50 mph. Other highways, 40 mph. OS: Determined by local regulations.
DOG: Permitted on 10 foot leash. Not allowed on beaches. No cats.

### MICHIGAN

MSL: 50 mph.
OS: Not permitted.

DOG: Permitted if leashed.

### **MINNESOTA**

MSL: 65 mph days, 55 nights. OS: Emergency overnight parking. DOG: Permitted on 6 foot leash.

### MISSISSIPPI

MSL: 70 mph or as posted.
OS: Not permitted.

DOG: No information available.

### **MISSOURI**

MSL: On Federal divided highways, 70 mph. Other highways 65 mph days, 60 mph nights. Cities, towns and villages 55 mph unless otherwise posted.
OS: Not permitted.
DOG: Only on leash of 10 ft. or less.

### **MONTANA**

MSL: 50 mph.
OS: Permitted as posted.
DOG: Permitted if leashed.

### **NEBRASKA**

same as autos. 23 foot and over, 50 mph.
OS: Not permitted.
DOG: Permitted in state parks if leashed. Check at county parks.

MSL: Less than 23 foot trailer,

### **NEVADA**

MSL: "Reasonable and proper," or as posted.
OS: Emergency parking permitted.
DOG: Permitted if leashed; household pets only.

### NEW HAMPSHRE

MSL: 45 mph. OS: Emergency parking permitted. DOG: Permitted in state parks.

### **NEW JERSEY**

MSL: 50 mph.
OS: Permitted.
DOG: Permitted in state and county parks.

### **NEW MEXICO**

MSL: 60 mph days. 55 mph nights.
OS: Permitted off highway in emergency.
DOG: Permitted if leashed.

### **NEW YORK**

MSL: 50 mph.
OS: Not permitted.
DOG: Permitted if leashed and proof of rabies innoculation; not permitted Long Island and Palisades.

### NORTH CAROLINA

MSL: 45 mph. OS: Not permitted. DOG: Permitted in state parks on 6 foot leash.

### NORTH DAKOTA

MSL: 50 mph. OS: Permitted off highway. DOG: Permitted on leash.

### OHIO

MSL: 60 mph days, 50 mph nights. OS: Not permitted. DOG: Not permitted.

### **OKLAHOMA**

MSL: 50 mph.
OS: Permitted unless posted otherwise.
DOG: Permitted if leashed.

### OREGON

MSL: 55 mph. If not posted, "reasonable and prudent."
OS: Permitted where posted.
DOG: Permitted if leashed.

### **PENNSYLVANIA**

MSL: 50 mph. OS: Not permitted. DOG: Not allowed.

### RHODE ISLAND

MSL: 50 mph days, 45 mph nights. OS: Permitted off highway. DOG: Permitted.

### SOUTH CAROLINA

MSL: 55 mph.
OS: Not permitted.
DOG: Must be on leash.

### SOUTH DAKOTA

MSL: 70 mph days, 60 mph nights. OS: Permitted off highway. DOG: Check at parks.

MSL: Interstate highways, 65 mph.

### **TENNESSEE**

Other highways 55 mph or as posted.
OS: Permitted at roadside parks or rest areas.
DOG: Permitted in state parks if leashed.

### TEXAS

MSL: 60 mph days, 55 mph nights. OS: Not permitted.

DOG: Permitted if leashed.

### UTAH

MSL: As posted. OS: Permitted off highway. DOG: Permitted if leashed.

### VERMONT

MSL: As posted.
OS: Permitted off highway in emergency.
DOG: Recommend leaving at
home or in kennel.

### **VIRGINIA**

MSL: Interstate or four lane divided highways, 50 mph. Other highways, 45 mph. OS: Permitted off highway. DOG: Permitted if leashed.

### WASHINGTON

MSL: 50 mph. Nights use posted truck speeds.
OS: Permitted off open highways only, not at roadside rest areas.
DOG: Permitted if leashed.

### **WEST VIRGINIA**

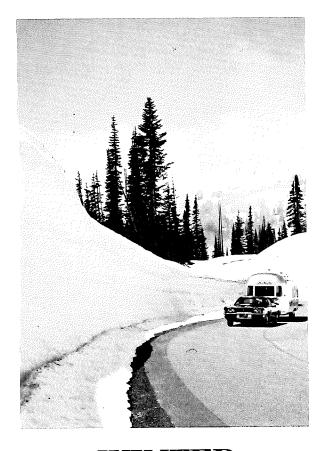
MSL: 55 mph.
OS: Not permitted.
DOG: Permitted if leashed.

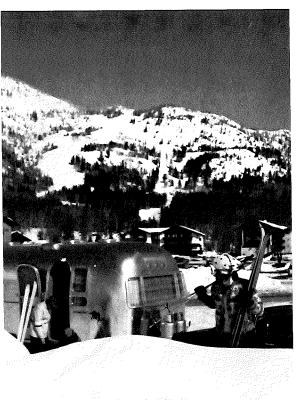
### WISCONSIN

MSL: 65 mph days, 55 mph nights. OS: Not permitted. DOG: Permitted at state parks if leashed. Check at county parks. Not on beaches or public buildings.

### **WYOMING**

MSL: Four lane divided highway, 75 mph. Other highways, 65 mph. OS: Not permitted. DOG: Permitted in state parks if leashed.







# WINTER AIRSTREAMING

Traveling in an Airstream during the cold winter months can be one of the most exhilarating experiences in all trailering. When we speak of cold, we are talking about temperatures of zero to -10 or -15 degrees. Airstreams properly outfitted with thermopane windows have been cold-soaked at -20 degrees with no adverse effects and with no real discomfort. Thermopane side windows, which are standard on the Excella, do not require storm windows and improve the efficiency of the heating system.

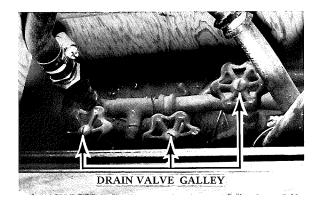
There are of course certain precautions which must be taken as you would in your own home in low temperatures.

- 1. There should be heat in the trailer at all times.
- 2. You must have a plentiful supply of propane gas. It goes pretty fast in extremely cold temperatures.
- 3. If your stay is longer than overnight (without driving to recharge your battery) then you should endeavor to have 110 V electricity available. The battery (fully charged) will not last more than about 18 hours in zero weather. Of course you can always run your

car to recharge the battery and normally the battery will attain sufficient power to run another 9 hours by running your engine for approximately 45 minutes to one hour at idle. For more detailed information on the battery see page 52.

- 4. Minimize use of electricity if 110 volt power source is not available.
- 5. Your Airstream has forced air heating in the holding tank and trunk area. There is also heating around the water tank.

By following the above suggestions, you may enjoy your Airstream year round, in cold as well as in warm weather.

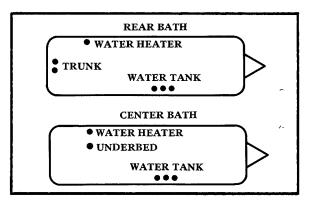


# STORAGE/ WINTERIZING

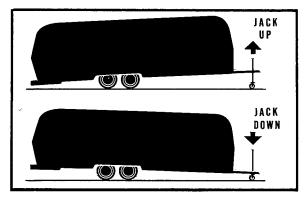
When storing your trailer for short or long periods use the same precautions as you would in your own home in regard to perishables, ventilation and rain protection. In addition, for prolonged storage periods, flush out all the drain lines and the holding tank. Also, drain the entire water system including the water heater and the water storage tank. Instructions for draining the water system are explained in the following paragraphs on winterizing.

Twice a year or after a long storage period, we suggest you take your unit in for a check-up and cleaning of the gas operated appliances.

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 tank, the water heater and the battery. To completely winterize your Airstream, follow this procedure:

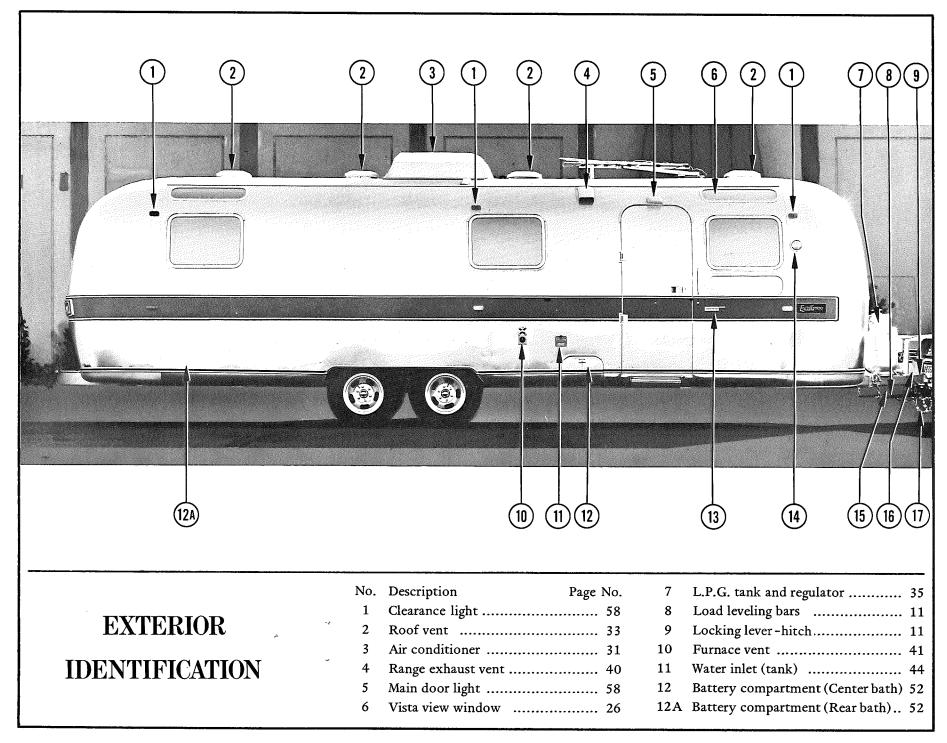


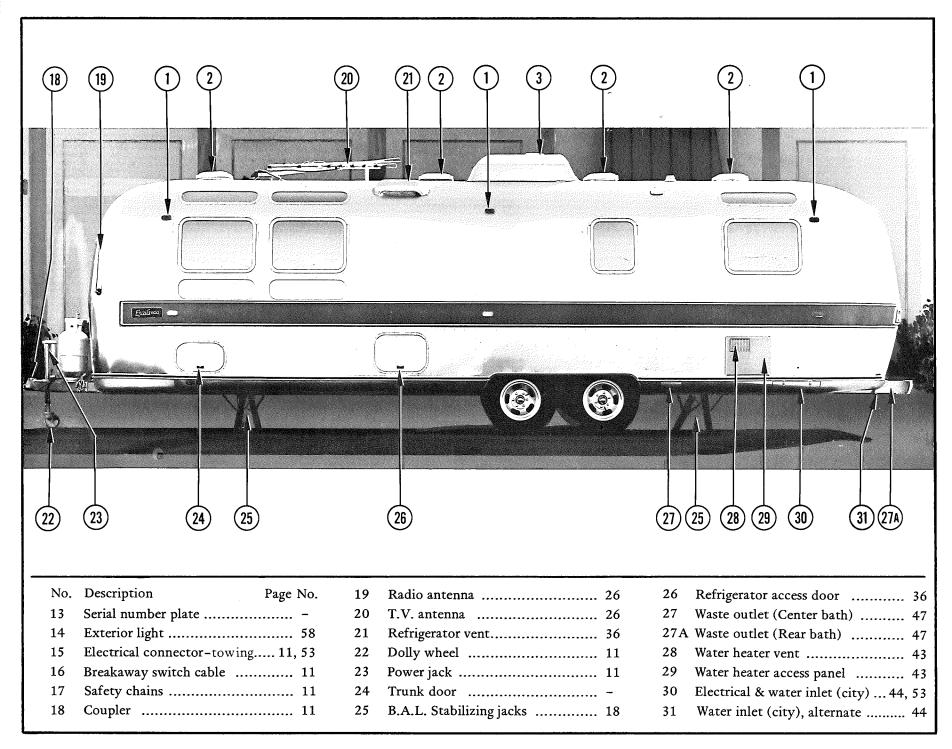
- 1. Level the trailer from side to side and front to rear. Open all the faucets.
- 2. Turn the water pump switch to the OFF position.
- 3. Open all drain valves. On rear bath models two are located in the rear trunk, roadside and three are under the galley sink. On center bath models one is located under the bed on the roadside and three are under the galley sink, see photo above and pages 43 & 45.
- 4. While the water is draining from the system, open and flush the toilet flushing valve. Depress hand spray thumb button and hold the spray head below rim of the toilet and drain the hand spray line. There is danger of damage from freezing if water remains in these lines and valves. Drain all water from telephone showerhead flexible hose.
- 5. Lower the front of the trailer as far as the jack will allow until water ceases to drain, then crank the jack up as high as it will go and let any remaining water drain out the rear drain valves. (see illustrations)
- 6. After the water has stopped running from the drain lines, apply air pressure, if available, to the drain lines with all drain valves and faucets still open. This will force any remain-



ing water from the water heater and remove any water which may be trapped in low areas.

- 7. Pour a cup of antifreeze (Glycol) into the lavatory, sink, and tub drains to prevent freezing of water in traps.
- 8. Be sure to open the waste-holding tank drain valve and drain and flush the tank thoroughly. (This is very important as the sewage in the tank, if frozen, could seriously damage the tank.)
- 9. Remove the lower portion of the water purifier, if your trailer is so equipped, and drain the purifier.
- 10. Disconnect the inlet and outlet connections of the water pump and turn the pump by hand until all the water is expelled.
- 11. 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. Please refer to the battery section for more information on battery maintenance.
- 12. Remove any items (food, cosmetics, etc.) from trailer interior that might be damaged by freezing—or might damage the trailer if containers break.





# **EXTERIOR**

The Airstream exterior has been covered by an acrylic lacquer finish providing years of environmental protection. Washing the exterior of your Airstream is similar to washing an automobile. Both have high quality finishes and certain precautions must be taken to protect them. Oil, grease, dust, and dirt may be removed by washing with any mild nonabrasive soap or detergent. Automatic dishwasher detergents and acid etch cleaners are too strong and should never be used. Always clean your Airstream in the shade or on a cloudy day when the aluminum skin is cool. Cleaning should be followed by a thorough clean water rinse. Spots and streaks may be prevented by drying the unit with a chamois or a soft cloth.

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. Wax should normally be applied every three to six months.

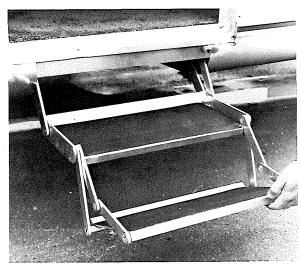
It is important to remove sap, seeds, gum, resin, asphalt, etc., as soon as possible after they appear by washing and rewaxing. Sunlight and time will bake-harden these materials making them almost impossible to remove without heavy buffing. If asphalt remains on the trailer after washing, use a small amount of kerosene on a rag and wipe the spots individually, being careful not to scratch the aluminum.



For small areas of damage to the acrylic protective coating, or where oxidation is beginning to occur, remove all traces of the acrylic coating with a good grade of lacquer solvent and then thoroughly clean the aluminum with an aluminum cleaner. Then respray the area with clear acrylic lacquer. All items needed for these minor repairs to the exterior shell are available at Wally Byam Stores. For extensive refinishing we recommend that you contact an Airstream Service Center or the factory for instructions or to arrange for factory service.

To keep your trailer looking new, paint the "A Frame," L.P.G. tanks, and rear frame periodically, by brushing on aluminum lacquer or, if possible, by spraying.

Each time you connect the 7-way electrical connector check for dirt and corrosion. Keep the contacts clean with "Spra-Kleen".



It is important that the main door be completely closed and locked during towing. If it is not locked the constant vibration of travel may cause it to open with possible damage.

For your security the lock has been designed as a dead bolt. For this reason never try to shut the door when it is locked. The door is properly closed when the handle is firm. If the door is difficult to open, push in to release the latch. When the door swings open it will automatically latch against the side of the trailer.

The screen door latches to the main door or operates independently using the same type latch that holds the main door open.

To operate the Fold-Away Step just press down the latch on the right hand side and the step will automatically drop into position. To stow the step simply lift the front edge and then push it up under the trailer to its stowed position.



The Extension Step is permanently at tached to the main step and when needed it is simply flipped out. Never travel with step lowered.

Your Airstream has a new High Strength Safety Glass Front Window that is stronger than car windshields. Inside this window is a second window of tough acrylic plastic. The combination represents a great improvement in safety and convenience as it eliminates the need for a rock guard and also acts as a thermo pane for better temperature control.

The windows in your trailer are of tempered safety plate glass. To open: release the two lever locks at the bottom, lift up on the two side operator handles until the window is in the desired position, and place the operators into one of the three positioning slots on the side of the frames. To lock the windows, reverse this procedure.



These windows are cleaned in the same manner that ordinary windows are. Clean the seals with a damp cloth or mild detergent every three to six months taking care not to use strong solvents as they will damage the seals. A coat of natural silicone lubricant applied after the seal has dried will keep it flexible. Spread the lubricant evenly with a brush or finger, working it into the surface. This is a good practice for all rubber seals in your Airstream. For replacement of a damaged window contact an Airstream Service Center or the factory.

The double pane side windows also include metalized mylar tint. Storm windows will not be required for winter operation, and also the efficiency of the air conditioning system is increased.

Screens are made of plastic for hard wear and easy maintenance. Clean with a damp cloth.

Note: They will melt at the point of contact if touched by a cigarette.

Vistaview Windows, an exclusive Airstream feature, are skylight windows filling the interior with sunlight, equipped with integral shades that can be completely closed.

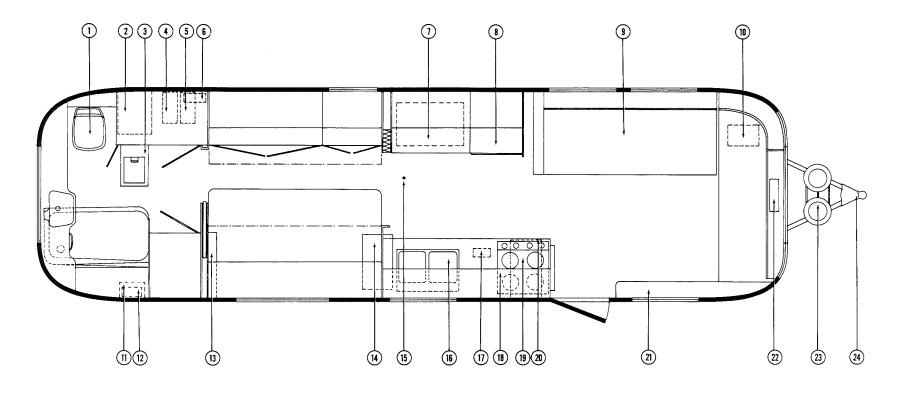
Factory recommended awnings give shade during trips and rallies, are easily operated and easily installed by your dealer from a wide selection.

The aluminum construction of your trailer creates a radio-shield and you will need outside antennas for perfect reception.

Motorized TV Antenna: The controls are located on the curbside wall just above the arm rest. To raise the antenna, depress the up button and hold it in place until the red light goes off. The antenna is now ready for rotating to the desired position. Press the top of the rotating button and rotate the antenna until you get the best possible TV picture. If you go too far, press the lower portion of the rotating button and the antenna will move in the opposite direction. To stow the antenna, press the bottom of the rotating button and allow the antenna to rotate until the red light goes off. The antenna is now ready for lowering so press the "lower" button and hold it until the red light goes off again. You are now ready for travel.

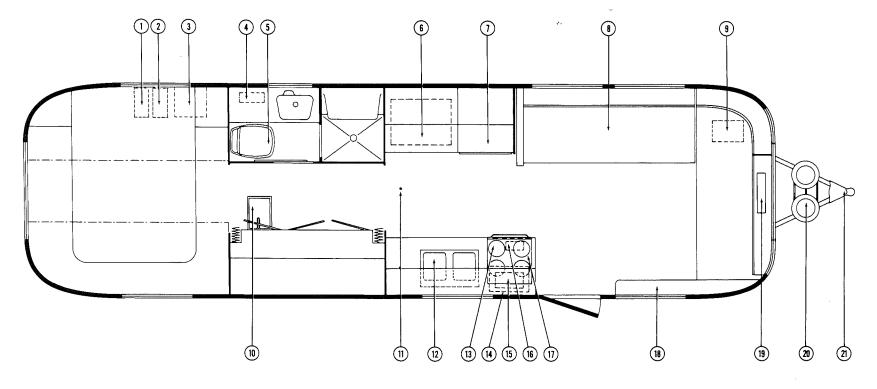
A police-type telescoping whip Radio Antenna is installed for the 12 V AM-FM transistor radio next to the front window roadside of your trailer on a swivel mount.

### FLOOR PLAN 31 FT TWIN & DOUBLE REAR BATH



No.	Description I	Page No.	8	Refrigerator	36	17	Water pump	44
			9	Front lounge	29	18	Range exhaust hood	39
1	Toilet	47	10	Safe deposit box	34	19	Range	39
2	Water heater	43	11	Battery	52	20	Heater	41
3	Tip down scale	34	12	Univolt	53	21	Table	32
4	City water inlet	44	13	Bed light	33	22	Central control panel	29
5	120 Volt inlet	53	14	Oven	39	23	L.P.G. tanks and regulator	35
6	120 Volt distribution panel	54	15	Air conditioner	31	24	Hitch	11
7	Micro wave oven	38	16	Sink	31			

### FLOOR PLAN 31 FT TWIN & DOUBLE CENTER BATH



4								
No.	Description Page N	٧o.	7	Refrigerator	36	15	Univolt	53
			8	Front lounge	29	16	Water pump	44
1	City water inlet	44	9	Safe deposit box	34	17	Range and oven	39
2	120 Volt inlet	53	10	Slide out scale	34	18	Table	32
3	Water heater	43	11	Air conditioner	31	19	Central control panel	29
4	120 Volt distribution panel	54	12	Sink	31	20	L.P.G. tanks and regulator	35
5	Toilet	47	13	Range exhaust hood	39	21	Hitch	11
6	Micro wave oven	38	14	Battery	52			
								ł





The Airstream interior 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 pleasure as well as the long life of your trailer.

To convert the Lounge into a bed, pull the back cushion down toward you onto the seat. Grasp the front rail of the seat in the center, lift it slightly and pull it out until it stops. Lay the back cushion down to finish the bed. To return, reverse this process.

Make beds in the usual way, using fitted sheets ¾ bed size. The space behind the rear cushion is ideal for storing bedding for both front travel lounges and side pull-out beds. An easy method of storing bedding is to remove and store pillows and then fold back the ends of the bedding



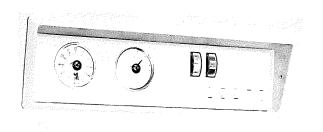
neatly to expose about 2" of the mattress; then, starting from the edge nearest to you, roll up the bedding as tightly as possible towards the back wall. Raise the rear cushion to its normal position.

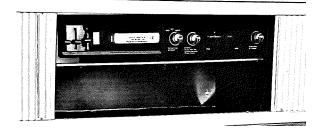
To make fixed twin beds, lift mattress slightly, pull it away from the wall and then tuck bedding in along wall. Note: Please do not launder mattress ticking; it has to be dry cleaned to prevent shrinkage.

The Central Control Panel, located above the front roof locker of your unit, contains the necessary instrumentation to monitor your Airstream's systems.

The Panel Light switch lights up the panel and makes an excellent night light.

The Clock is operated by a 'C' cell battery which will last from nine months to a year. Reset the

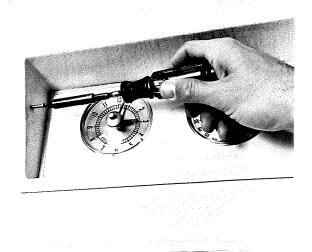




time with the knob on the bezel and change the battery from the rear of the panel.

The Battery Condition Tester has a switch which operates a meter indicating: Good condition, fair and low. (This meter does not indicate true battery condition while you are hooked-up to 120 volt city power.) When it shows low condition, you should take every reasonable step to conserve power by using as few lights as possible and switching off appliances.

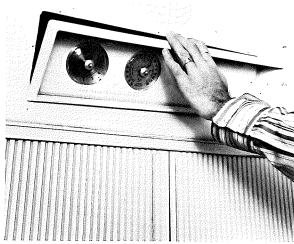
The Ammeter indicates whether the trailer battery is being charged. If discharge is indicated, reduce your power usage. The Univolt System charges the battery only to the extent of any surplus over and above the electrical demands you make. The battery will not be able to recharge until the power usage is reduced. Therefore, before leaving on a trip, conserve power usage the night before to insure a fully charged battery.



The Water Pump Switch, when on, also lights up the indicator light. For a complete discussion of the pump, please refer to page 44.

The Water Level Indicator Lights show the amount of water in the water tank. Press the button and the light will show: "1/2" when the tank is at least half full, "1/4" when the tank is at least 1/4 but less than half, and "0-0" when it is less than one quarter full. If no lights show, the tank is nearly empty. In rare cases, when the tank has been filled with very pure water, as from a mountain stream, the indicator lights may not work at all.

The Holding Tank Level indicates "1/2" when it reaches half full, and "4/4" when it reaches the three quarters full mark.



The **Power-On Light** will glow automatically when you are hooked up to city power. This light and the polarity warning light are your checks on a proper 120 volt connection.

The Thermometer indicates the outside temperature, and the minimum and maximum temperatures reached since the last setting. The lowest temperature reached the night before and the highest temperature reached during the day may be determined by resetting the pointers the night before. To reset the pointers turn the center adjusting knob on the bezel clockwise and counterclockwise until the pointers are against the temperature hand. Do not apply excessive pressure against the temperature hand.

Access to the rear of the Central Control Panel is necessary for replacement of: the clock battery, panel light bulbs and the water pump fuse. To get behind, remove the attaching screws, grasp the center, pull down, and swing the panel

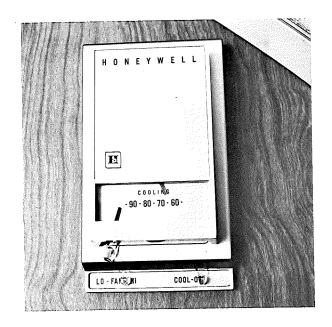
out and forward (see photos).

The Excella has a new Motorola AM-FM multiplex radio (stereo), and 8 track cartridge tape deck. It is equipped with a "fadar" control which allows the front speakers to be turned on by themselves, or the rear speakers by themselves, or any combination of front or rear speakers.

The 8-Track Stereo Tape Cartridge Player is designed for installation in vehicles and incorporates solid state circuitry and automatic program change. To operate:

- 1. Turn tape player on by inserting tape cartridge into tape slot (label side up and open end first) until it is firmly seated.
- 2. Adjust left and right VOLUME controls for desired sound level between speakers. Adjust the TONE control for desired bass or treble response.
- 3. To change programs, push and release the program selector button. Each time this button is pushed and released, the next program will play. If button is not pushed, programs will play in succession, automatically and continuously.
- 4. To turn tape player off, pull cartridge out approximately one inch from its seated position. Never allow cartridge to remain seated when tape player is not in use. Store tapes in a cool area (in their containers) with the open (tape) end down. Protect tapes from direct sunlight and dust.

In time, oxide from recording tape will accumulate on the tape head and capstan shaft which







can cause tape hiss and erratic operation. The more often the tape player is used, the more often it should be cleaned.

Clean the head with a cotton swab moistened with isopropyl alcohol. Do Not Use carbon tetrachloride.

To clean the capstan shaft, first turn on the motor by depressing the motor switch (next to the capstan shaft) with the eraser end of a pencil. Use a cotton swab moistened with alcohol on the shaft.

Fuses for the radio, tape deck and main radio, line are located behind the central control panel.

The Bay Breeze Airconditioner has a high and low speed setting. To operate: (1) Close doors,

windows and ventilators. (2) Set thermostat to desired temperature (75° is normal). Do not make frequent changes. (3) Set the fan switch (left under thermostat) to "HI" position. (4) Set main switch (right under thermostat) to "cool". When the inside temperature is 90° or less and expected to continue, set speed to "LO". To shut down: Set main switch to "OFF."

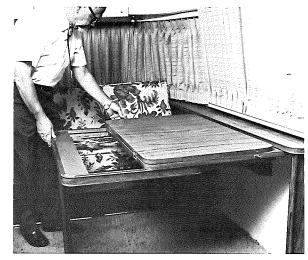
Shut off to clean or replace the filter. To clean, brush off loose lint, run water through filter or move it briskly in soapy detergent water. Rinse thoroughly, dry completely and replace. The unit has a low voltage starter kit, so that it can start at 90 Volt current.

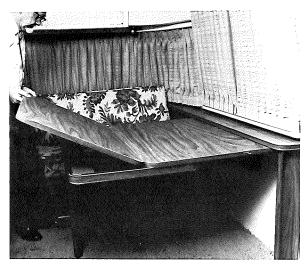
Stainless steel sinks cannot be harmed by boiling water. However, salt, mustard, mayonnaise and ketchup will cause pitting. Stubborn stains will

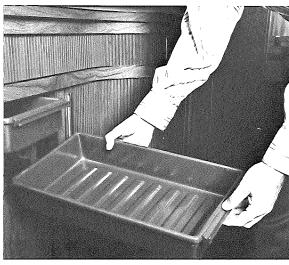
yield to paste made of water and slightly abrasive cleaner. Be sure to work in the direction of the polish-lines on the steel, to keep the original finish. Fingerprints are sometimes a problem. They can be minimized by applying a cleaner that leaves a film of thin wax: simply wipe it on and remove the excess with a dry cloth. After this, fingerprints can be wiped off with a soft dry cloth, or one moistened with a little wax cleaner. The surface should always be washed before wax is applied. Regular cleaning will prevent build-up of scale and film. Ordinary soaps or detergents are best for routine cleaning of the stainless steel sinks. Rinse thoroughly with warm water and wipe dry with a cloth to avoid streaks and spots.

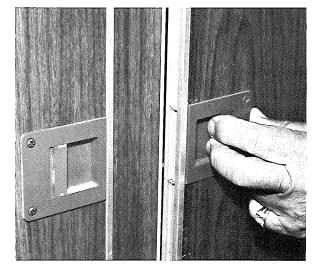
For further information on galley equipment, refer to page 36 for the refrigerator and page 39 for the range and oven.

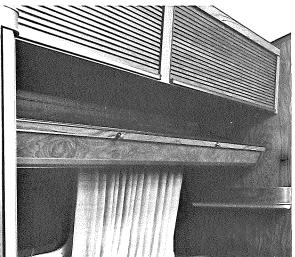












To open the table, lift the table into a horizontal position, depress latch and pull the folding leg down until it locks in position. To extend the table pull out on the latch underneath the table right next to the leg and lift the table and leg slightly off the floor. Now pull the extension frame and leg out as far as they will go. Release the catch on the extension table leaf and rotate it over onto the extended frame. By raising the

leg the entire table can be slid forward and aft for your seating comfort.

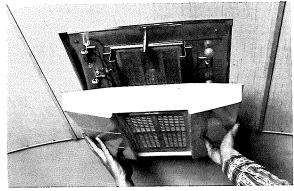
To stow simply reverse the procedure and unlock the leg and drop the table to the wall.

All the drawers and shelves are removable allowing you storage flexibility and ease of packing and unpacking.

Wardrobe catches are self locking and they may be opened by sliding the touch plate away from the door opening.

A drop-down locker attached to the roof lockers is available for additional storage space for bedding, etc. in the bedroom.





Bed-lights are operated by a switch on the side. To replace bulbs snap the lens out by squeezing gently the long side of the lens until it drops out of the fixture. Area lights have switches on the rim.

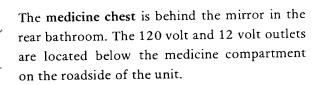
When attaching wall hung improvements, like hooks for clothing, bookshelves and extra towel racks, secure with half-inch No. 8 sheet metal screws with flat binder heads, make holes in the aluminum inner walls with a small hand drill (No. 32 drill bit).

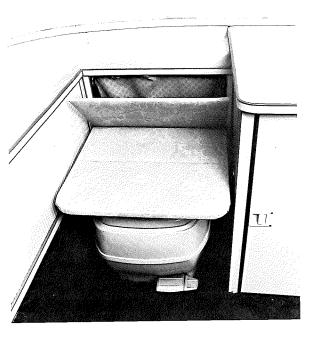
Ceiling light fixtures are incorporated with the ceiling fresh air vents. To operate the lights turn the forward control knob clockwise; first position 2 lights, second position 4 lights, third position 6 lights, fourth position to replace the bulbs and remove the lens.





The fresh air vents are operated by the aft control handle. Turning clockwise will raise the vent and at the maximum extension vents with fans will automatically turn on. For maximum air without fan, open until fan starts and back up just enough to turn fan off. Turning counter clockwise will close the vent. Airstream vents are designed to allow air circulation while still keeping out rain and can be used in any weather. Screens should be removed for periodic cleaning.



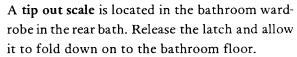


The medicine chest in the center bath is to the left of the lavatory with the 120 volt and 12 volt outlets located under the mirror.

The vanity lights in the bathroom are operated by a switch under the roadside light. By lifting slightly and pulling out, the lights can be adjusted to any angle for makeup. To change bulbs squeeze lens and pop it out.

The light in the center bath is operated by a switch at the top center of the base. To change bulbs, squeeze the lens at each end and pop it out.





A slide out scale is located in the rear wardrobe in the center bath. Slide scale vertically out of the track and place on floor.

The toilet exhaust fan in the rear bath models is in the bathroom wardrobe wall left of the toilet and is operated by a switch under the vanity light. In center bath models the fan is located behind the toilet and is operated by a switch located on the wall behind the toilet. For complete toilet instructions see page 47

The telephone shower head is designed to give maximum flexibility in usage and provide for water saving techniques when using your trailer on self-containment. For operational procedures refer to page 46.

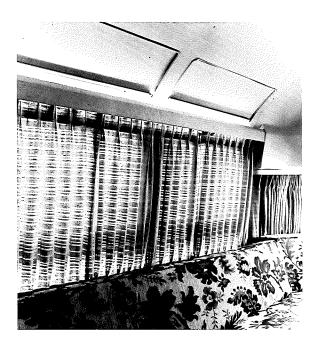


A fire proof safe deposit box is located under the front lounge. To gain access remove curved bolster, pull back roadside end of front lounge seat cushion and remove small access door on bed top.

A 12 volt two-tone door bell is installed on the forward side of the main door with the chimes located under the credenza.

The lavatory bowl, counter top, tub or shower pan in your Airstream bathroom are made of a special ABS long-wearing, light weight, high strength plastic material. When cleaning, use soap or detergent only — never use scouring powder.

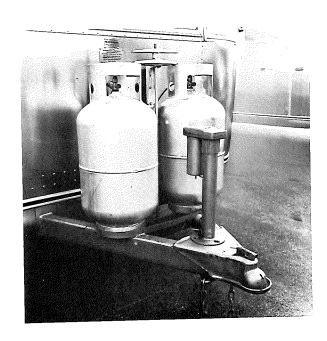
The living room has an indirect fluorescent lighting system. It features a solid state ballast and three position switch for two levels of light-



ing. The first position is low level, second position is high level and third position is off and bulb replacement. The switch is located under the front roof locker on the curbside.

To replace bulb turn switch to off position, remove electrical terminal from each end and slip off each elastic retaining loop.

The bulbs are wired in series therefore if one bulb burns out the other will not operate.





Your Airstream is equipped with two tanks for LPG (Liquid Petroleum Gas). LPG burns with a clean blue flame and produces more heat than natural gas. There are two basic types of LPG in common usage: Butane and Propane. Butane is widely used where temperatures are normally above freezing the year round and Propane is used where subfreezing temperatures are common, since Butane freezes at 32° F as compared to -40° F for Propane. All of the orifices in your Airstream LPG appliances are of the universal type which will burn either fuel.

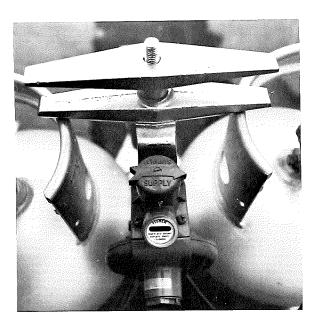
How long a full tank of gas will last is dependent on usage. In cold weather when you are using the furnace, large amounts of hot water, and are doing extensive cooking, you will naturally use more than you will in warm weather when you may do limited cooking. On the aver-



age, with normal cooking and other appliance use, you can probably count on three weeks service from each 28-lb. tank.

The Excella is equipped with an Automatic Gas Regulator. Both tanks are connected to this regulator and are turned on. Gas is drawn from only one tank at a time and when the tank being used is depleted the regulator automatically switches to the full tank. An indicator on the regulator points toward the tank being used to give you a visual reminder when one tank is empty. Additionally a tank gauge is on each tank indicating fuel level. The empty tank can be removed for refilling without disturbing the tank being used. Simply close the tank valve, disconnect it, have it filled and reconnect.

To remove the gas tanks, disconnect the tubing nut with a wrench and loosen the bar handle



which holds the tanks in place. The tubing nut has a left hand thread so be sure to always turn it clockwise to loosen and counter-clockwise to tighten. When replacing a tank, connect and tighten the tubing nut before clamping it in place.

If you have allowed both tanks to run out, air may have gotten into the lines. In this event, the air must be forced out through the lines by gas pressure before you will be able to light the pilots. Hold a match to the pilot of the appliance closest to the tanks until it lights and stays lit. Then move to the next closest, etc. For complete appliance operating instructions, refer to pages 36-43, and for their B.T.U. ratings, refer to page 59.

Note: In some states it is illegal to leave the gas tanks turned on while towing a trailer.



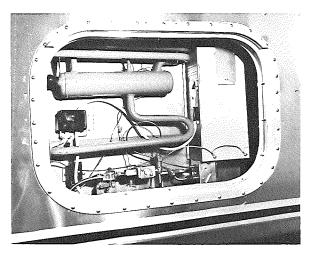
# REFRIGERATOR

Your Airstream is equipped with an A.G.A. approved Dometic gas-electric refrigerator. These are the finest refrigerators available for trailer use and will give you many years of faithful service.

For best operation of this refrigerator it is important to level your trailer. When parking try to avoid having a strong wind blowing directly against the vent outlet for most efficient operation.

For gas operation, the tap must always be fully opened whenever the refrigerator is in use. A partially opened tap effects no savings and may interfere with the operation of the unit.

Before the refrigerator is started on gas, open the outside access panel in the trailer behind the

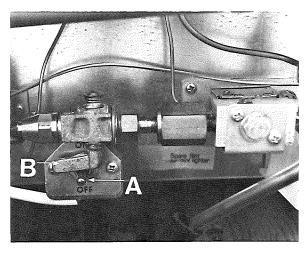


refrigerator and check that the electric switch lever (A) is in the OFF position and gas valve handle (B) is turned to the open position.

Outside access doors are opened by unlocking and turning the handle 1/4 turn counter-clockwise.

To light, open the refrigerator door. The controls are located inside the food compartment near the bottom of the unit.

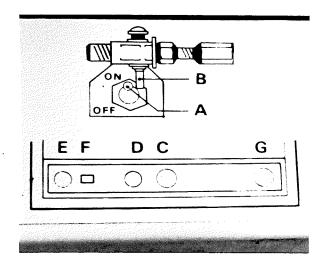
- 1. Turn the gas thermostat knob (C) to setting No. 4.
- Pull knob (D) of the automatic pilot and keep it out for 15 seconds. Then turn the flint knob (E) counterclockwise with a rapid movement. This will create a spark which lights the burner.
- 3. After the burner is lit, which can be seen through reflector window (F), keep the knob(D) pulled outward for an additional 15 second.
- 4. Release the knob (D) and check that the burner is operating.



If the burner is not operating, repeat the lighting procedure.

As soon as the required cold temperature inside the cabinet is reached, the thermostat cuts the burner main flame to the by-pass flame sufficient to keep the safety valve open during gas operation. During electric operation the thermostat cycles the flow of the electrical current to maintain the set temperature.

Your Dometic incorporates a unique, fully automatic defrosting device for the general food storage compartment, which eliminates the necessity for manual defrosting at frequent intervals normally associated with most conventional refrigerators in the medium size range. Furthermore, the time interval of each defrosting cycle, and the frequency, have been so arranged that during defrosting there is no noticeable effect upon the temperature of the foods stored in the refrigerator, and the frozen food storage conditions can be maintained at all times in the frozen



storage compartment.

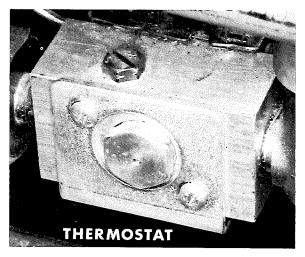
When cleaning, remove all food and clean the interior and all other plastic parts with warm water, and mild detergents. Never use abrasive or caustic cleaning powders, polishes, cleaning paste, gasoline, turpentine or other solvent type cleaners.

Use a damp cloth for cleaning and finish with a soft dry cloth.

When the refrigerator is to be out of operation for some time, always leave the door slightly open or place a pie tin of barbeque charcoal on the shelf.

The following are some trouble shooting tips for emergency use only. They relate to gas operation and should normally be done by the dealer.

Incorporated in the burner bracket is an automatic flame failure device which allows gas to pass only when the burner is lighted, keeping



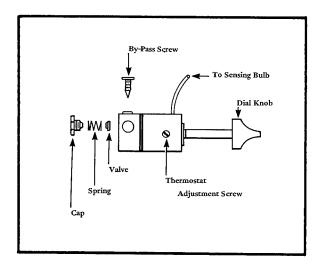
the thermocouple hot. Should the flame be blown out, the thermocouple will cool and the device will cut off the flow of gas to the burner.

For electric operation, follow these instructions:

- 1. To start the refrigerator, turn the gas valve (B) to the shut-off position.
- Check to be sure the electric cord is plugged into 110-volt outlet located on the refrigerator cabinet counter top. Turn the switch lever
   (A) which is accessible through the outside access panel to the ON position.
- 3. Turn the electric thermostat knob (G) to setting No. 4.

For best operation even during extended stays in parks your unit should be periodically run on gas.

The refrigerator has automatic thermostatic control of the temperature in the food storage space. The gas thermostat (C) controls the temperature during gas operation, while the electric thermostat (G) controls the temperature during



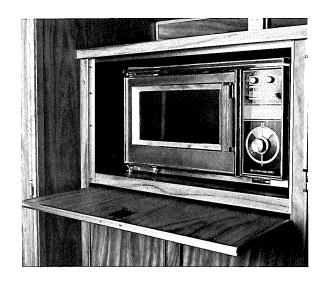
electric operation. Be sure to make the temperature setting on the correct thermostat.

Problem: Flame goes out. The thermostat is out of adjustment. To adjust it, turn the dial to "zero". If the flame does not go down to the "low" by-pass setting, follow this procedure:

- 1. Unscrew the large cap screw at the rear of the thermostat and remove the valve. Clean the seat and valve, and replace.
- 2. If procedure (1) does not correct the problem, adjust the set screw out (in counterclockwise direction) until the flame goes down to the "low" position.

If the flame keeps going out when the dial is turned to (O), remove and clean the by-pass screw which is located as shown in the photo.

Problem: Burner does not light. Remove and clean the burner barrel, and/or check the gas supply.



### MICRO WAVE OVEN

Your Excella is equipped with a portable Litton Industries, Atherton Division Micro Wave Oven.

Airstream dealers cannot service or make adjustments to the oven. This must be done by an authorized Litton Industries dealer. If you ever have problems with the oven check the local telephone directory for the nearest dealer.

The operation of your electronic oven is as simple as 1, 2, 3:

- 1. Press the ON/OFF button. This starts the cooling fan and cavity lights. Only 5 seconds are needed for warm-up.
- 2. Depress thumb latch on handle, open door and place food item inside. Set timer for desired setting. NOTE: The first half of the timer covers 4 minutes in short second increments. To set timer on a short time, e.g., 15 seconds, first turn

to 1 minute then back to 15 seconds.

3. Press the START button to begin the cooking process. NOTE: When you open the door, cooling will stop automatically until you close the door and re-press the START button. Your timer will maintain the proper time setting.

We recommend that you try one of the following to acquaint you with this exciting new idea in cooking:

- 1) Easy bacon! Place 3 strips of bacon over paper toweling on a paper plate. Cover with several paper towels (to prevent spatter). Cook for 2-1/2 minutes.
- 2) A quick apple! Wash and core apple. Fill center with a mixture of 1/2 tablespoon butter and 1 tablespoon brown sugar. Place in a large custard cup or dessert dish. Cover with wax paper and cook for 2 to 2-1/2 minutes.
- 3) Pouch of frozen vegetables! Place frozen pouch in oven. Cook (thaw) for 2 minutes. Puncture a small hole in the top of the bag (for steam to escape). Continue to cook for 2 minutes longer.

Please read your cooking guide carefully. It will help you learn about your new Litton Electronic Oven quickly.

#### IMPORTANT

# SAFETY, OPERATION AND MAINTENANCE INSTRUCTIONS

Your new Litton microwave oven has been carefully designed and thoroughly tested to meet exacting safety standards. However, it is important for you as a user to observe certain precautions and care in utilizing your Litton oven for

maximum performance and safety. The door on your oven has been carefully designed to contain the microwave energy; therefore, it is important that you observe the following:

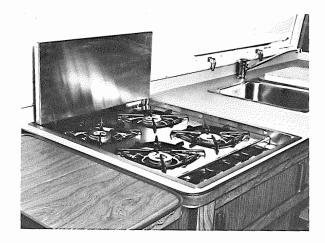
- 1. Do not operate the oven with any object closed between the door and the oven face.
- 2. Do not operate the oven if there has been any damage to the oven face or door including loose or broken hinges or latch, or if the door does not close firmly against the oven front.
- 3. Do not attempt to defeat the interlock switches. They are there for your protection. You will note that upon operating the door latch while the oven is in the cook cycle, the oven cook light will go out. If the light does not go out, the front interlock switch is not operating properly. In such case, do not operate the oven until the interlock switch has been repaired.
- 4. Remember that it requires considerable electrical power to operate the microwave oven (15 amps). Operation of other 120 volt appliances should be kept at a minimum when operating the oven.

The door enclosing the Micro Wave Oven can also be used as additional counter space.

#### Maintenance:

Your new oven requires very little maintenance except for cleanliness. Do not allow grease, soil or splatter to build up on the door seal to the oven cavity.

Litton maintains trained service technicians in all principal metropolitan areas. It is suggested that these authorized service agencies be utilized for proper repair and adjustment of your oven.



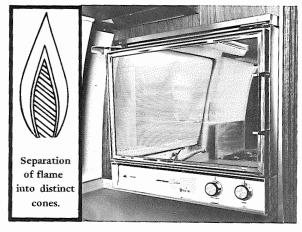
# RANGE/OVEN

Your Airstream is equipped with a Magic Chef gas range and oven. The following are some hints on how to keep them operating at their best.

The range is equipped with coaxial orifices for use with LPG. The flame will be approximately ½ inch long. Do not attempt to adjust gas to burner. The orifices have no adjustment.

Air shutters on top burners are to be adjusted so that each cone of the flame is separate and distinct and appears as illustrated in the figure on this page. Air shutters set too far open will cause the flame to lift away from the burner head and it will be difficult to light. If the air shutters are closed too much, the flame will look hazy and the distinct cones will be missing.

Problem: Flame lifts off ports—Too much air. Problem: Soot formations — Not enough air. Problem: Flame flashes back into air mixture chamber — Too much air in proportion to gas. Slightly decrease air.



Problem: Orange flame; caused by small filings in new burners or dust in air — Clean burners. Problem: Burner fails to light — Usually too much air.

Note: To adjust air-gas mixture, rotate the sleeve behind the burner control knob. Decrease air by closing the opening, and increase air by opening it.

Adjust the top pilot so that the tip of the flame is just over the edge of the inner cone. The burners should light within 4 seconds. If lighting is difficult, refer back to the previous step.

Never allow the top cover to be closed while the range is in operation, as this will extinguish the flame and permit gas to escape into the otrailer.

The range exhaust hood provides venting of cooking heat and smoke from the trailer. To operate, pull lever (A), on right hand side of hood, toward you. This will open the shutter and turn on the switch for the power fan. Clean

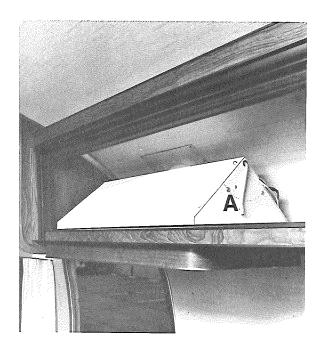


the filter regularly with warm water and detergent. To remove the filter, remove the two screws, that secure it to the housing, and let it drop out. Keep the vent housing clean from grease and dirt by frequent washing.

#### Note:

The range gas line shut-off valve (F) located under the top of the range at the right end of manifold pipe (G) must be turned off when towing the trailer, when changing the gas tanks, or if the gas supply is turned off for any reason. Be sure oven pilot light has been relighted as soon as range shut-off valve is turned on.

The thermostat on your oven does not have a by-pass setting. It will cycle off and on at all temperature settings except broil. No by-pass adjustment is necessary.



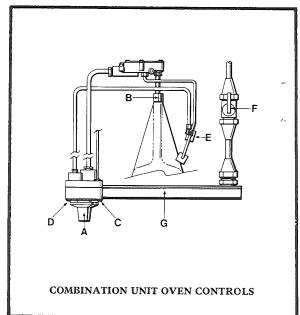
#### Oven Section:

The Thermostat Control Knob (A) is combined with the constant pilot shut-off. For normal use: turn only between "OFF" and "BROIL." When traveling, turn to "PILOT OFF." Relight only when you want to use the oven, by turning from "PILOT OFF" to "OFF" and lighting with a match.

The air shutter (B) on the main burner is to be adjusted so that each cone of flame is separate and distinct, as illustrated.

#### Constant Pilot Adjustment.

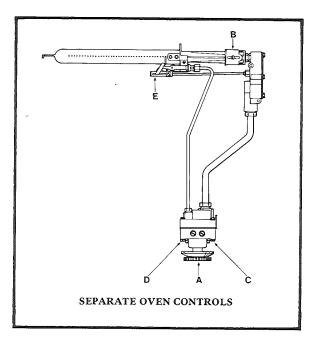
- 1. Remove Control Knob and Bezel (A).
- 2. Using a screwdriver, turn slotted red-colored Constant Pilot Selector (C) to LP position. When the slot is in the vertical position, the Selector Cartridge is in the "OFF" position.



#### Heater Pilot Adjustment.

- 1. Replace Control Knob and turn to the 300 degree setting on the Control Knob Dial. This opens the thermostatic valve in the thermostat and allows gas to flow through the Heater Pilot Tube to the Heater Pilot.
- 2. Remove the Control Knob.
- 3. Using a screwdriver, turn the slotted greencolored Heater Pilot Adjusting Cartridge (D) in either direction until the pilot flame just envelopes the Temperature Responsive Element (E).
- 4. Replace Bezel and Control Knob.
- 5. Make any air shutter adjustments for oven burner flames.

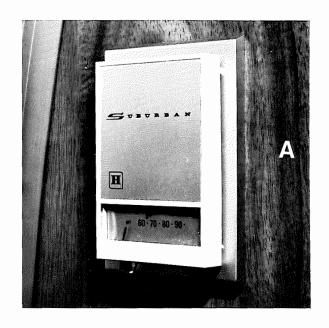
Important: Your oven is equipped with a safety ignition that requires a minimum of 30 seconds to operate after turning the oven control knob on. The oven pilot may be slow in lighting due

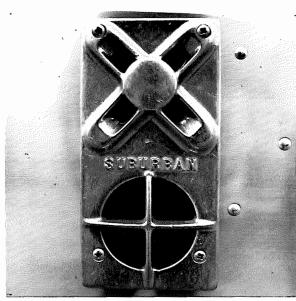


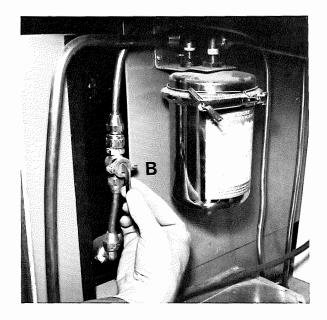
to air in the gas lines.

Cleaning instructions after range and oven are in use.

- 1. The main top has been hinged from the back so that it can be raised for cleaning around the top burners.
- 2. When cleaning the top burner heads, care should be taken that all ports are opened up with a toothpick afterwards.
- 3. Spill-over or spotting in the oven or broiler are more easily cleaned when removed promptly after they occur. Never wash porcelain when warm. Never use cleaning powder containing grit or acid. When oven bottom is replaced after cleaning and servicing, be sure that it is locked in place. The front return flange on the oven bottom must hook under the side support angles to prevent warping.







# bly. Check it often to make certain it does not become clogged.

## **HEATER**

The Airstream furnace is an American Gas Association approved Suburban unit designed specifically for travel trailers. It has a sealed combustion system with a dual blower for maximum air circulation. One blower circulates room air while the other draws in air for combustion. The adjustable louvered heat registers control warm air flow while cold air returns through the galley cabinet toe kick opening.

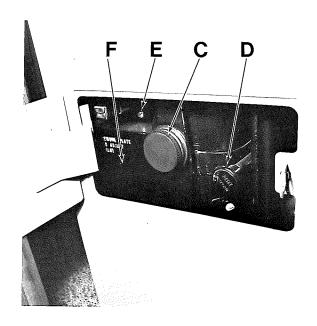
The heat duct system also circulates warm air around the holding tank, water tank, and one-stop-service center, a vital feature when operating in below freezing weather.

The Suburban heater is thermostatically controlled. When the thermostat calls for heat, the blower starts and only after it has reached nearly full speed will the burner light. After the

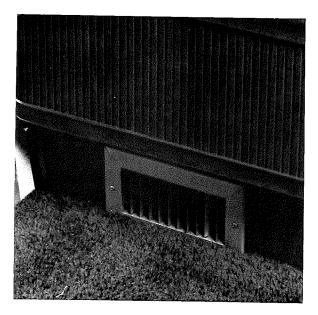
temperature set on the thermostat is reached the blower will continue to run for a short time removing most of the remaining heat from the heater, as well as forcing the combustion gases from the heat exchanger. To turn the heater off, turn the thermostat to its "OFF" setting and turn the manual gas valve to its "OFF" position (perpendicular to the gas line). Operating instructions are printed inside the furnace door.

Trouble-free operation of the Suburban heater will depend on your adherence to recommended operating procedures and precautions. Corrections of possible malfunctions presented here will be helpful in an emergency situation, but servicing should be done by a dealer. One note of caution regarding flue gases: they are vented from the furnace to the outside of the trailer through a vent in the outside wall. Do not in any way obstruct this vent by placing clothing or other flammable material on the vent assem-

The furnace may be lighted with the electromagnetic lighter or a match. Set the thermostat (A) to the "OFF" position, unlatch the furnace door, and open it. Turn on the manual gas valve (B) and remove the lighter hole cover (C); depress the reset button (D) and hold it in. Light the pilot by pressing quickly on the ignition button (E). After the pilot is lit, keep the reset button depressed for thirty seconds. Release the reset button and the pilot should remain lit. If the pilot goes out, repeat the above steps keeping the reset button depressed for a longer period of time. The pilot may not light immediately due to the presence of air in the gas line. It may be necessary to hold the reset button in for a minute or more before the pilot ignites. Replace the lighter hole cover (C) as soon as the pilot is lit and close the front access door and







set the thermostat. If the furnace has just gone out, turn the manual gas valve (B) off and wait 5 minutes before attempting to relight the pilot.

Differences in pressure between the room air and the outside air may cause a strong draft to come through the heater once the lighter hole cover is removed. Opening a window or the door on the same wall as the heater while lighting the pilot will prevent this from happening. Differences in inside and outside temperature will have no effect on heater operation once the lighter hole cover (C) has been replaced.

Adjustment of Main Burner (Primary Air): Set the heater into operation by advancing the thermostat and allow to run until it reaches nearmaximum operating temperature. Observe the main burners through the lighter hole cover (C). The flame should be without a trace of yellow and be "sitting" on the burner. As the heater

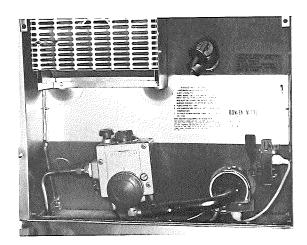
was tested at the factory before shipment, it may be found that the primary air is already in proper adjustment. However, adjustments may vary from one location to another due to differences in elevation and in characteristics of the fuel gases.

If the flame burns yellow or "lifts" off the burner, it needs adjustment. Take out the screws retaining the rectangular cover plate (F) and lift the plate off. Inside the opening is a threaded rod with the visible end slotted to receive a screwdriver. By turning the rod you will adjust the position of the main burner air shutter. This air shutter should be adjusted to the point where a slight trace of yellow remains in the tip of the flame. Replace the cover and check that the yellow tips have now disappeared. Caution: the lighter opening cover and the primary air adjustment cover plate must be in place for proper operation of the furnace.

The most common cause of heater failure is pilot outage, the inability of the pilot to stay lit unless the reset button is depressed. The trouble is usually in the thermocouple, which is located inside the cover plate near the pilot light. Check to see that the end of the thermocouple lead is screwed firmly into the safety pilot valve and that the joint is clean.

The furnace can be used to circulate air during hot weather by shutting off the gas valve and turning the thermostat up higher than the temperature in the trailer. Return the thermostat to the "OFF" setting whenever the heater is not in use.

When the humidity is high inside your trailer and you wish to remove moisture, open a roof vent and turn on a vent fan or open a window slightly for cross ventilation.

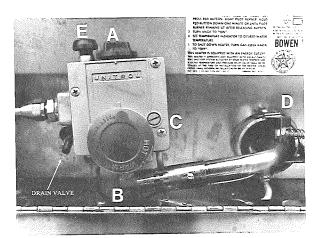


# WATER HEATER

The Bowen Gas Water Heater is equipped with a Robertshaw 100% shut-off safety valve which shuts off the gas supply if the pilot flame is extinguished or the water temperature becomes excessively hot. It is lighted and serviced from the outside through an access panel at the road-side, rear, of the trailer.

#### Procedure for lighting or relighting:

- 1. Be sure the water heater is filled with water. Open the hot water faucet at the sink and when the water flows, the heater is full.
- 2. Turn the gas cock knob (A) to the "OFF" position and the temperature indicator dial (B) to the lowest temperature position.
- 3. Wait sufficient length of time to allow gas, which may have accumulated in the burner compartment, to escape (approximately five minutes.)
- 4. Turn gas cock knob (A) to "PILOT."
- 5. Depress and hold the red reset knob (E) and push the lighter (D) in and turn until the pilot flame ignites. This may take several



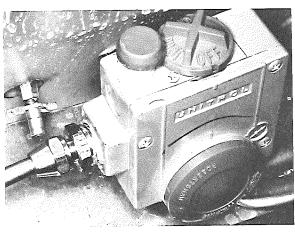
turns of the knob. Or you may light it with a match.

- 6. Keep the reset knob depressed for one-half minute after the pilot flame ignites.
- 7. Turn the gas cock knob to "ON."
- 8. Set the temperature indicator dial to the desired water temperature.
- 9. To shut down the water heater, turn the gas cock knob to the "OFF" position.

#### Pilot Flame Adjustment.

If the pilot flame does not have a small orange tip, the pilot is not getting enough gas. The flame should be about 1/4 inch in vertical height when the water in the tank is cold and the burner is off, 1/4 to 3/8 inch in horizontal length when the tank is warm.

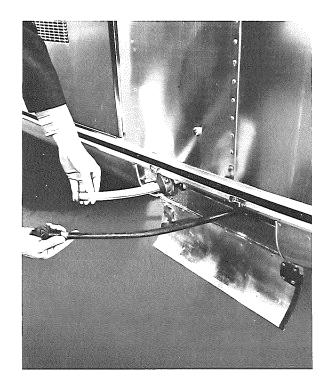
A large orange flame indicates excessive gas supply, which will result in short pilot life and early replacement. The pilot has been properly adjusted at the factory and should operate with a blue, orange tipped flame enveloping the pilot thermocouple. Removal of the pilot adjustment cap (C) in the lower right corner of the control

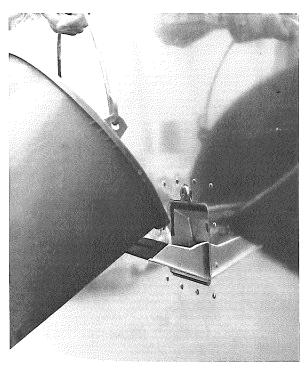


will reveal the pilot adjustment screw. Turning this screw clockwise reduces the flow of gas to the pilot (blue flame) and counter-clockwise, the gas supply will increase (orange flame). Always replace the Pilot Adjustment Cap to prevent gas leakage.

#### Air Shutter Adjustment.

All fuels depend upon air (oxygen) to give them proper burning characteristics. A yellow, smoking flame indicates a lack of air and a noisy hard blue flame indicates too much air. The air shutter slides back and forth along the burner tube and is held in place by a small shutter adjustment screw (D). Loosen the screw for adjustment. A good method of adjusting the air shutter is to slide the shutter to the right until yellow tipping occurs on the main burner flame (not the pilot) and then slowly slide the shutter to the left until all signs of yellow tipping are gone. When proper adjustment has been obtained, tighten the screw holding the air shutter. The outside access door must be kept firmly locked for proper operation.







## WATER SYSTEM

The Airstream Water System provides full service both when the trailer is self contained, or when city water is available. Water heater capacity is 10 U.S. gallons. The water tank stores 45 gallons of clean fresh water for all your needs.

When self contained, the Water Pump should be turned on. The switch is located on the Central Control Panel above the front roof locker of your Airstream. The Water Pump will run whenever a faucet is opened, and will shut off when the faucet is closed. It will deliver 3 gallons per minute under constant pressure.

Note: The Water Pump must be turned off when hooked up to city water supply and when

you leave your Airstream unattended.

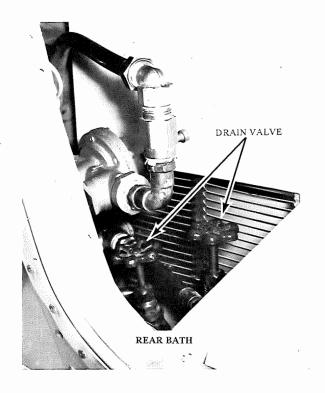
For city water supply connect the high pressure hose to the water supply connection at your camp site. Be sure the connection is secure, then open the valve. In addition, open a faucet on the inside of the trailer and allow water to flow until it is free of air. The water system will now be ready for use. If you are staying for some time where city water is available, drain the water storage tank. The drain valve is accessible through a hole in the floor below the galley sink. Access to this area is gained by opening the forward galley tambour door and sliding open the tambour door beside the furnace. Be sure to refill your tank with fresh water before departing. Your system has check valves in the water lines to protect the water tank while you

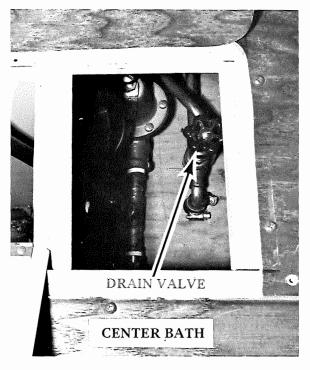
are connected to the city water supply.

The water tank is located under the floor just forward of the axle. To fill the water storage tank, open the filler spout (see photo) on the exterior wall adjacent to the galley, and fill with a hose or a bucket, until the water supply pipe is overflowing. Close and lock the spout and the water system is ready for use.

To clean the tank, pour some bicarbonate of soda into the filler spout with several gallons of water and allow to stand for a minimum of four hours. Then flush the tank out by opening the drain valve and running fresh water through it.

The pump and water screen are under the Galley







Sink. The screen should be cleaned periodically to prevent accumulation of dirt and sand. To remove the water screen, disconnect the rubber hoses from both ends, separate the screen housing, and lift the screen out of the housing.

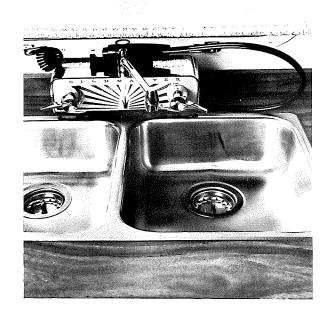
The Water Pressure Regulator is on the roadside of the rear trunk in rear bath models, & below the bed in center bath models. It protects the plumbing inside your trailer, regardless of the variation in city water pressures. The pressure at the faucet is kept constant.

The Everpure EN-1 Water Purifier is located under the galley sink. It will remove all dirt and colloidal matter, and eliminate most chlorine, phenol and similar odors and tastes while delivering sparkling tastefree water for drinking

and cooking. The filter is connected to the cold water line only. The purifier is not guaranteed to remove the tastes and odors of iron and sulphur. To remove these tastes, chlorinate the water supply. Super chlorination will precipitate dissolved iron, and the purifier will then remove the formed chlorine salts. To purify any questionable water add 1/6 oz. of chlorine (ordinary household bleach) per 10 gallons of water to the water tank. 5/6 oz. for a 45 gallon tank. We recommend the use of tablets available at Wally Byam Stores. The quality of the water never varies even at the end of the filter pack life, however as the minute pores slowly fill up with impurities, this will gradually reduce the rate of flow until it is necessary to change the filter. Instructions are in each box, and we advise buying two at a time, always keeping one in reserve.

The Telephone Shower Head is designed to give maximum flexibility of usage and to conserve water. When using the shower Head, it should be held in the hand and moved about the body. Normally the best water conservation procedure is to wet the entire body and then turn the water off. Apply soap, lather thoroughly, then rinse the soap off.

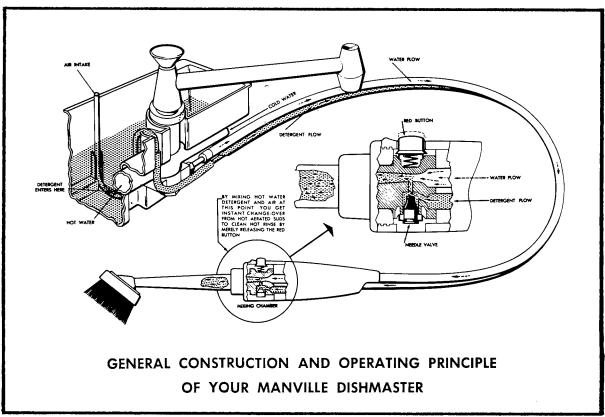
The Excella shower has an automatic temperature control device that will maintain constant temperature even when hot water is being used elsewhere in the trailer. It can be turned on and off without disturbing this adjustment, and is also used to fill the tub for taking a bath.



Your Manville Dishmaster is designed to use detergents only. Do not use soaps or soap powders. Always use a liquid detergent and use only one tablespoonful to a tank of water:

Your Dishmaster has a double hose which carries hot water and detergent to an all nylon Brush with a push button control providing clean hot suds and clean hot rinse for every dish.

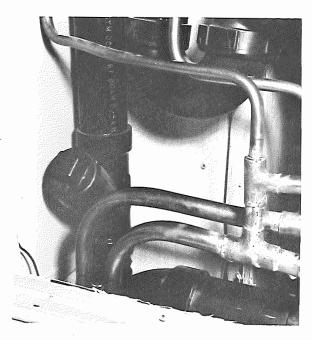
1. Remove the Tank Lid and pour one tablespoonful of LIQUID DETERGENT\* into the Detergent Tank, then finish filling the Detergent Tank with warm water. \*Any name brand liquid detergent will work.



- 2. Turn on the hot and cold water valves to get the water flow and temperature desired from the spout.
- 3. Pick up the Dishwashing Handle and pull up on the Black Knob on the Spout to direct the Water through the Brush.
- 4. Direct the water spray onto your dishes and press the Red Button for suds, release the Red Button for clear hot rinse.
- 5. When finished washing dishes, turn off your faucet valves and replace the Dishwashing Handle into its holder in back of the spout. The

Holder is spring loaded to hold the Brush Handle in place. The Taper Tube will snap in or out of the Holder with little effort. See diagram above for correct position of Spray Handle and Brush. Note-that the Black Knob on top of the Spout automatically drops down when the water is shut off, thus returning your DISHWASHER to a regular water faucet.

6. When traveling, be sure the detergent tank is empty.

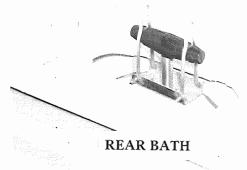


# DRAIN/WASTE/ VENT SYSTEMS

Your Airstream has a drain and waste system similar to the one in your home. The system includes a waste holding tank made from molded plastic, free from corrosion problems, with a trouble free dump valve. This tank enables you to use the toilet for several days away from disposal facilities. The waste water from the sink, shower, bath and lavatory bypasses the holding tank, yet drains through the same outlet as the waste; therefore you need to make only one connection when hooking up in a trailer park with sewer facilities.

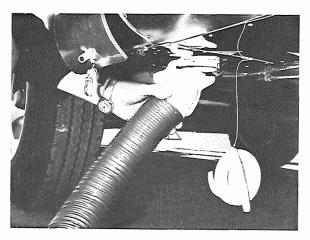
On rear bath models, a convenient fitting for flushing the holding tank (see photo) is on the roadside of the rear trunk compartment. Re-

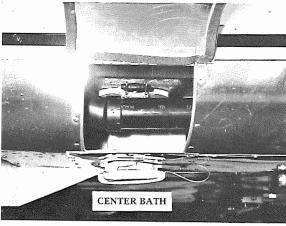




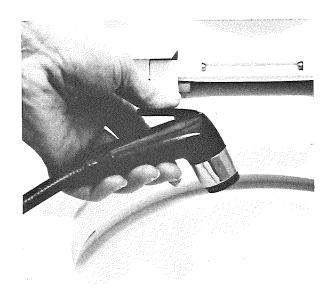
place the plug after using the fitting. The sewer hose is stored in the rear bumper compartment. Rinse out the sewer line before storing.

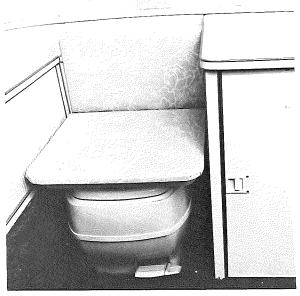
When the toilet will no longer drain, the tank is full and must be emptied. Watch this closely, because when the tank is full, sewage cannot be emptied from the toilet bowl. In models with a central control panel, watch the tank level indicator. To empty the tank, attach the sewer hose by pressing the bayonet fitting onto the dump valve outlet and rotate clockwise until it feels solid and secure. Attach the outlet end of

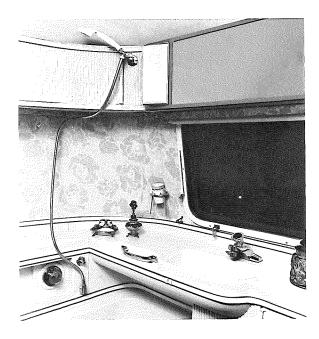




the hose to the sewage outlet, making sure that the hose is placed so that it will drain completely. The dump valve has two wire loops that lock the handle in the closed position. To unlock push outward on the wire loops and they will snap loose, permitting you to open the valve. Pull up the dump valve handle as far as it will go and wait until the tank is drained. Close the dump valve and using the flushing fitting, refill the tank with 5 to 10 gallons of clean water and repeat the operation until all paper and waste material is flushed out. The capacity of the holding tank is 16 gallons.







The Aqua Magic toilet employs a new principle: a sliding self cleaning positive seal blade. Odors cannot escape from the holding tank into the trailer. The unit uses less than 2 quarts of water for automatic flush. A special feature is the second pedal attached to the main foot pedal which, when pressed by itself, allows fresh water through either the fill rim or hand spray without opening the slide valve.

When conserving water, use the hand spray in the following way:

- 1. Hold the hand spray in ready position over bowl.
- 2. Depress thumb button, and step on the foot pedal, which sprays water and dumps the contents at the same time.
- 3. Spray bowl clean.

- 4. Release foot pedal, shutting off water flow.
- 5. If you wish to refill bowl with water for next use, depress small foot pedal till water reaches desired level.

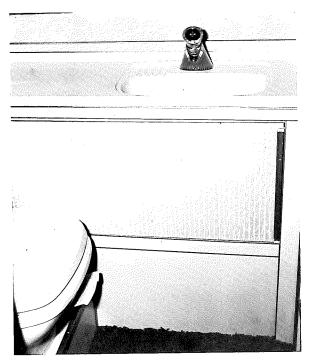
#### When using automatic flush:

- 1. Step on main foot pedal, and this will automatically open the slide valve and drop the waste into holding tank.
- 2. Hold pedal down until water begins to swirl. This fills rim storage and rinses the bowl.
- 3. Release the foot pedal. This will close the valve blade and stop fresh water from flowing. The bowl will refill automatically.

If you are certain to empty your holding tank every few days, you can use the toilet on automatic flush. It uses very little water and the tank will provide for the requirements of two adults from 2 to 4 days.

Whenever water is scarce, the hand spray flush makes it possible to stay a week or longer in areas where you cannot empty the holding tank. In flushing for urine only, first, wet the bowl with fresh water, and again after use. Starting with a dry bowl takes more water for the final rinse. To flush for urine and solid matter: spray just enough water in the dry bowl to provide for floating the paper and solids. After use, rinse down the sides with the hand spray and empty the bowl. Hold the slide valve open and spray and rinse the lower surfaces. Even if it appears clean, quickly spray it one more time, then release the pedal and it is ready for the next use.

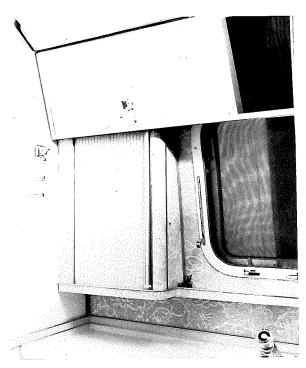
When connected to a sewer outlet keep the holding tank dump valve closed and empty the tank every few days or whenever it becomes almost



full. Only by sending a large volume of liquid through the holding tank at a time will toilet paper and other solids completely wash away. This practice will avoid the accumulation of solids in the holding tank which could lead to an unpleasant cleaning job. Should solids accumulate and close the dump valve, fill the tank about half full with water then tow the trailer for a few miles. The turbulence and surging of the water will usually dissolve the solids into suspension so the tank can be drained.

There are certain items that should never be put into the toilet or tank. Facial and other similar tissues: because they have wet strength and do not dissolve easily. Toilet paper, especially white, dissolves well after a period of traveling.

Detergents and bleaches should not be used as

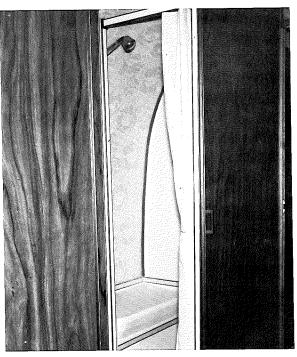


deodorizers because they may damage your tank.

Use a trailer sewage tank deodorizer instead. Antifreeze, Ammonias, Alcohols and Acetones may cause damage to the tank, valve parts, tank fittings, and drain hose. For protection against freezing, use recommended fluids (See Winterizing, pg. 22).

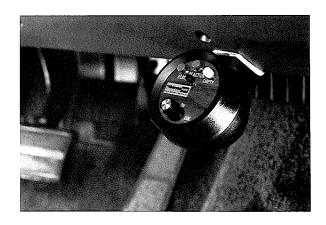
Dishwater and Washwater, as they contain detergents which attack the system, should not be dumped into the tank. Some state and federal parks prohibit draining sinks and bathwater into the ground, though this is done in the wilderness. We suggest you use a pail under the drain outlet and discard the water in a public bathroom.

Although we do not recommend the following practice for reasons stated above, in an emer-



gency or unusual parking situation, you may empty waste water from the sink and lavatory into the waste holding tank instead of allowing it to drain onto the ground. To empty waste water into the waste holding tank, open the dump valve while keeping the sewage line drain cap on. Waste water will automatically back up into the tank. Note: Water conservation must be practiced as the holding tank will fill rapidly.

To drain the holding tank after draining waste water into it, place a bucket under drain outlet, close the tank dump valve and carefully remove the drain outlet cover cap. This will drain the section of pipe between the cap and the valve and any adjacent drainage lines that might have filled with waste water. Next, drain the holding tank following the instructions at the beginning of this chapter.

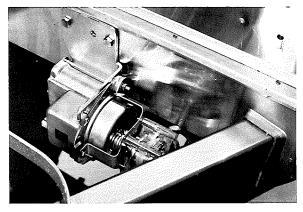


# **THERMASAN**

No longer is it necessary for you to interrupt your leisure travel by making stops to empty your holding tank. When your Airstream is Thermasan equipped, you need only turn a switch to automatically dispose of your toilet wastes in a pollution free manner.

Your Thermasan is a model BLT-200 and has an OFF-ON switch that also acts as a dimmer control for three signal lights: The green READY light indicates that the system is on. The red REACTION light shows when the pump is moving wastes through the connecting lines towards the hot exhaust. The white EMPTY bulb will light when the holding tank is empty, indicating that you should turn your Thermasan to the OFF position.

You can turn on your Thermasan anytime you are pulling your trailer, however it will actively destroy wastes only when the exhaust temperature and speed of your vehicle are proper for combustion. You may test your Thermasan to see if it is moving wastes anytime you desire by



pushing the small black button located beneath the three operation lights. Press the button and hold it in a few seconds to see if the red and green lights are slowly flashing. The slow flashing indicates that the pump is operating properly. If the lights do not flash check your electrical disconnect coupling at the trailer hitch.

The control, sensing and incinerating portions of your Thermasan are located in your car. The Metering Injection Pump, Holding Tank Sensor and Holding Tank Evacuation Probe are installed in your Trailer. The car and Trailer components are connected by electrical and fluid quick disconnect couplings. Each time you hitch or unhitch remember to insert or remove the Thermasan connections. The fluid coupling is disconnected by pushing the slip ring towards the trailer and removing the trailer portion.

#### How the Thermasan Works

When you switch your Thermasan control to the "ON" position as you travel down the highway, the green light will glow indicating that the system is READY.

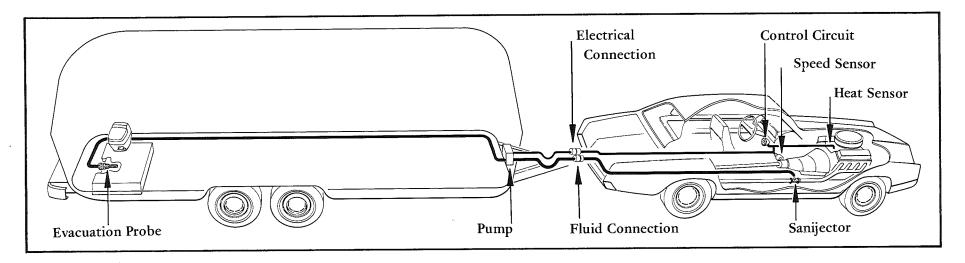


As the speed of your vehicle reaches thirty plus miles per hour, the specially designed Speed Sensor in line between the transmission and speedometer sends a message to the Control Circuit.

Simultaneously, the Thermasan Heat Sensor is detecting the adequate BTU flow in the engine exhaust. When a super-heated condition is reached that will annihilate the bacteria, and disintegrate the solids into micron sizes, this message is transmitted to the control circuit.

When both heat and speed conditions are met, the Metering Injection Pump is actuated to withdraw the wastes from the holding tank and transfer it through connection system into the exhaust system. At this point, the red REACTION Light signals the driver that wastes are moving through the lines and being destroyed.

The Holding Tank Evacuation Probe is a selfcleaning, non-clogging screen that removes the waste suspension that has been created by holding tank agitation and bio-chemical reaction.



The line flow is governed by the pump to assure just the right positive displacement rate to allow complete waste destruction.

Wastes are introduced into the high volume stream of heat energy in the engine exhaust through the stainless-steel Thermasan Sanijector — which is affixed to the exhaust pipe at its hottest point. The Sanijector will not affect engine back pressure or life of the exhaust system and insures complete waste dispersion for instant conversion into a bacteria-free, invisible, harmless emission that complies with Federal Register, Volume 33, No. 108, Par. 2 and National Sanitation Foundation Standard No. 24.

When on a vacation or trip, we recommend operating the unit some each day. This way you can keep ahead and have reserve tank space available for periods when you wish to stop for a few days.

Holding tanks are not easily cleaned. For this reason we recommend that napkins, kleenex, or

other "wet strength" articles be kept from your holding tank. Furthermore, in the interest of safety, do not put kerosene, fuel oil, or alcohol in your holding tank. The recommendations for use of your Water and Drain/Waste systems on pages 40 through 44 will assure trouble free Thermasan use.

Occasional draining of your holding tank by conventional sewer hookup is recommended. This should be done at least annually to remove any foreign particles or other insoluble matter.

Frozen waste lines or a frozen holding tank will inhibit the system's ability to destroy waste. You may overcome this by using an RV holding tank anti-freeze (Glycol base). Do not use Kerosene.

#### Chemical Treatment:

Your Thermasan BLT 200 was designed to burn two gallons of wastes per hour, or two persons' waste per day in one hour. With a Thermasan Waste Destruction System installed on your Airstream you can make more liberal use of water for flushing. If more water is mixed with wastes there is less possibility of exhaust odors. The **Thermasan chemical** included with your installation is supplimentary and compatible with other holding tank concentrates used to control bacteria and odors in the holding tank. If you detect strong exhaust odors it does not mean that the Thermasan is operating improperly. Exhaust odors merely indicate that chemical treatment is required.

#### Recommended Treatment is:

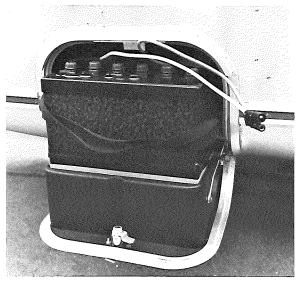
- 1. Pour one bottle of Thermasan chemical (available at Wally Byam Stores) into the empty holding tank before use through the open sliding blade in the base of the toilet bowl.
- 2. Add one third of a bottle after every three or four days of toilet operation.
- 3. If there are contents in the holding tank before using the chemical start treatment by adding one full bottle.





A normal battery will discharge by itself in 30 to 45 days, therefore, it is necessary to periodically check the battery and charge it as is necessary. We suggest checking the battery at least every two weeks in freezing weather. A fully charged battery will not freeze under any normal circumstances, therefore, it is imperative that you keep your battery charged during the winter. A safe level of charge is a specific gravity reading of 1.225. A fully charged battery has a specific gravity of 1.250 to 1.280. Always use a hydrometer which has a temperature correction scale.

Maintain a clean battery top and check terminals and cables for tightness and cleanliness. A dirty battery will dissipate its charge through surface contamination. Clean battery top with a damp cloth, and dry thoroughly. The terminals should be tight and free of corrosion. To clean terminals, neutralize with a solution of baking



soda, rinse in clear water, and dry. Prior to reinstalling, coat terminals and battery posts with a light film of non-metallic grease. Petroleum jelly will do as an alternate, but will require more frequent application. Important; reconnect the battery cables to the correct battery posts. For example, if negative ground, the black cable should be connected to the negative (—) post and the red cable to the (+) post. The polarity may be determined by inspecting the battery post which is grounded on the tow vehicle, since it must always match the trailer. For example, if negative pole of the tow vehicle is grounded, the polarity of the trailer battery is negative ground.

Add water to cells as necessary. Check the electrolyte level at least once a month. When you are traveling steadily and for an extended period of time, or you are in climates above 90°F check the electrolyte level every two weeks.

Caution: The gases generated within a storage



battery cell may be ignited by an open flame or spark in the vicinity of the battery. Do not use a match to provide light for checking the level of water.

During the winter the battery should be removed from the Airstream and stored in a cool, dry place, kept full of water, cleaned and charged monthly. A battery which is allowed to completely lose its charge will never regain its original power, or a full charge.

On rear bath models the battery is located in a rear curbside compartment. On center bath models it is located in a front curbside compartment. The battery slides out onto the opened door for service. For battery service or replacement, go to any service station or dealer who sells and services this battery. The battery is rated for 100 amp. hrs. at 80° F and has a 24 month prorated warranty.

# ELECTRICAL SYSTEM

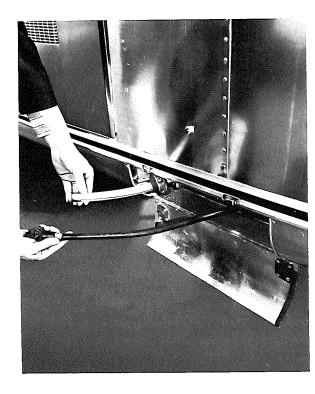
The exclusive Airstream Univolt System enables you to use the lights and appliances whether operating on self-contained battery power or hooked up to 120 volt city power. This combination unit is designed for protection from damage up to and including a dead short. The 12 volt light bulbs give off the same light as regular household bulbs, so that when operating on self-contained battery power, everything works normally except the 120 volt convenience outlets and electrical operation of the refrigerator.

Convenience Outlets for 120 volts and 12 volts are located throughout the interior of the unit (see page 55).

Outside Outlet for 120 V is located in the curbside storage compartment.

When operating with city power, make very certain that the service is 120 volt and not 220 volt. Roll out the power cord from the automatic reel to the desired length and plug it into the city power source.

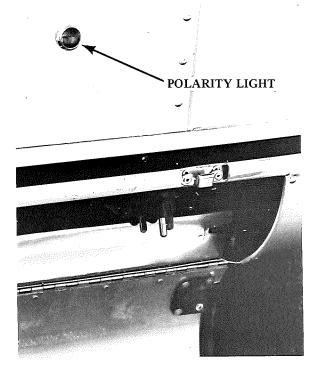
The univolt system has a new transformer designed to maintain constant output voltages regardless of the variances that occur in city pow-



er systems. The transformer design eliminates the need for complex electronic sensing systems to charge the battery, minimizing the possibility of failures and greatly increasing its overall reliability.

When the three pronged plug can be used, there will be no problem with proper polarity or grounding. In some older parks and other locations where three pronged outlets are not available, take certain precautions to insure proper grounding and polarity:

- ^ 1. Attach the three pronged plug to a two prong adapter. The third conductor line of this adapter has a short wire lead which is the ground line.
  - 2. If possible, clamp the ground line to the junction box or to a water pipe, and then in-

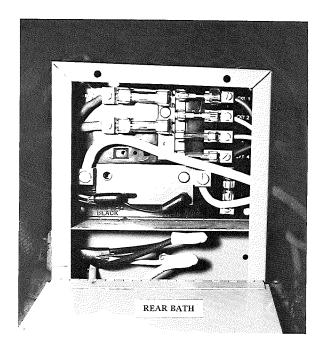


sert the two prong plug into the receptacle.

3. Check the polarity light in the water heater compartment. If it is on, pull out the plug, turn it over and reinsert. The light will now be out.

When no water pipe is available, experienced trailering people will drive a metal rod two feet into the ground and attach the ground lug to it thus providing the unit with proper grounding.

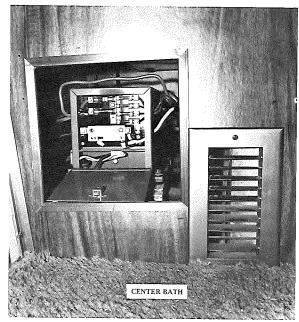
The polarity warning light indicates improper polarity and it should be off when the power supply cable is used with a two pronged adapter. It may occasionally glow when the three wire system is in use, but your trailer is properly grounded, and in this case you may ignore the light.



To operate self-contained, simply disconnect the power supply cable from the city power receptacle. Store the supply cable in the hose storage compartment.

When your Airstream is hooked up to 120 volt A.C. the Univolt System automatically charges the trailer battery and, if it is hooked up, your automobile battery as well. The speed and degree of charge depends on how much power is used for lights and appliances, as only the surplus goes to charging the battery. (Please refer to the specifications section for more information on power consumption.) If you are making an extended stay or storing your Airstream, then you should (if it is available) keep your trailer hooked up to 120 volt current.

Whenever possible, use the automatic built-in charger of the Univolt System for charging. The



charging circuit automatically controls the current, reducing it as the battery increases in charge. At service stations, make certain they give your battery a slow charge because quick charges will drastically shorten the life of the battery as will allowing repeated complete discharges.

The Univolt is located at the rear curb side interior next to the bathtub in rear bath models and is accessible through the rear wardrobe or through the bedroom partition under the bed, depending upon the particular model.

In center bath models the Univolt is located under the galley and is accessible through a door attached to the magazine rack.

On rear bath models the 120 volt circuit breaker panel is in the rear roadside wardrobe. On center

bath models it is located under the bathroom lavatory top.

In the event of failure of a 120 volt circuit, check your circuit breaker first. While you are connected to the 120 volt receptacle, the wiring is protected by circuit breakers in the breaker panel. If a breaker continues to trip after you have reset it several times, your circuit may be overloaded with appliances or there may be a short in the circuit. If lessening the load does not solve the problem consult an Airstream Service Center or the factory.

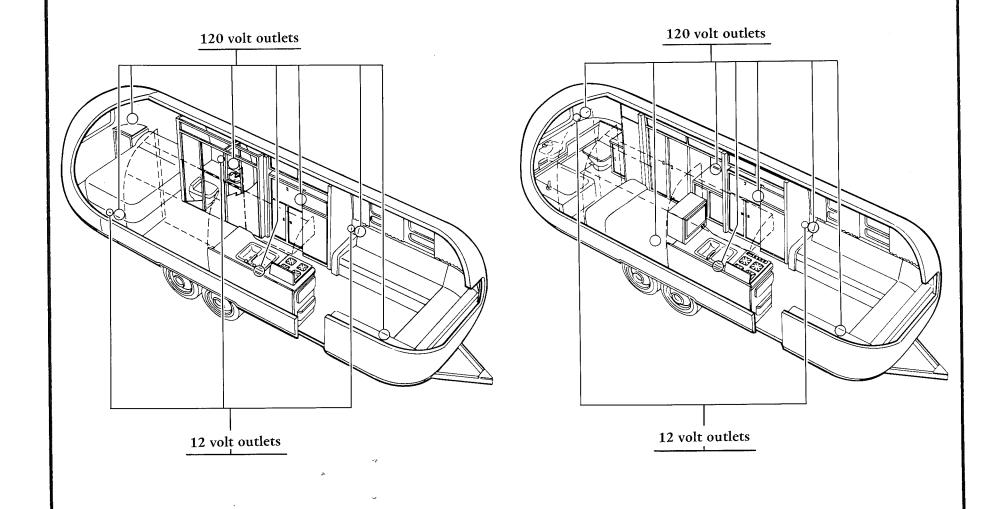
The Univolt System and the Central Control Panel are provided with a series of fuses (see illustrations) for the safety of you and your unit. Trouble with the electrical system is extremely unlikely, but if it should occur we recommend that you contact your nearest Certified Service Center for repairs. We have included a trouble shooting chart to be used in emergencies only.

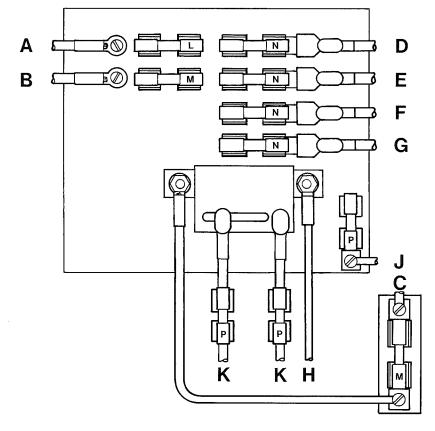
Details of electric motor amperage, light bulb size, and fuse and circuit breaker locations are shown on the chart in the specifications section on page 58.

When being towed, the 12 volt battery in your Airstream is receiving a constant charge from the car's generator and alternator through the Seven Way Connector. The charge rate is controlled by your automobile's voltage regulator. It is important to keep the seven way connector clean: one method is to use "Spra-Kleen."

#### CENTER BATH MODELS

#### REAR BATH MODELS





#### LOW VOLTAGE DISTRIBUTION PANEL

A – Car Battery (pos) &

H – Negative Load

Circuit #5

J - Power-On-Light

B - Trailer Battery + (pos)

K – Ammeter

C – Trailer Battery –(neg)

L - AGU 40 - amp - Fuse

D - Circuit #1

M - AGU 50 - amp - Fuse

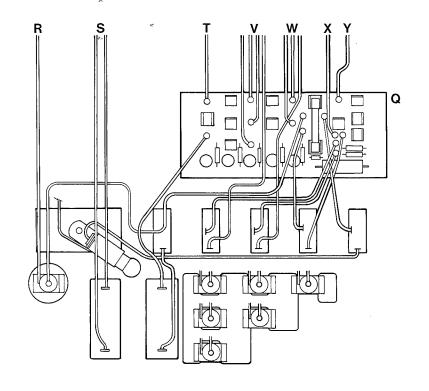
E - Circuit #2

N - SFE 20 - amp - Fuse

F - Circuit #3

P - SFE 4 - amp - Fuse

G - Circuit #4



#### CENTRAL CONTROL PANEL

Q - Printed Circuit Board

R - Power-On

S - Ammeter Shunt

T - 12 V - (neg)

V — Water Tank Probe

W — Holding Tank Probe

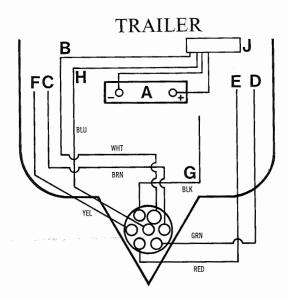
X — Water Pump

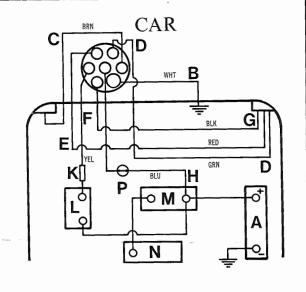
Y - 12 V + (pos)

#### TRAILER-CAR CONNECTOR

A — Battery B — Ground C — Right Turn & Stop D — Running Lights E — Left Turn & Stop F — Brake G — Backup Lights H — Charge Line J — Univolt K — Resistor L — Brake Controller M — Voltage Regulator N — Generator P — Fuse or Circuit Breaker

Note: Polarity of trailer battery must match polarity of car battery. e.g. If negative pole of car battery is grounded, negative pole of trailer battery must be grounded.





#### SYMPTOM

No 12-volt power (Lights, appliances do not work)

Blown fuse

Dim lights or sluggish fan motor

UNIVOLT will not charge battery

Specific gravity of battery is too high (over 1.275)

#### POSSIBLE CAUSE

- Input line and/or battery not connected
- 2. Trailer battery on wrong polarity
- 3. Overloaded circuit (over 50 amps)
- 4. Electrical short
- 5. Shorted battery
- Battery terminals not properly connected to UNIVOLT + and – terminals
- 7. 25- or 50-cycle power (some foreign countries)
- 8. Discharged battery (when operating without 120-volt line)
- 9. Input line not connected
- 10. Battery not connected (or polarity reversed)
- 11. Bad battery
- 12. Too many lights and appliances in use
- 13. Fuse blown
- 14. Battery is low on water

#### REMEDY

- 1. Make necessary connections
- 2. See items 3, 4, 5, and 6
- 3. Turn off switches to reduce load Replace blown fuse in Univolt or next to Univolt
- Find blown fuse in Univolt
   and identify circuit
   From wiring diagrams check the
   circuit for defective wiring, lamps or motors
- 5. Replace battery and fuse
- 6. Make proper connections; replace fuse
- 7. Use 60-cycle power
- 8. Charge battery
- 9. Connect input line
- 10. Connect battery to UNIVOLT
- 11. Replace battery
- 12. Reduce electrical load
- 13. Replace Fuse
- 14. Add distilled water to battery

# **SPECIFICATIONS**

LIGHT & APPLIANCE AMPERAGES			Central Control Panel	Main Cen. Ctrl. Pnl	. AGC 15 amp fuse
ITEM		AMPERAGE	Stereo Tape	Cen. Ctrl. Pnl.	SFE 9 amp fuse
CONTROL PANEL LIGHT		.1	Radio	Cen. Ctrl. Pnl.	IAG 5 amp fuse
WATER PUMP		9.9 max.	*		•
CEILING FAN		4.8	LIGHT BULB REPLACEMENT		
BATHROOM EXHAUST FAN		2.0	LOCATION		LAMP NUMBER
RANGE EXHAUST FAN		2.0	Reading Lights (living room)		1383
FURNACE FAN		4.5	Reading Lights (bedroom)		1141
TOILET EXHAUST FAN		2.0	Galley & Vanity Lights		1141
READING LIGHTS: Living Room, Bedroom		1.6 each bulb	Ceiling Lights		1141F
MAIN DOOR LIGHT		1.6	Central Control Panel Light		53X
CEILING LIGHT (6 Bulbs):			Door Light		1141
Living Room, Galley, Bedroom, Bathroom		1.6 each bulb	Service Center & Trunk Lights		57X
GALLEY LIGHTS Under Roof Locker		1.6 each bulb	Clearance & Cluster Lights		1895
TRUNK LIGHTS: Service Center, Trunk		.2 each bulb	Stop & Turn Signal		1034
MICRO WAVE OVEN		15.0	License Plate Light		89
			Backup Lights		1073
FUSES & CIRCUIT BREAKERS			Fluorescent Lights (living room) Roadside F72T12CW		
CIRCUIT	LOCATION	RATING		Curbside	F36T12CW
Air Conditioner &	120 volt panel	20 amp C.B.			
General Circuit		(man. resetting)			
Charge line from Car	Univolt	AGU 40 amp fuse	CAPACITIES		
Low Voltage Circuits	Univolt	SFE 20 amp fuse	APPLIANCE		CAPACITY
Trailer Battery Fuse (+)	Univolt	AGU 50 amp fuse	Waste Holding Tank	(Rear Bath)	17 gal.
Trailer Battery Fuse (-)	Nxt. to Univolt	AGU 50 amp fuse	Waste Holding Tank	(Center Bath)	16 gal.
Power On Circuit	Univolt	SFE 4 amp fuse	Water Tank		45 gal.
Ammeter	Nxt. to Univolt	SFE 4 amp fuse	Water Heater		10 gal.
Stereo/Radio Fader	Cen. Ctrl. Pnl.	IAG 5 amp fuse	Battery		100 amp hrs. at 80° F.

	B.T.U. RATINGS		Roof Vent Elevator Screws	Lubricate with light household oil.	
APPLIANCE		B.T.U.	All Exterior Door	Lubricate by shooting in dry	
Furnace		30,000	Locks	graphite.	
Oven (only)	Rear Bath Models	12,000	Strike pocket on Main	Coat with paraffin.	
Range Top (only)	Rear Bath Models	28,000	Door		
Range - Oven	Center Bath Models	23,600	Tires	Check for foreign objects. Check air pressure.	
Refrigerator		1,345			
Water Heater	12,600 Every 5,000		5,000		
				miles or 90 days	
•			7-way Plugs & Receptacle	Clean contacts and coat with "SPRA-KLEEN."	
			Water Pump	Check belt for wear and proper tension.	
LUBRICATION & MAINTENANCE			Wheel Lug Nuts *	Check for tightness.	
			Retracting Step	Lubricate moving parts.	
ITEM	Every 1,000 miles or 30 days	PROCEDURE	Window Seals/Door Seals	Clean with mild detergent & coat with "Slipicone."	
Battery	Check water level — fill with distilled water only.			Every 10,000 miles or 6 months	
Smoke Hood	Clean fan blades and wash filter.				
Hitch Ball Latch	Latch Lubricate with engine motor oil.		Wheel Bearings	Clean, repack, and adjust.	
Hitch Jack	Lubricate with light household oil (put oil can spout up under handle		Brakes	Inspect and adjust.	
THE SUCK			*NOTE: On new trailers check lug nuts every 200 miles for the		

and allow oil to run down post).

Lubricate with light household oil.

Lubricate with light household oil.

Note: If and when new materials and production techniques are developed which can improve the quality of its product, Airstream, reserves the right to make such changes.

first 1,000 miles.

LPG Hold Down Knob

Entrance Door Hinge

# PRE-TRAVEL CHECK LIST

# ■ INTERIOR ☐ Turn off water pump switch. ☐ Check battery water level. ☐ Close windows and vents. ☐ Turn off Gas to Range & Oven. ☐ Lock oven door. Lock all interior cabinet doors. ☐ Lock refrigerator door. (Seal containers first.) ☐ Hold down or stack securely all loose, hard and sharp objects. ☐ Fasten sliding & foldette doors. □ Drain toilet bowl. ☐ Turn off interior lights. ☐ Secure & Lock the Main Door. ☐ Pull up step.

#### **EXTERIOR**

☐ Disconnect:					
a) electrical hook-up cord.					
b) sewer-hose hook-up hose. (flush out and stow)					
c) water hook-up hose.					
$\square$ Turn off gas line shut-off valve to appliances.					
☐ Retract B.A.L. Stabilizing Jacks and stow wheel chocks.					
☐ Check hitch: it must be properly attached.					
☐ Check safety chains and breakaway switch cable.					
☐ Fully retract jack. Remove and stow dolly wheel.					
☐ Check clearance and stop lights.					
☐ Check lug nuts.					
☐ Check tires: 55-60 p.s.i. for 7:00x15 6 Ply					
☐ Check that TV antenna is pointed forward & dipoles	closed.				
☐ Adjust car mirrors.					
☐ Pull forward some 50 ft., test brakes, and check si forgotten objects and cleanliness.	te for				

#### Display car and trailer registration properly. ☐ Leave key with your neighbor. ☐ Store valuables and important papers in a safe place. Carry drivers license. In Canada you will need a non-resident Discontinue newspaper, milk and other deliveries. liability insurance card. Ask the Post Office to hold your mail for you. ☐ In Mexico you must have special auto insurance. ☐ Arrange with the Telephone Company for discontinued or 'Vacation Service'. ☐ Carry an extra set of ignition and trunk keys in a separate ☐ Arrange care for your pets. pocket, or in your wallet. ☐ Have your lawn, garden and house plants cared for. Keep an operating flashlight with fresh batteries in the Lock all windows and doors securely. Keep shades glove compartment. open for a lived-in look. Cover all food to keep out mice and insects. Pack the trunk so that you can reach the tools and spare tire ☐ Eliminate all fire hazards. Place matches in a tin box without completely unpacking. or glass jar. ☐ Keep sharp or hard articles securely packed wherever they ☐ Store oil, gasoline and other inflammables properly. may be. Destroy all newspapers, magazines and oily rags. Do not pack things in the passenger sitting area, you need ☐ Notify police. maximum space for comfort. ☐ Wear easy-wash, drip-dry traveling clothes. PERSONAL Do not make your vacation trips a mileage marathon! Automobile insurance to cover you and your family fully. Stop and relax frequently. ☐ Avoid Cash. ☐ Use travelers checks and Credit Cards. Confirm reservations. ☐ Carry a first aid-kit. ☐ Have sunglasses for everyone. Carry your pets dish, food, leash and health ☐ Pack cameras and films. and registration papers. ☐ Make a check list of clothing for everyone, & toilet articles.

■ MOTORING ESSENTIALS

HOME

# MAINTENANCE RECORD Mileage Date Address Dealer Service Performed Remarks

#### TELEPHONE OVEN CLEANING ..... 40 ELECTRICAL PANELS ...... 27, 57 **INDEX** SHOWER HEAD ..... 45 OVERHEATING ...... 13 ELECTRICAL SYSTEM ...... 53 THERMASAN ...... 50 OVERNIGHT STOP ..... 16 ELECTRIC JACK (HITCH) ...... 11 TIRES ..... 10 PANEL SWITCHES ..... 29 EQUIPMENT LIST ..... 7 AIR CONDITIONER ..... 31 TIRE PRESSURES ..... 10 PILOT ADJUSTMENT: EXTENDED STAY..... 17 ALUMINUM SHELL ..... 25 TOILET ..... 47 FURNACE ..... 41 EXTENSION STEP..... 26 AMMETER ..... 29 TOWING TIPS ...... 13 OVEN ..... EXTERIOR ..... 25 AMPERAGE CHART ..... 58 TRAILER STORAGE ...... 22 RANGE ..... 39 EXTERIOR CHECK LIST ..... 60 AUTOMATIC GAS REGULATOR 35 TROUBLE SHOOTING: REFRIGERATOR ...... 36 FACTORY SERVICE ..... AXLE ..... ELECTRICAL ..... 57 WATER HEATER ..... 43 FAN SWITCH ...... 31 BACKING ..... 15 FURNACE ..... 42 PERSONAL CHECK LIST..... 61 FILTER (AIR CONDITIONER).... 31 BALL (HITCH) ..... 11 RANGE & OVEN ...... 39 POWER ON ..... BATTERY ..... 52 FLAT TIRES ..... 10 REFRIGERATOR ...... 37 POLARITY LIGHT ..... 53 FLUORESCENT LIGHTS ...... 34 BATTERY CONDITION WATER SYSTEMS ..... 44 FOLDAWAY STEP..... 25 RANGE ..... TESTER ..... 29 TV ANTENNA ...... 26 REFRIGERATOR ..... BRAKE CONTROLLER ..... GAS (LPG) SYSTEM ...... 35 UNIVOLT ..... 53 GAS TANK...... 35 REFRIGERATOR: BRAKES ..... DEFROSTING ...... 36 UTILITY CONNECTION ..... 18 **GROUNDING** ..... 52 B.T.U. RATINGS ..... VISTA VIEW REGISTRATION ..... HITCH ..... 11 BULBS (REPLACEMENT)..... 58 WINDOWS ...... 26 REGULATOR (LPG) ..... HITCH BALL HEIGHT ..... 12 CAPACITIES ..... VENTS ...... 33 5 REPAIR CENTERS ..... HITCHING UP ..... 11 CAR CONNECTOR ..... 12, 54 REMOVING MOISTURE ..... WARRANTY ..... 4 HOLDING TANK ..... 49 **CEILING FANS ...... 33** WATER DRAINAGE HOME CHECK LIST ..... 61 RUNNING GEAR ..... CEILING VENTS...... 33 PROCEDURE ...... 44 SCREEN (WATER) ..... 44 CENTRAL CONTROL PANEL .... 29 INTERIOR CHECK LIST ...... 60 WATER DRAIN VALVES ..... 44 SELF-CONTAINED CHASSIS ..... INTERIOR WATER HEATER ..... 43 47 MAINTENANCE...... 29 (DRAINAGE) ..... CHECK LISTS ..... 60 WATER INLET ..... 44 JACKING TRAILER ..... 18 **SELF-CONTAINED** CIRCUIT BREAKERS ...... 54 WATER LEVEL INDICATOR ...... 30 LUBRICATION CHART ..... 59 (ELECTRICAL) ...... 54 CITY POWER ..... 53 WATER PUMP ..... 44 SERVICE CENTERS ..... 5 LAWS ...... 19 CLOCK ...... 29 WATER PUMP SWITCH ..... 33 SEWER CONNECTION ...... 48 LEVELING ..... 17 DEFROSTING ...... 36 WATER PURIFIER (FILTER) ...... 45 SHOWER HEAD ..... 45 DISHMASTER ..... 46 LEVELING BARS ..... 11 SINK MAINTENANCE ...... 31 WATER PRESSURE LIGHT BULB REPLACEMENT.... 58 DRAINAGE SYSTEM ..... 47 REGULATOR ..... SPECIFICATIONS ...... 58 LIGHTS ...... 33 **DUMP VALVE ...... 47** WATER SCREEN ..... 44 L.P.G. SYSTEM ...... 35 STABILIZING JACK ELECTRICAL WATER SYSTEM ..... 44 LOADING ..... POSITIONS ..... 18 COMPONENTS ..... 53 WEIGHT: HP RATIO ..... SWITCHES: LIGHTS ...... 33 MICRO WAVE OVEN ..... 38 **ELECTRICAL** WINDOWS ...... 26 TANK (SEWAGE) ...... 47 MOTORING CHECK LIST ...... 61 CONNECTOR ..... 12 OVEN ..... 38, 39 ELECTRICAL INLET ..... 53