# Electrical System

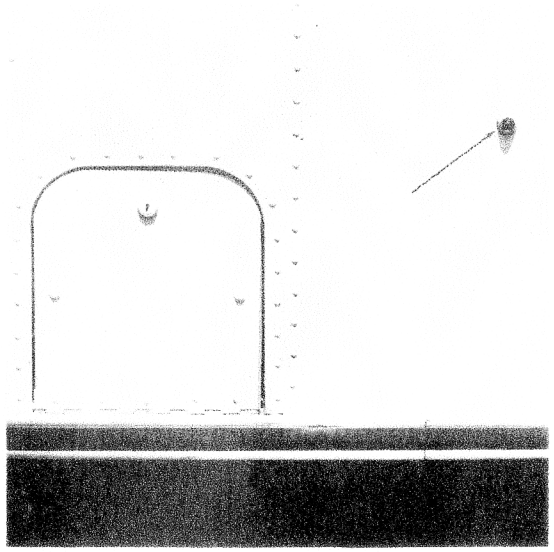
The Argosy Univolt System enables you to use the lights and appliances whether operating on self-contained battery power or hooked up to 120 volt city power. This combination unit is designed for protection from damage up to and including a dead short. The 12 volt light bulbs give off the same light 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 60).

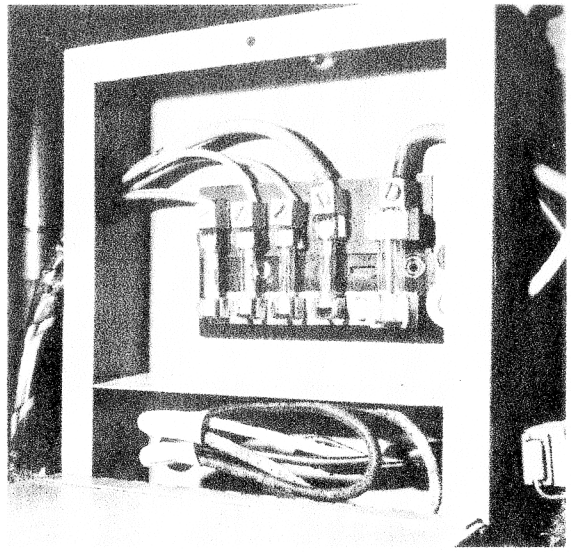
When operating with city power, make very certain that the service is 120 volt and not 220 volt. Open the bumper storage compartment lid, uncoil only the needed amount of cord and plug it into the city power source.

The Univolt System has a new transformer designed to maintain constant output voltages regardless of the variances that occur in city power 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, certain **precautions to insure proper grounding and polarity must be taken:**



*Polarity Warning Light*



*Univolt*

1. Attach the three pronged plug to a two prong adapter. The third conductor line of this adapter has a short wire lead which must be grounded.
2. For proper grounding connect the ground lead to a grounded outlet box or to a cold water pipe. 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.
3. Check the polarity light located just aft of the battery storage compartment. If it is on, pull out the plug, turn it over and reinsert. The light will now be out.

**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 Argosy 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 trailer 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 in the bathroom wardrobe below the storage shelf.

**The 120 volt circuit breaker panel is in the bathroom wardrobe.** 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 a Certified Service Center or the factory.

The Univolt System has a series of fuses (see illustration page 63 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 (see page 61).

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 64.

When being towed, the 12 volt battery in your trailer 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."

# Battery

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. To insure maximum battery capacity on both charge and discharge, the battery terminals and the inside portion of the cable connector should be scraped or brushed until both of these surfaces are shiny bright. The cable connectors should then be reconnected to the battery and tightened. The complete assembly, battery post and cable connector should be coated with a heavy bodied mineral grease or petrolatum.

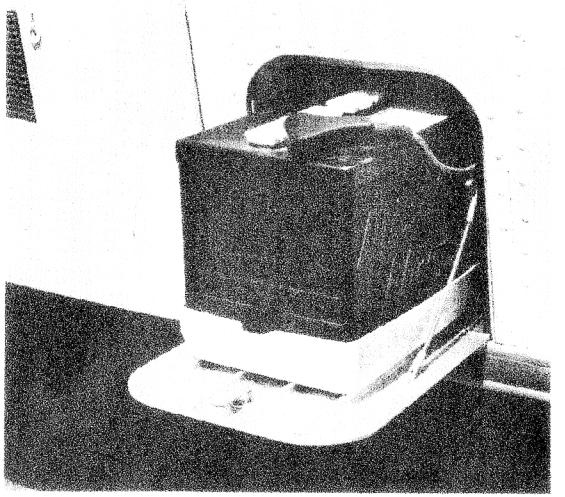
**Important: Reconnect the battery cables to the correct battery posts.** For example, if negative ground, the black cable should be connected to the negative ( — ) post and the red cable to the ( + ) post. The polarity may be determined by inspecting the battery post which is grounded on the tow vehicle, 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 Argosy 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.

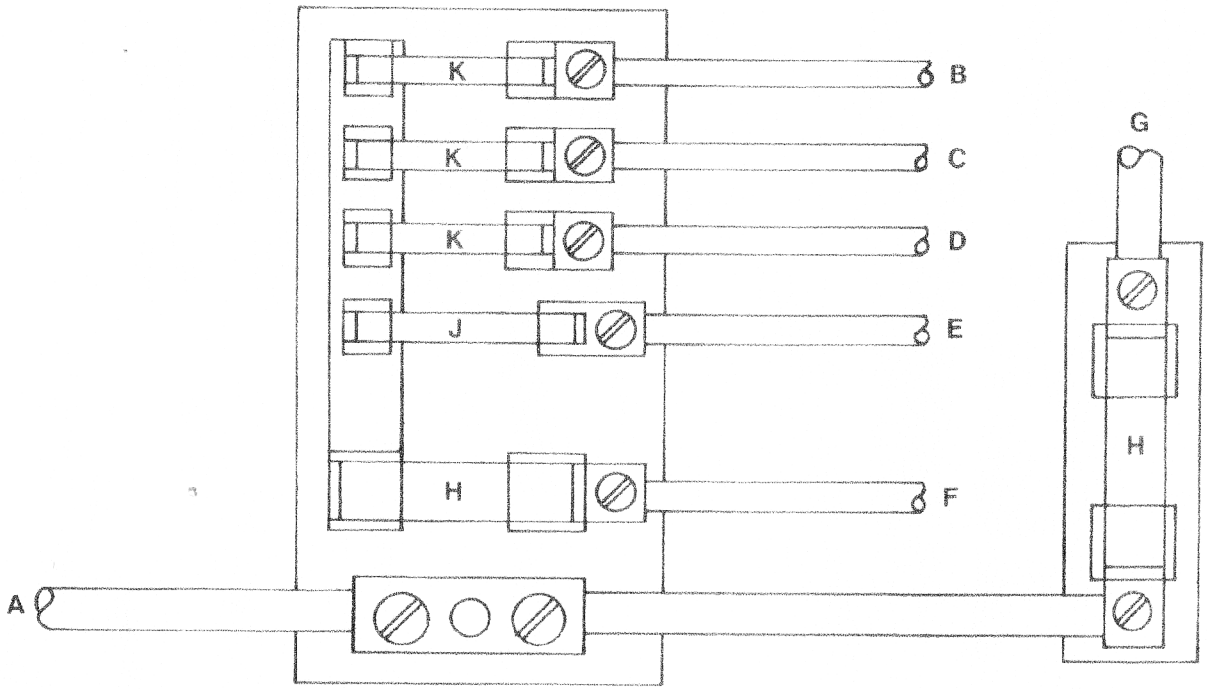
**The battery is located in a rear roadside compartment.** The battery slides out onto the opened door for service. For battery service or replacement, go to any service station or dealer who sells and services this battery. The battery is rated for 72 amp. hrs. at 80°F and has a 24 month prorated warranty.



*Battery Storage Compartment*

# Electrical Trouble Shooting

| Sympton | Possible Cause | Remedy |
|---|---|---|
| No 12-volt power (Lights, appliances do not work) | 1. Input line and/or battery not connected<br>2. Discharged trailer battery<br>3. Trailer battery on wrong polarity | 1. Make necessary connections<br>2. Charge battery<br>3. See item 6 |
| Blown fuse | 4. Overloaded circuit (over 50 amps) | 4. Turn off switches to reduce load<br>Replace blown fuse in Univolt or next to Univolt |
| | 5. Electrical short | 5. Find blown fuse in Univolt and identify circuit<br>From wiring diagrams check the circuit for defective wiring, lamps or motors |
| | 6. Shorted battery | 6. Replace battery and fuse |
| | 7. Battery terminals not properly connected to UNIVOLT + and — terminals | 7. Make proper connections; replace fuse |
| Dim lights or sluggish fan motor | 8. 25- or 50-cycle power (some foreign countries) | 8. Use 60-cycle power |
| | 9. Discharged battery (when operating without 120-volt line) | 9. Charge battery |
| | 10. Battery is low on water | 10. Add distilled water to battery |
| UNIVOLT will not charge battery | 11. Input line not connected | 11. Connect input line |
| | 12. Battery not connected (or polarity reversed | 12. Connect battery to UNIVOLT |
| | 13. Bad battery | 13. Replace battery |
| | 14. Too many lights and appliances in use | 14. Reduce electrical load |
| | 15. Fuse blown | 15. Replace fuse |




Low Voltage Distribution Panel

A — Chassis Ground (neg)
B — Circuit #1
C — Circuit #2
D — Circuit #3
E — Car Battery + (pos)
F — Trailer Battery + (pos)
G — Trailer Battery - (neg)
H — AGU - amp - Fuse 50
J — SFE 30 amp Fuse
K — SFE 20 amp Fuse

FUSES ON UNIVOLT

# Specifications

Capacities

| Appliance | Capacity |
|---|---|
| Main Holding Tank | 12 gal. |
| Auxiliary Holding Tank | 10 gal. |
| Water Tank | 30 gal. |
| Water Heater | 6 gal. |

Light and Appliance Amperages

| Item | Lamp Number | Amperage |
|---|---|---|
| Water Pump | — | 4.9 max. |
| Ceiling Fan | — | 4.8 |
| Bathroom Exhaust Fan | — | 2.0 |
| Range Exhaust Fan | — | 2.0 |
| Furnace Fan | — | 4.5 |
| Reading Lights: | | |
| Living Room | 1383 | 1.6 each bulb |
| Bedroom | 1141 | 1.6 each bulb |
| Ceiling Light (4 Bulbs) | | |
| Living Room, Galley, Bedroom, Bathroom | 1141 | 1.6 each bulb |
| Galley and Vanity Lights under Roof Locker | 1141 | 1.6 each bulb |
| Main Door Light | 1141 | 1.6 |
| Exterior Light | 1156 | |
| Clearance and Cluster Lights | 1895 | |
| Stop and Turn Signal | 1157 | |
| License Plate Light | 89 | |
| Backup Lights | 1156 | |
| Battery | | 72 amp hrs. at 80°F. |

Fuses and Circuit Breakers

| Circuit | Location | Rating |
|---|---|---|
| Main Breaker | 120 volt panel | 30 amp |
| General Circuit | 120 volt panel | 15 amp |
| Appliance Circuit | 120 volt panel | 20 amp |
| Air Conditioner and General Circuit | 120 volt panel | 20 amp C.B. (man. resetting) |
| Charge Line from Car | Univolt | AGU 30 amp fuse |
| Low Voltage Circuits | Univolt | SFE 20 amp fuse |
| Trailer Battery Fuse (+) | Univolt | AGU 50 amp fuse |
| Radio, Radio/Tape | Radio, Radio/Tape | IAG 5 amp fuse |
| Water Pump Fuse | Water Pump | MDX 6¼ Slo-Blo fuse |