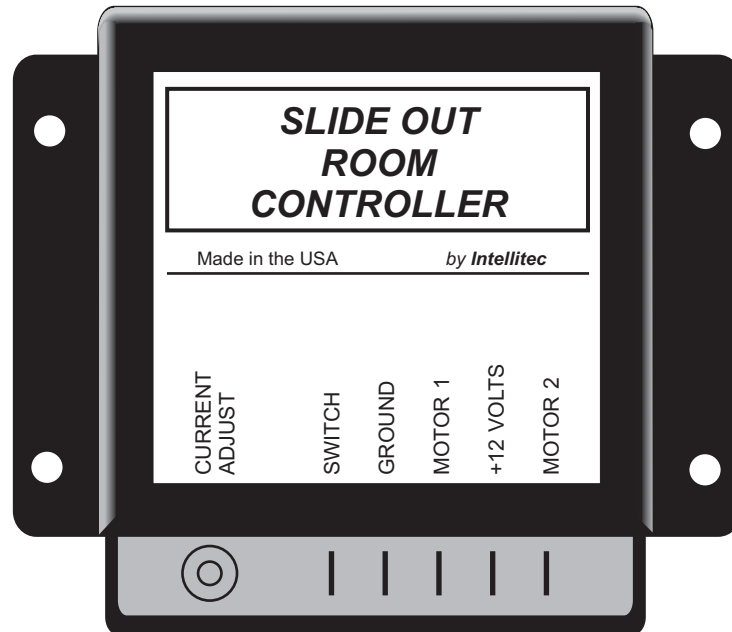


# MONOPLEX SLIDE OUT CONTROLLER

## SERVICE MANUAL



P/N 00-00193-000

P/N 00-00193-100

P/N 00-00193-300

### **CAUTION:**

The MONOPLEX SLIDE OUT CONTROLLER is a power switching controller used to operate a slide out room in an RV. Power from the battery of the vehicle is fed to this control. Inadvertent shorts at this box could result in damage and/or injury.

All servicing of this box should be done only by a qualified Service Technician.

Tools required: Low current test light, DC voltmeter

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### PRODUCT DESCRIPTION

The MONOPLEX Slide Out Room controller is designed to control the operation of a slide out room electrical mechanism. It automatically stops the slide out when it reaches its inner or outer limit, by sensing the current drawn by the motor. This eliminates the need for the owner to hold the switch in the ON position for the entire extend/retract cycle, or the installation of limit switches and associated wiring.

Typically, the control unit is mounted near the motor mechanism to minimize the length of the heavy gauge wire used. The switch wires are run from the controller to the wall mounted switch. One of these wires is the control lead and the other is ground.

To operate the room, momentarily press the button on the switch. The indicator will come on and the slide will move. When the slide reaches its end of travel, the controller will sense the rise in current and switch off the power to the motor and indicator light. To move the room back, momentarily press the button to start the room in the opposite direction. If, at any time during the operation of the slide out, the owner wants to stop the room, he can push the button and the it will stop. Pressing the button again will start the room in the opposite direction.

### HOW IT WORKS

The Slide Out Controller switches power to the motor of the mechanism with two double-pole, double-throw relays (See Figure 1). Normally, both leads of the motor are connected to ground, through the relays. When the button is pressed, one of the relays is closed, connecting that motor lead to +12 volts. Motor current is run through a small (<0.05 ohms) resistor in the ground lead to sense current.

When the motor is started, the controller ignores the current for approximately two seconds to allow for the start-up surge. It then begins to sense the current by measuring the voltage drop across the sense resistor. When this voltage exceeds the preset value, the controller shuts off the motor. The value of current can be adjusted by the control on the edge of the board. The best setting for this control is the *lowest* value required to move the room in and out, without nuisance shut down.

### STOP CURRENT ADJUSTMENT

The controller measures motor current to sense when the mechanism reaches the end of its travel. When the current exceeds a pre-set level the controller will shut off. This current level is adjustable by a pot, mounted on the unit. If the current is set too low, the mechanism will stop before it reaches the end of travel or during start-up. If it is set too high, it may damage the mechanism or loosen the trim of the room. **NOTE:** The current adjustment pot only turns 270 degrees. Attempts to force it further will damage it.

1. USING A SMALL SCREWDRIVER, CENTER THE POT.
  2. OPERATE THE ROOM IN BOTH DIRECTIONS TO CHECK OPERATION.
    - A. If the controller stops before the room reaches its normal stop, adjust the pot clockwise about 20 degrees and try again. Repeat if necessary within the limits of the pot.
    - B. If the room hits its stop too hard, adjust the pot counter-clockwise about 20 degrees and try again. Repeat if necessary within the limits of the pot.
    - C. Repeat steps A and B with finer adjustments if desired.
- THE CONTROLLER IS NOW ADJUSTED FOR NORMAL OPERATION.

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### TROUBLE SHOOTING

#### PROBLEM

Room won't slide out, indicator not on.

#### POSSIBLE CAUSE/SOLUTION

+12 volts not available. Check for +12 volts at controller. If the voltage is not present, check fuse/breaker feeding controller.

Check for voltage on switch line. Should be approximately 2.5 volts with the controller off (5 volts with the motor running). If voltage is less than 2.5 volts, remove wire from controller and check voltage on the controller. If it is now 2.5 volts, switch wire is shorted to ground. Locate switch wire problem.

Controller failed, replace controller.

Room won't slide out, indicator on.

Motor bad. Check voltage on motor, should be 12 volts with indicator on.

Controller failed, replace controller.

Room fails to fully extend or retract.

Current adjustment incorrect. Adjust current trip level to higher value.

Mechanics of mechanism binding or dragging. Repair mechanics.

Replace controller

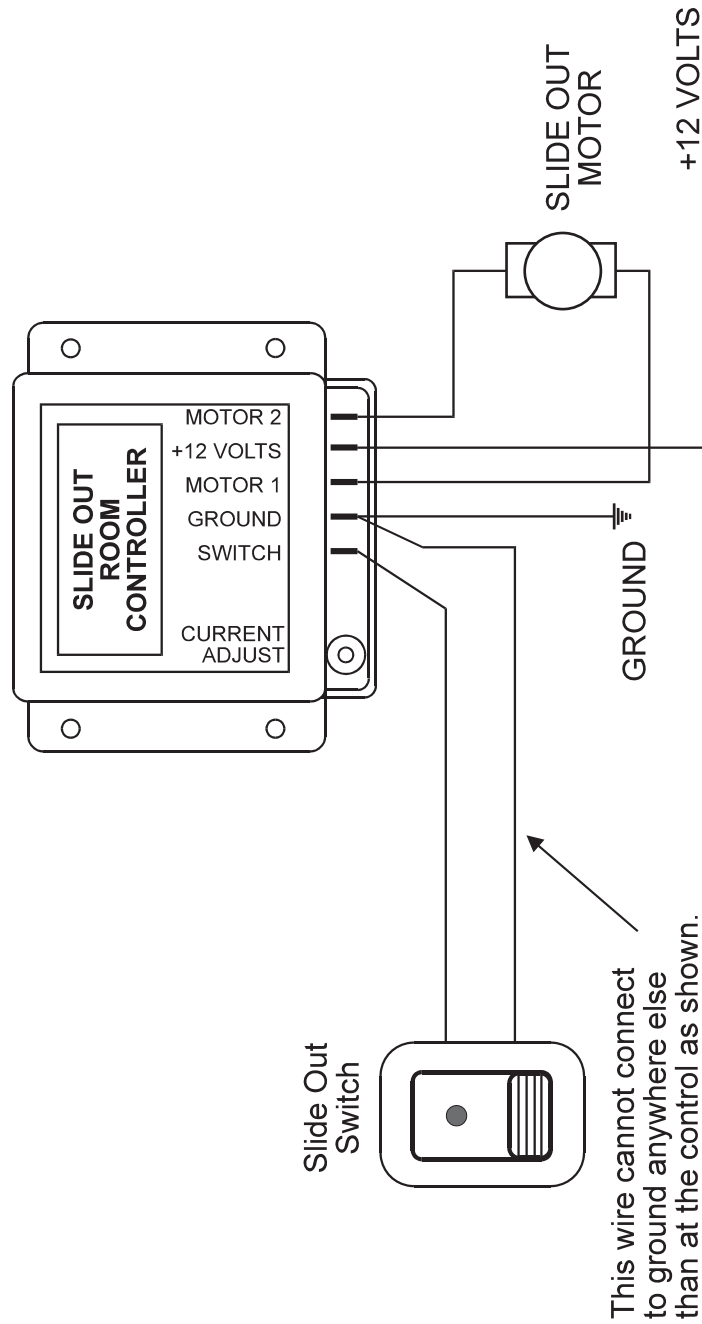
Control fails to turn off at end of travel

Current trip level set too high. Readjust current level.

Replace controller.

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### TYPICAL INSTALLATION

Figure 1