



Figure 1 Control Box 1510000276

Owner's Manual Dual Planetary Gearmotor Auto Programming Slim Rack Slide Out System

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Introduction

SYSTEM DESCRIPTION:

The Power Gear In Wall Slideout System is a rack and pinion design operated by a 12 Volt DC electric Motor. The system is designed to actuate rooms up to 1500 pounds and 30" stroke. Room slide out systems rated for higher weight or longer strokes can be obtained. Please contact Power Gear for application assistance.

MAJOR COMPONENTS:

- Vertical channel that mounts into the side wall opening.
- Horizontal gear rack arms that actuate the room.
- A 12 Volt DC gear motor will operate the room using power from the battery.
- A specially designed control box that gives the user full control of room movement, in or out. The control box has programmable stops that stop the motor when the room is fully extended or retracted and the ability to detect faults for ease in troubleshooting.
- Rocker Switch that mounts to the wall. It allows room movement and provides end user feedback.
- Floor rollers (not supplied by Power Gear) that support the rooms weight while extending or retracting the room.
- Harnesses to connect the rocker switch and motors to the control box.

! WARNING

- Always make sure that the slideout room path is clear of people and objects before and during operation of the slideout room.
- Always keep away from the slide rails when the room is being operated. The gear assembly may pinch or catch on loose clothing causing personal injury.



Figure 2 Rocker Switch 1510000240

Operation Mode

Prior to moving the slide out room:

- Make sure the engine or generator is running to ensure ample voltage is being supplied to the slide out control box.
- Set the parking brake, if applicable.

Extending the room:

1. The engine or generator must be running, or coach is plugged into shore power.
2. Transmission must be in park or neutral (if applicable).
3. Set the park brake (if applicable) and level the unit.
4. If equipped, remove the transit bars.
5. If equipped, turn "on" the on/off switch or key.
6. Press and hold the **OUT** button (**FIGURE 2**). There will be a slight delay before the room will begin to move, this is normal.
7. Release the button when the room is fully extended and stops moving.
8. If equipped, turn "off" the on/off switch or key.

Retracting the room:

1. The engine or generator must be running, or plugged into shore power.
2. Transmission must be in park or neutral (if applicable).
3. Set the park brake (if applicable) and level the unit.
4. If equipped, turn "on" the on/off switch or key.
5. Press and hold the **IN** button (**FIGURE 2**). There will be a slight delay before the room will begin to move, this is normal.
6. Release the button when the room is fully retracted and stops moving.
7. If equipped, turn "off" the on/off switch or key.
8. If equipped, install the transit bars.

Preventative Maintenance

Your Power Gear slideout system has been designed to require very little maintenance. To ensure the long life of your slideout system, read and follow these few simple procedures:

- When the room is extended, visually inspect the slide rail assemblies. Check for excess build up of dirt or other foreign material; remove any debris items that may be present.
- If the system squeaks or makes any noises, blow out any debris from the gear rack arms and apply a dry lubricant to prevent and/or stop squeaking.

If you have any problems or questions, see the contact tab on our website at www.powergearus.com



! WARNING

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- Always keep away from the slide rails when the room is being operated. The gear assembly may pinch or catch on loose clothing causing personal injury.

Fault Diagnostics/Troubleshooting

This control has the ability to detect and display several faults. When a fault is detected, the room movement may stop and two (2) different LED's on the control box will flash in a pattern.

- The **FAULT CODE** LED (**FIGURE 2, page 2**) will flash **RED** a number of times corresponding to the number of red flashes on the control box. Refer to the **TROUBLESHOOTING** chart below to best determine what caused the fault.
- The **MOTOR** LED on the control box will flash **GREEN** a number of times corresponding to which motor had the associated fault.
 - For example: if you are seeing two (2) **GREEN** flashes and four (4) **RED** flashes at the control box, it means that there is a motor fault on motor 2.

Note: For major faults, the control will automatically enter "**Emergency Jog**" mode when motor movement is not detected by the control box in either direction during room actuation. When in "**Emergency Jog**" mode, the control will jog both motors in the direction the rocker switch is pressed (**IN or OUT**). The rocker switch may need to be pressed multiple times to fully retract or extend the room. Take the unit to an O.E.M authorized dealer for service.

NOTE: The control box will return to normal operation mode after 5 minutes of inactivity or by cycling power to the control box.

FAULT CODES

Fault Code Number of Flashes		Fault Type	Description	Possible Cause	Possible Solutions
Green Flash	Red Flash				
1	1	Minor	Park Brake not set	- Park Brake not set (if applicable) - Ground signal lost at park brake receptacle at control box.	- Set parking brake (if applicable). - Check for continuity to ground on wire plugged into park brake receptacle at control box.
1	2	Minor	Low Voltage	Incoming voltage to control box is below 12.0 VDC. The room will NOT move if the voltage is 10.5 VDC or below.	Start vehicle, generator, or ensure plugged into shore power. Check 2-pin power connector at control box at BATT + and GND -. Consult manufacturer of unit charging system for troubleshooting assistance
1	4	Major	Motor 1 Fault	- Bad wire connection - Bad motor	Refer to TIP Sheet 82-S0533 for troubleshooting.*
2	4	Major	Motor 2 Fault	- Bad wire connection - Bad motor	
1	6	Minor	High Voltage	Supply voltage to control box is 17 VDC or greater.	Consult manufacturer of unit charging system for troubleshooting assistance.

# of RED flashes	# of GREEN flashes

*This tip sheet and other updated troubleshooting information can be found on our website at www.powergearus.com.



Override Modes

In the event of component failure or loss of system power, your slideout can be manually overridden and retracted for travel.

Note: At any time during the override procedure, the unit will exit this mode if the room has not been moved for five (5) minute.

MANUAL EMERGENCY RETRACT MODE

In the event that power is lost to the slide out motor(s), the room can be manually retracted by following these steps:

! WARNING

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- Always keep away from the slide rails when the room is being operated. The gear assembly may pinch or catch on loose clothing causing personal injury.



Figure 3 8-point star socket



Figure 4 Removing the bulb seal screw

Override Modes (continued)

1. You will need to gain access from either the inside or outside (whichever is more convenient) of the coach to the **VERTICAL CHANNEL** assembly. Motors are currently located at the top of channel. If accessing from the outside, the flange must be unscrewed.
2. If applicable, remove the top screw from the bulb seal at the top of the **VERTICAL CHANNEL (FIGURE 4)**.
3. Pull down the bulb seal and remove the motor cover (**FIGURE 5**). The motor cover may stick to the bulb seal.
4. Using a pick tool, remove the end of the retaining spring from the motor spring clip (**FIGURE 6**). If not equipped with a retaining spring, loosen the motor retaining screw (**FIGURE 7**). **DO NOT REMOVE THE SCREW.**
5. Unplug the motor from the harness and remove the motor by lifting it up and out.
6. Repeat steps 1-4 for the other side.
7. Push the room into the retracted position.
8. Secure the room in place by either re-installing the motors (making sure the end of the retaining spring is re-hooked to the motor spring clip (**FIGURE 6**) or torque the motor retaining screw to 40 in lbs. (**FIGURE 7**) and the motor retainer is fully engaged) or using a travel lock, 2 x 4 (cut to size), etc. **SEE NOTE BELOW ON SEATING MOTOR.**
9. Have the slide out room serviced by an O.E.M. authorized dealer as soon as possible. Do not operate room until service is complete as damage to the room may result.

Note: It may be possible to manually retract the room by accessing the ½" square drive tube at the bottom of each vertical channel assembly. This will only be possible if there is access to this area.

1. You will first need to follow steps 1-6 as detailed above.
2. Using a ½" 8-point star socket (**FIGURE 3**) and alternating from one side to the other, turn the ½" square drive tube to bring the room in. A 15 mm 12-point socket is an option if the ½" 8-point star socket is not available. Use caution, as the 15 mm 12-point socket does not fit as snug as the ½" 8-point socket.
3. When the room is retracted, secure the room per step 8 above.
4. Have the slide out room serviced by an O.E.M. authorized dealer as soon as possible. Do not operate room until service is complete as damage to the room may result.

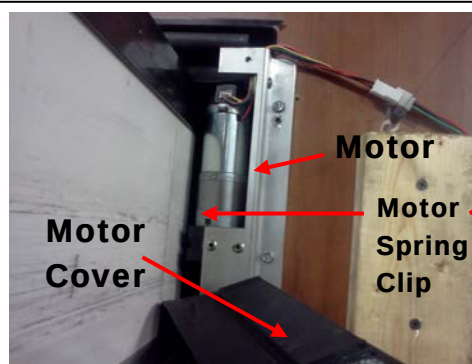


Figure 5



Figure 6



Figure 7

NOTE: Motor shown properly seated. No gap between mounting bracket and block.

Motor Retaining Screw

Override Modes (continued)

Note: It may also be possible to manually retract the room by using a ratchet and socket attached to the end of the coupler (**FIGURE 8**).

1. You will first need to follow steps 1-6 under the Manual Retract Mode section to remove the motor.
2. Place a socket wrench with a 3" extension and 5/8" deep well socket (**FIGURE 9**) through the motor access opening and seat the socket onto the coupler. One man alternating from side to side of the room is able to retract a 1500 lbs. room with or without a ramp

Note: 1 person per side of the room (2 total) with ratchet and socket will expedite the process. Room moves approx.. 1/4" for every 30-40 degree turn of the wrench.

3. Secure the room in place by either re-installing the motors (making sure the end of the retaining spring is re-hooked to the motor spring clip (**FIGURE 6**) or torque the motor retaining screw to 40 in lbs. (**FIGURE 7**) and the motor retainer is fully engaged) or using a travel lock, 2 x 4 (cut to size), etc. **SEE NOTE ON PREVIOUS PAGE ON SEATING MOTOR.**
4. Have the slide out room serviced by an O.E.M. authorized dealer as soon as possible. Do not operate room until service is complete as damage to the room may result.

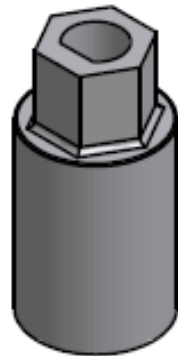


Figure 8 Coupler



Figure 9 Ratchet with 3/8" extension and 5/8" deep well socket



Figure 10 Ratchet inside motor access with socket on coupler

ADDITIONAL REFERENCE PUBLICATIONS LOCATED AT WWW.POWERGEARUS.COM

<u>Document #</u>	<u>Description</u>
3010002813	Installation and Service Manual for In Wall Slideout System
82-S0533	Troubleshooting for control box 1510000236 or 1510000276 for In Wall Slim Rack Slide out System
82-S0534	Encoder Test 1 Dual Planetary Gear Motor Sync with Control Box 1510000236 or 1510000276
82-S0535	Encoder Test 2 Dual Planetary Gear Motor Sync with Control Box 1510000236 or 1510000276

