Service/Installation Manual
Full Wall Slide Systems

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WARNING

ALWAYS MAKE SURE THAT THE SLIDE-OUT ROOM PATH IS CLEAR BEFORE AND DURING OPERATION OF THE SLIDE-OUT ROOM.

ALWAYS KEEP AWAY FROM THE SLIDE-OUT RAILS WHEN THE ROOM IS BEING OPERATED. THE GEAR ASSEMBLY MAY PINCH OR CATCH ON LOOSE CLOTHING CAUSING PERSONAL INJURY.

ALWAYS UTILIZE A ROOM LOCKING DEVICE ON THE SLIDE-OUT ROOM DURING STORAGE AND TRANSORTATION.

BEFORE YOU OPERATE THE SLIDE SYSTEM

The Power Gear electric slide-out system in your coach is designed to give you years of trouble free operation and reflects the latest state of the art technology. READ, STUDY, AND UNDERSTAND THIS MANUAL BEFORE OPERATING YOUR SLIDE-OUT SYSTEM.

SYSTEM DESCRIPTION

Your Power Gear slide-out system is a rack and pinion design operated by a 12Volt DC electric motor.

MAJOR COMPONENTS

- Inner rail assemblies are designed to support the room weight.
- The 12Volt DC gear motor will operate the room using power from the onboard unit battery.
- Slide-out systems are equipped with a manual override that allows you to extend / retract the room in the event of a loss of power.

OPERATIONING INSTRUCTIONS

EXTENDING THE ROOM

1. Start the engine.
2. Set park brake.
3. Level the unit.
4. Verify the battery is fully charged and hooked-up to the electrical system.
5. Remove the transit bars (if so equipped).
6. Turn 'ON' the on/off switch or key (if so equipped).
7. Press and hold the EXTEND/RETRACT switch in the EXTEND position until the room is fully extended and stops moving.

   NOTE: *For coaches equipped with room locks, this can take as long as one minute. You may observe the room locks disengaging for 30 seconds before the room starts to move. This is normal operation.*
8. Release the switch, which will lock the room into position.

   NOTE: *If the slideout switch is held after the room in fully extended, the control will sense that the room has stopped and will shut off the motor after a few seconds.*
9. Turn 'OFF' the on/off switch or key (if so equipped).

RETRACTING THE ROOM

1. Start the engine.
2. Set park brake.
3. Verify the battery is fully charged and hooked-up to the electrical system.
4. Turn 'ON' the on/off switch or key (if so equipped).
5. Press and hold the EXTEND/RETRACT switch in the RETRACT position until the room is fully retracted and stops moving.

   NOTE: *For coaches equipped with room locks, it is necessary to continue to hold the 'IN' button until both room lock lights are illuminated on the control panel, to ensure that the room locks are fully seated.*
6. Release the switch, which will lock the room into position.

   NOTE: *If the slideout switch is held after the room is fully retracted, the control will sense that the room has stopped and will shut off the motor after a few seconds.*
7. Turn 'OFF' the on/off switch or key (if so equipped).
8. Install the transit bars (if so equipped).

PREVENTATIVE MAINTENANCE

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

CAUTION: DO NOT WORK ON YOUR SLIDE-OUT SYSTEM UNLESS THE BATTERY IS DISCONNECTED.

- When the room is out, visually inspect the inner slide rail assemblies. Check for excess build-up of dirt or other foreign material; remove any debris or items that may be present.
- If the system squeaks or makes any noises it is permissible to apply a light coating of silicone spray or lithium grease to the roller and bearing sleeve I.D., removing any excess lubricant so that dirt or debris do not build-up. DO NOT lubricate the slide-out drive gears, gear racks, or roller OD as this will attract dirt / debris.

IF YOU HAVE ANY PROBLEMS OR QUESTIONS CONSULT YOUR LOCAL AUTHORIZED DEALER

MANUALLY OVERRIDING YOUR SLIDE SYSTEM

Your Power Gear slide-out system is equipped with a manual override that allows you to extend or retract the room in the event of a loss of power.

NOTE: If the room does not move when the switch is pressed, check the following:

- Battery is fully charged and connected
- The transit bars are removed
- All system fuses/circuit breakers and relays are good.

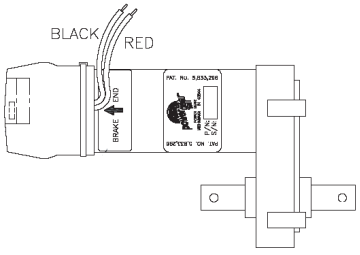
After the previous items have been checked and the room still does not move when the slide-out switch is pressed, follow these simple steps to manually override your slide-out room.

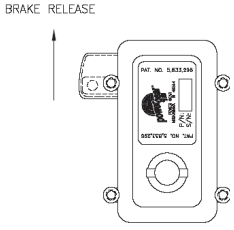
1. Locate the slide-out motor (see drawings later in this manual). The motor is located in the top of the center storage compartment under the slide-out room. For a bedroom slide-out the motor will be mounted to rail assembly.
2. Rotate the brake lever on the back of the motor counter-clockwise (looking from the rear of the motor) about 1/8 of a turn to the released position. Refer to the label on the motor and the motor drawing in this manual. This will release the brake that holds the room in place.
3. The room is now free to move.
4. Locate the manual override on the end of a rail assembly (see drawing later in this manual). It is also permissible to use an adjustable wrench on the square drive shaft to crank the room in or out.
5. Check the slide-out awning (some awnings must be manually unlocked before operating).
6. Using a ¾ wrench or ratchet, crank the room either in or out completely (depending on your need).
7. When the room is fully in/out apply pressure to the wrench or ratchet and return the motor brake lever to the "Engaged" position. This will ensure the room is locked into a sealed position.
8. Check the slide-out awning (some awnings must be manually locked before traveling).
9. Install transit bars (if so equipped) and take the unit to an authorized dealer for service.

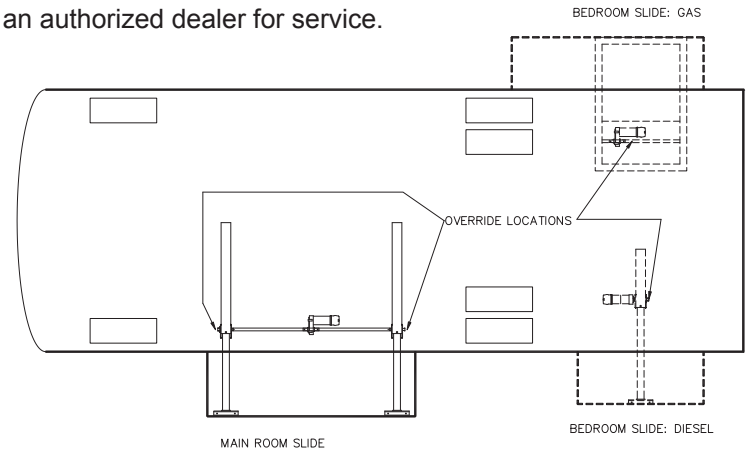
WARNING

WHEN THE MOTOR BRAKE IS DISENGAGED THE SLIDE-OUT ROOM WILL NOT LOCK IN PLACE; THEREFORE, THE ROOM WILL NOT BE SEALED.

WHEN THE ROOM HAS BEEN MANUALLY RETRACTED, BE SURE TO INSTALL THE TRANSIT BARS AND RETURN THE MOTOR BRAKE LEVER TO ITS NORMAL "ENGAGED" POSITION IN ORDER TO SEAL AND LOCK THE ROOM INTO POSITION.







NOTE: *If only one or two people are available to move the room the following procedure must be followed:*

- Start at the front of the coach, release the motor brake, rotate that shaft approximately 1/8 turn, re-apply the motor brake.
- Proceed to the center rail. Release the motor brake, rotate that shaft approximately 1/8 turn, re-apply the motor brake.
- Proceed to the rear rail. Release the motor brake, rotate that shaft approximately 1/8 turn, re-apply the motor brake.
- Return to the front rail. Repeat this procedure in the above order until the room has been fully opened or closed as desired.

MANUAL OVERRIDE

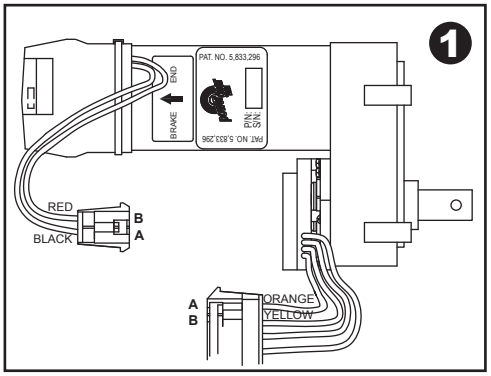
In the event of battery / power failure or some other loss of system power, your Full Wall Slide System can be manually operated. It has been equipped with mechanical override couplers on each keyed shaft assy. for your use. Due to the size and weight of the room, assistance will be needed and care taken during the process. Use the following steps to mechanically operate the room:

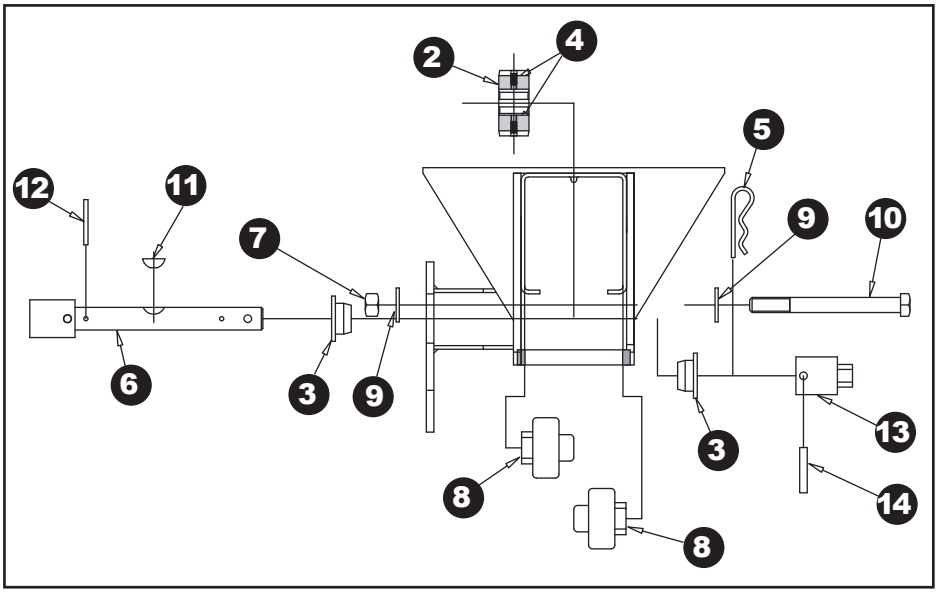
1. Unplug each motor near the motor.
2. Disengage each motor brake by pushing the rubber boots in the direction indicated on the decal to the "disengaged" position (counter clockwise as observed from the boot end of the motor). A metal lever within the boot will "pop" into position.
3. If enough people are available and wrenches for each shaft are available, the room can be moved in or out quickly as long as all shafts are turned at the same time. Use a wrench or socket and ratchet to turn each keyed shaft in the direction required.

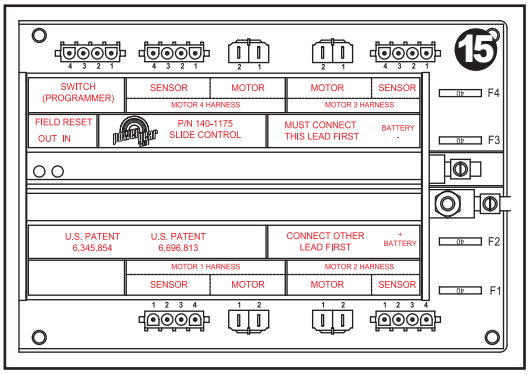
WARNING **After the room has been moved in the desired direction, the brake levers on each motor MUST be returned to the "engaged" position. When the motor brake is disengaged the slideout room will not lock into place; therefore, the room will not be sealed. When the room has been manually retracted, be sure to install the transit bars (if so equipped) and return the motor brake lever to its normal engaged position in order to seal and lock the room into position. Do not travel unless each motor brake is in the "engaged" position!**

WARNING **Do not attempt to use the room again until a service center has re-set the computerized controller according to the service manuals instructions. Failure to reset the controller may cause damage to the system or coach.**

PARTS LIST



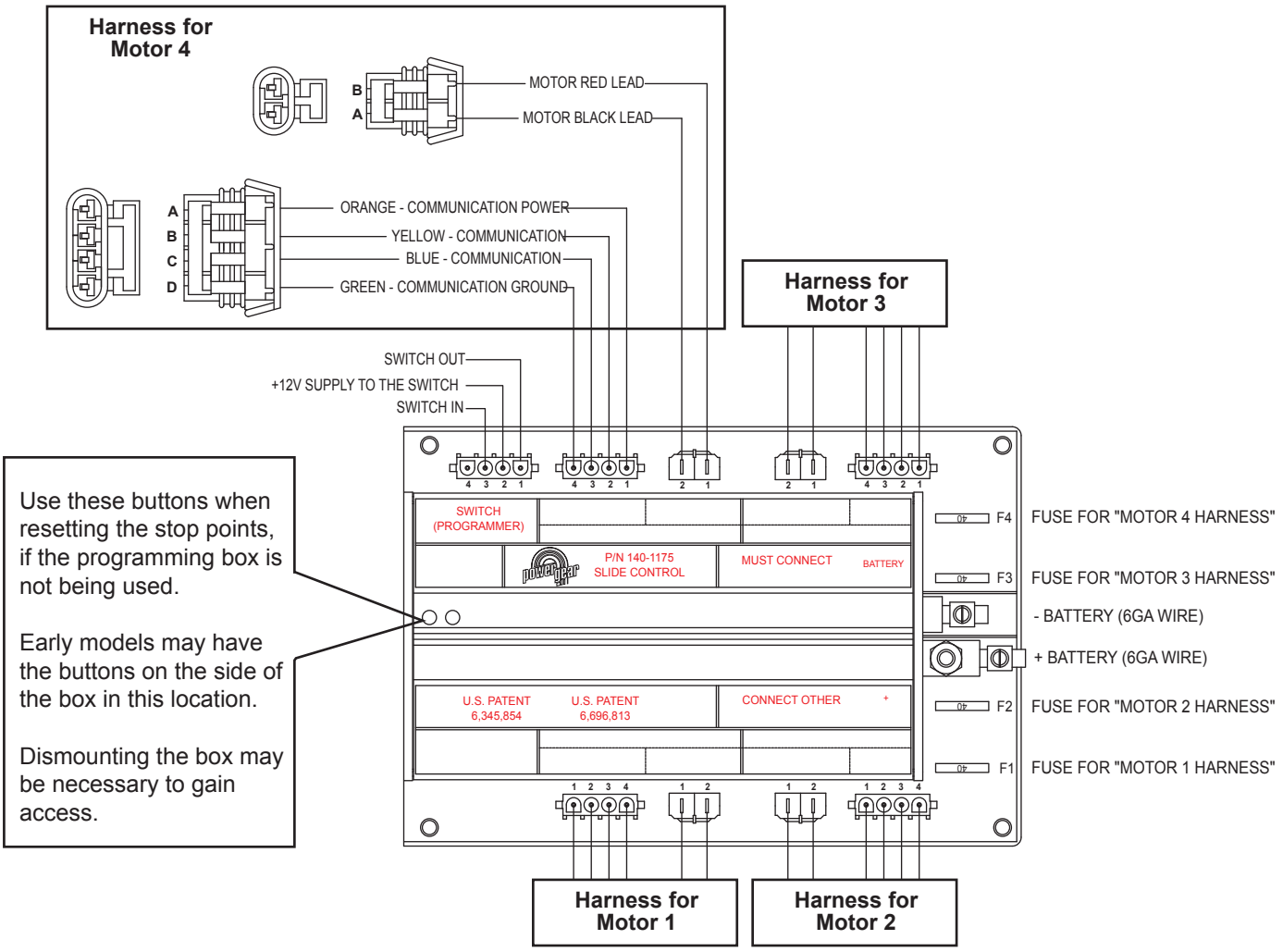




Key No.	Part No.	Description
(1)	524120	Motor assembly
(2)	250-0005	Gear, spur 2.0x1.0"
(3)	510036	Bearing sleeve 3/4
(4)	15-1412	Screw, set #10-24x.38
(5)	18-1032	Pin clip 01/8
(6)	524035	Shaft, keyed 3/4 w/coupling
(7)	15-1131	Nut, hex 1/2-13
(8)	520014	Outer roller

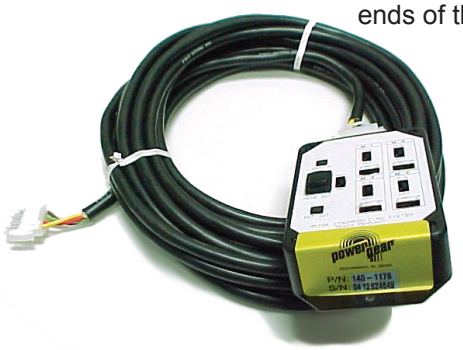
Key No.	Part No.	Description
(9)	16-1034	Washer flat 1/2
(10)	15-1130	Bolt hd 1/2-13x5
(11)	521336	Key, Woodruff #606
(12)	18-1036	Pin, 0.140x1-1/4
(13)	520223	Coupling, hex .75 ID
(14)	18-1007	Pin, 0.250x1-1/4
(15)	140-1175	Control

WIRING DIAGRAM



Control #140-1176 Installation/Programming

Each "Motor Harness" contains 6 wires, (2 wires are for the motor itself, 4 wires are for the sensor attached to the motor). To keep track of the harnesses use colored tape on both ends of the motor harness, and use a different color tape for each motor harness.



1. Attach both connectors at the motor end of each harness.

2. At the control, there are 4 "zones" for the motor/sensor harnesses. Each zone is labeled "Motor 1 Harness", "Motor 2 Harness" etc. Both of the connectors for each zone must go to the same motor. Connect the front-most slide motor to "Motor 1 Harness", then connect the 2nd rail from the front to "Motor 2 Harness", and so on until all motors are plugged in. If only 3 motors are to be used with this control, you will not use the 4th connector on the control.

3. Connect the negative battery lead (Labeled "Battery -") first, then connect the positive battery lead (Labeled "Battery +") next. ***NOTE:*** *MINIMUM OF 6 GAGE CABLE MUST BE USED. POWER SUPPLY MUST BE CAPABLE OF SUPPLYING 10.5 VOLTS DC DURING MAX LOAD.*

4. Attach the 4 pin programming box harness from the programming box (P/N 140-1176) to the control in the spot labeled "Switch (Programmer)".

PROGRAMMING CONTROL WITHOUT PROGRAMMING BOX

Intended for service personnel in the field.

On site personnel may not have ready access to the programming box. The procedure is best handled with three people; one operating the wall switch inside the coach; one operating the reset buttons on the controller, and one checking room seals.

Align the rails.
If one or more rails are not in the correct position, align them by unplugging the motor on the rail(s) that is the first to reach the stop point. Next the person inside the coach moves the remaining rails until the person under the slide room determines that the rails are aligned. Next plug the motor back in. This may take a few tries. The objective is to get all rails aligned in a row before setting the controller stop points.

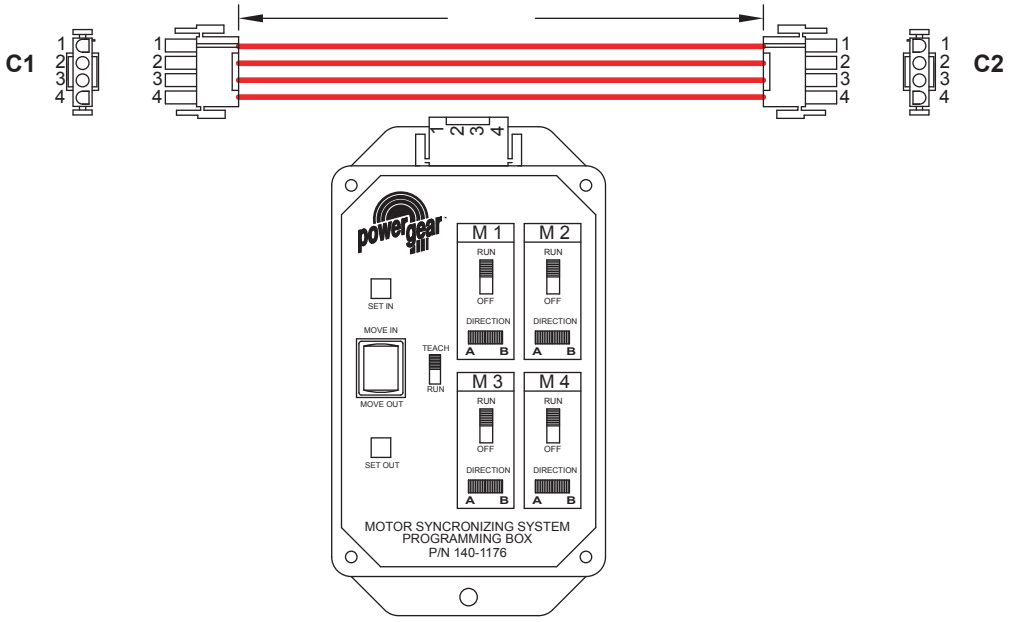
Reset "IN" stop point.
Press and hold the reset button for the "IN" position while moving the room "IN" until reaching the correct stop point. When the room is in the correct "IN" position, release the reset button. This will set the correct position for all motors. Note: "IN" must be set before "OUT."

Reset "OUT" stop point. (See wiring diagram, Page 5)
Repeat this for the "OUT" position. Push in and hold the "OUT" stop reset button while another person operates the room switch to move the room until it is in the correct out position. Once the room is in the correct "OUT" position, release the "OUT" reset button. This completes the slide control calibration/programming.

"TEACHING" THE CONTROL

Follow these instructions exactly. Failure to do so may result in failure to program properly.

1. Move the "Teach/Run" switch to "Run".
2. For about 1 second, simultaneously press both the "Field Reset" IN and OUT buttons (located on the 140-1175 controller.)
3. Move the "Teach/Run" switch to "Teach."
4. Make sure all motors move IN when "Move In" is pressed.
   - This is easier to check if you do this one motor at a time.
   - You can turn off individual motors via the "Run/Off" switches.
   - Switch "M1" controls the motor connected to the "Motor 1 Harness" and so on for Motors 2,3 & 4.
   - If a particular motor is moving in the wrong direction, you can change the direction via the "Direction A/B" switch
5. Run all of the motors IN until they are in a fully retracted position, turning off individual motors as necessary to achieve a good seal. Press "Set In" to store the IN position
6. Run all of the motors "OUT" until they are in a fully extended position, turning off individual motors as necessary to achieve a good seal. Press "Set Out" to store the "OUT" position.
7. Move the "Teach/Run" switch to the "Run" position. Cycle the room IN and OUT to verify that the control held the set stop points
8. As soon as "Set Out" is pressed, the IN/OUT switch will not function until it is taken out of "Teach" mode and put back into "Run" mode. If you forget to move the "Teach/Run" switch back to the "Run" position before checking to see if the stop points held, the programming box will appear to not work at all.
9. If you need to re-teach the stop points, repeat the above steps starting at "Move the Teach/Run switch to Teach"
10. Remove the 4-way programming box harness from the control
11. Replace it with a 4-way wall switch harness (Power Gear P/N 141-0004012)
12. Connect the green "IN" wire to the "IN" position on the wall switch and the blue "OUT" wire to the "OUT" position on the wall switch
13. Connect the red "12V" wire to the "center" position on the wall switch.
    - It is important that you use this red wire as the 12V source to the switch. The control will not operate properly if 12V is acquired from another source
    - If the room moves the wrong direction when using the wall switch, you have the green "IN" wire and the blue "OUT" wires backward. Reverse the two wires to fix.



FLAT FLOOR ROOM HEIGHT ADJUSTMENT

Instructions for setting the room height on a flat floor full wall slide-out system utilizing angled rails.

With the room fully extended:

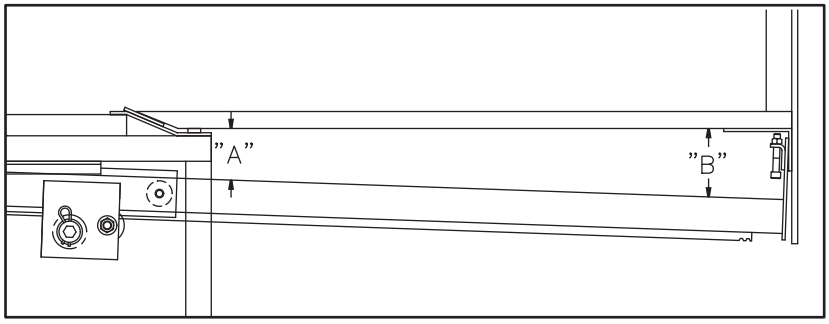
- Measure from the top of the first moving slide-out rail to the bottom of the slide-out room floor up close to the coach. This is dimension "A".
- Measure from the top of the first moving slide-out rail to the bottom of the slide-out room floor out near the mounting bracket. This is dimension "B".
- To calculate dimension "B" use the following formula:
  "B" (end bracket height setting)="A" + (slide out room floor thickness) + ¼"

EXAMPLE:

"B" (end bracket height setting)="A" + (slide out room floor thickness) + ¼"
If "A" = 3-1/4"
Then "B"=3-1/4" + 1" + ¼" = 4-1/2"

- Perform this check on each slide-out rail independent of the other.

NOTE: *Figures are approximates. Each coach may be slightly different. Refer to manufacturer of coach/trailer for correct slide out room floor thickness.*



TROUBLESHOOTING GUIDE

Description of Problem	Solution
Motors will not run.	Check all connections. Check fuse for that motor on the controller. Check for proper voltage to the controller input terminals while under load. Check that harnesses are connected to proper plug. Magnetic reed switch for room locks is faulty (stuck closed,) bypassed, or magentized. Room locks are not disengaging, caused by magnetic switch problem (open) or faulty room lock. Fuse blown (Fleetwood circuit #329.)
Room does not stop going out.	Need to reprogram out stops.
Room does not stop coming in.	Need to reprogram in stops.
Room "skips" when coming in or out.	Check for proper room height setting. Check for damaged gears or rail teeth.
Slide runs backwards from switch designation.	Verify that the switch is wired up correctly.
Motors run in opposite directions.	Reprogram the motor direction using the Programming harness or reverse the motor leads.
Rooms seems "weak."	Check voltage at each motor while the room is climbing the ramp. Repair wiring or batteries if voltage falls below 10.5 volts under load. Check for excessive weight in slide system or storage bins. Check for proper room height setting. Check for proper room alignment within seals/wall opening.

This document has been modified from the original Power Gear release. All former references to the Power Gear warranty and contact information were removed.

For all concerns or questions, please contact
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