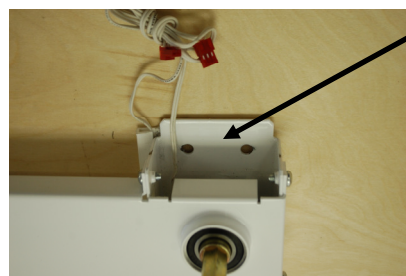
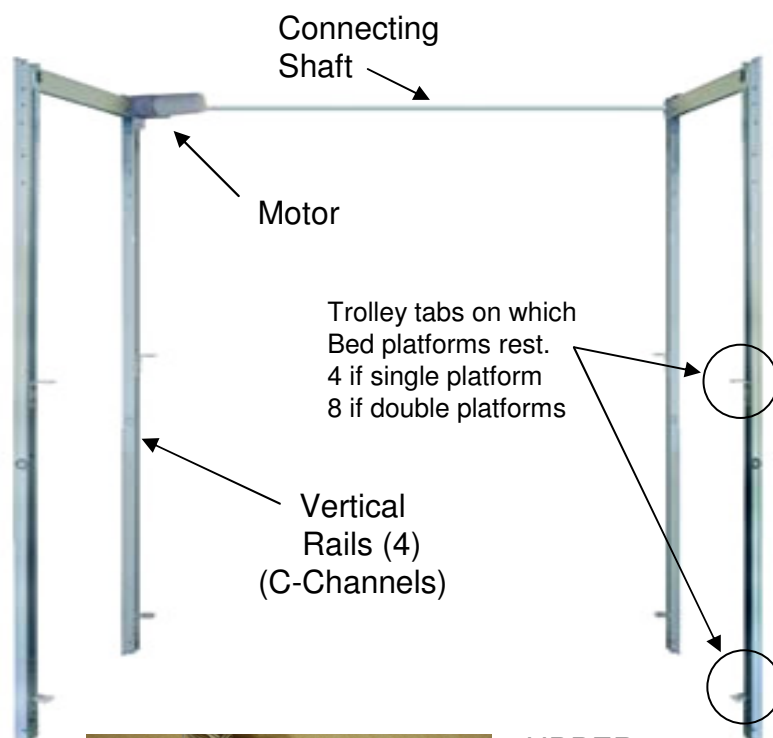


# BED LIFT INSTALLATION

## Plug & Play Models

### LIFT FRAME INSTALL:

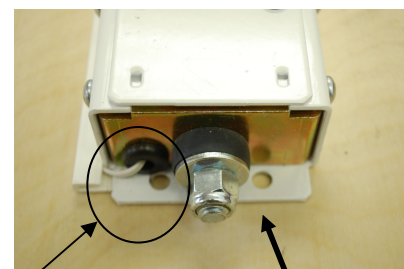
1. System must be installed squarely, at the same height side to side and at the same distance front to back in the RV with vertical rails parallel side to side. **Leave wooden packing strips in place until system is secured to the RV.**
2. Sufficient backing must be incorporated within the walls of the RV to support the sheer load of the bed lift with bed platforms installed. The bed lift is rated at 600 lbs per platform attachment (static load).
3. Screws / bolts of sufficient size (1/4" diameter recommended) must be used to safely meet the above referenced load requirements must not interfere with any moving parts of the mechanism.



UPPER MOUNTING HOLES

Screws / bolts should be used in ALL mounting locations to secure the vertical rails. Use the larger holes for mounting as the smaller holes are alternate mounting locations for the upper bunk stop blocks. The number of mounting holes will vary according to the vertical rail length of the system being installed. However, it is imperative that the double mounting holes at each end of the vertical rail be used. These horizontally orientated holes prevent rail twist.

**CAUTION:** When installing lower mounting screws/bolts in the vertical rail below the motor containing the micro stop switches, be sure that the micro stop switch wire at the bottom of the rail is not pinched behind the screw / bolt head.



LOWER MOUNTING HOLES

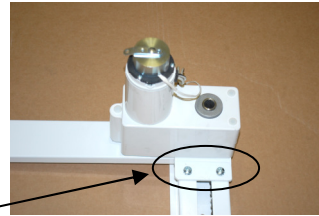
*Once the rails are installed and checked for square and parallel installation, remove the wooden packing strips.*

## MOTOR & CONNECTING SHAFT INSTALLATION:

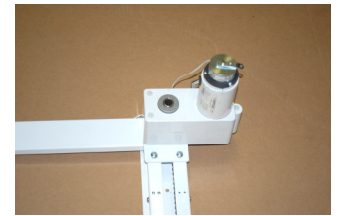
- 2 -

1. Motor may be mounted inward or outward. This is determined by the way the motor mounting plate is attached. Attach the motor mounting plate for the desired orientation using the 4 large countersunk bolts provided.

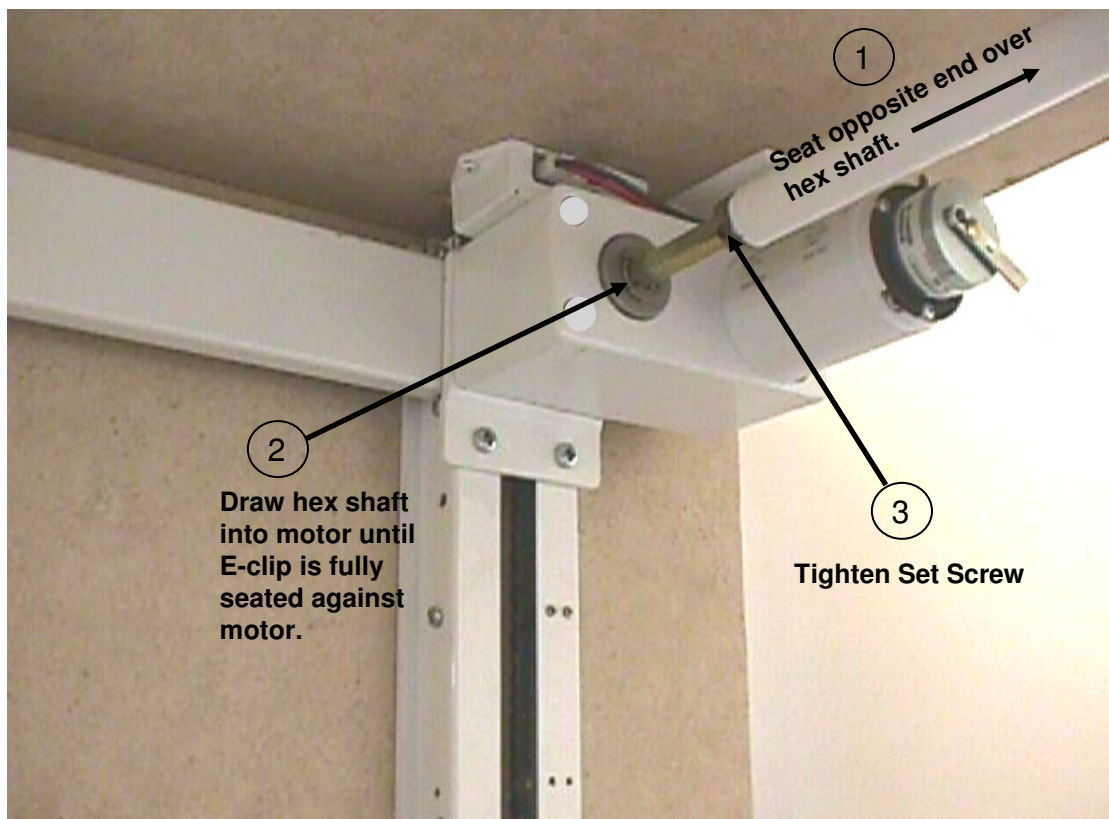
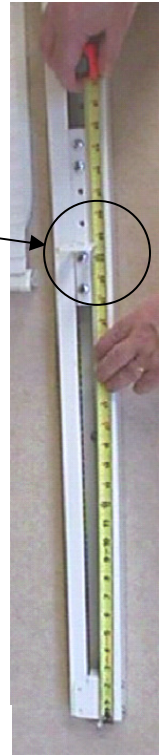
Inward Mounting



Outward Mounting



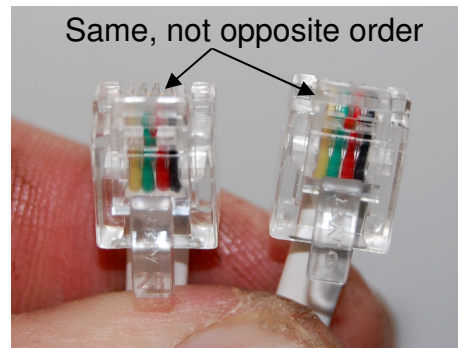
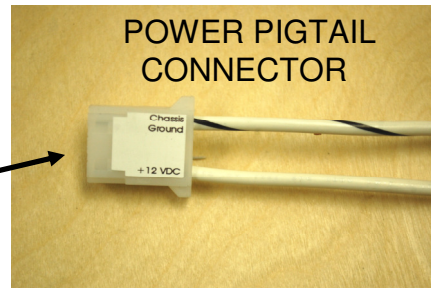
2. After attaching the motor mounting plate, attach motor to bed lift system by sliding motor over the hex shaft at the top of the motor rail (the one with the micro switch wires protruding from the top) and securing with the two Philips bolts and star washers provided.
3. Make certain that the drive trolleys (lower trolleys) are at the same height on both sides of trailer.
4. Install cross shaft by sliding open end of shaft over the hex shaft on the side opposite the motor. Make sure cross shaft is fully seated.
5. Loosen set screw in collar of cross shaft where gold hex shaft protrudes.
6. Draw out hex shaft and insert it into motor until E-clip is seated against motor. Be sure opposite end of cross shaft remains seated. Note: It may be necessary to rotate the cross shaft very slightly one way or the other to get the shaft to engage the motor. Side to side level will be affected no more than  $\frac{1}{4}$ " by so doing.
7. Tighten set screw in cross shaft collar.



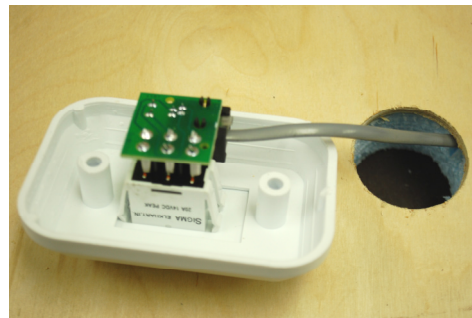
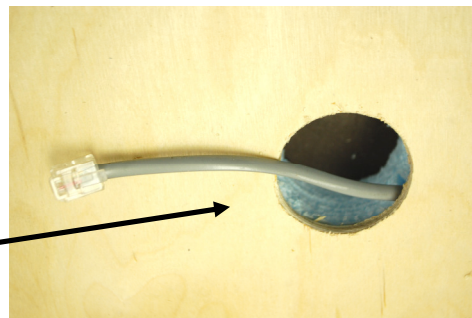
## WIRING THE SYSTEM:

- 3 -

1. Bring +12VDC and Ground from the RV's power supply to motor location.  
**(10 gauge multi strand wire)**
2. Connect +12 line to the SOLID WHITE wire of the supplied power pigtail and the Ground wire to the BLACK STRIPED wire of the pigtail.
3. Run the telephone style **(reverse pin out)** RJ-11 cord from the Up/Down switch location to the motor location.
4. Plug the power pigtail, telephone switch connector, motor connector, brake connector, and two micro switch connectors (red plugs) into the PNP CONTROL MODULE.
5. Secure the control module to the RV using the mounting holes at each end of module.
6. Install the Up/Down switch assembly by routing or drill-sawing a 1.5" hole in wall or cabinet panel where switch is to be mounted, then drawing the RJ-11 switch cable out through the hole.
7. Plug the switch cable into the printed circuit board on the back of the switch then put the switch in place over the hole, and secure with the screws provided. Make sure the switch is positioned such that BOTH screws will grab securely.



When holding the locking tabs toward you, the wire colors are the same right to left.



**CAUTION:** Make sure printed circuit board is not in contact with any metallic surface or object.

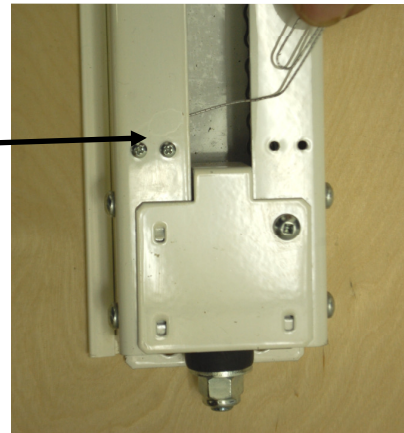
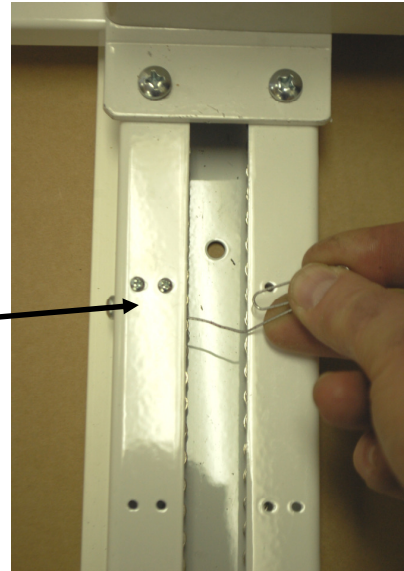


## TESTING THE SYSTEM:

1. While pressing UP ensure that the trolleys travel upward. If they go down, re-check the orientation of the +12 VDC and ground connections to the power pig-tail.
2. While running the system upward, toggle the upper micro-limit switch with a stiff wire or large paper clip. (Test requires 2 people). Each time the micro-limit switch is depressed the drive trolley should stop. If the trolley fails to stop when the switch is depressed, recheck all connections and +12 and ground wire orientation.

*The micro-limit switches are located behind the two small Phillips screws near the top and bottom of the rail below the motor.*

2. Check the lower micro switch in the same manner while going down.
3. If the system fails to operate recheck all connections. Also check to see that the wires punched down into the micro switch connectors (small red ones) are tightly secured. Press these firmly in place with a small screwdriver blade if necessary to ensure that the pins in the connector bite through the insulation on the wire.

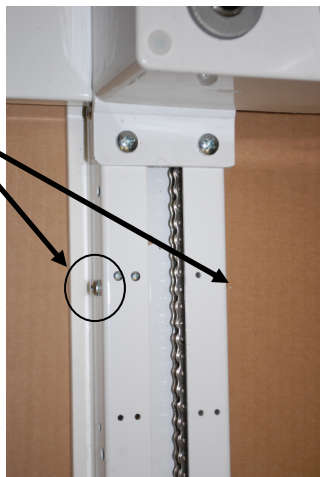


## MOVING THE LIMIT SWITCHES:

If desired, the limit switches can be moved from their factory setting to one of the alternate positions. To reposition the switch, remove the two small Phillips screws, move the switch to the new location and reinstall the screws. **CAUTION:** Do not over tighten the screws as this can damage the switch. Tighten slowly just until switch is snug and does not move.

On upper switch, be sure to move physical stop screws in rail sides as well. (One on each side of rail adjacent to micro-limit switch).

**Failure to do so will result in damage to the system.**



If the lower micro-limit switch is moved from it's lowest possible setting, these stops screws must be added at the new switch location. Screws are a #10 x 3/8 self threading screw.

**NOTE:** It may be necessary to add wire to switches to accommodate switch movement.

## EMERGENCY MANUAL OPERATION:

Note: Before manually cranking the bed-lift, the brake must be released and the motor unplugged from the PNP Control Module.

Motor unplugs from Control Module.  
(Module location may be different but will be in close proximity to motor).



Brake release for manual operation.



### CRANKING POINT (One on each side) FOR MANUAL OPERATION

*May be covered with yellow caps.*

Use 1/2" hex socket wrench.  
Cranking is easier if 2 people crank,  
one on each side of the coach.

#### To Manually Raise the beds

*Do the following in the order listed:*

1. Unplug the motor
2. Release the brake
3. Turn hex shaft with 1/2" ratchet.
4. Re-apply break at desired bed height.
5. Reconnect motor lead.

#### To Manually Lower the beds

*Do the following in the order listed:*

1. Unplug the motor
2. Release the brake
3. Bed will drift downward.
4. Re-apply break at desired bed height.
5. Reconnect motor lead.

**CAUTION:** BEFORE RELEASING BRAKE IN MANUAL MODE, MAKE SURE THERE ARE NO OBSTACLES BELOW THE BED PLATFORMS. KEEP HOLD OF THE BRAKE LEVER AS THE BEDS DECEND AND BE PREPARED TO REAPPLY THE BRAKE IF NECESSARY.