

Helix Curved Stair Lift

Installation & Service Manual

 **Harmar**[®]
America's Lift Leader™

www.harmar.com | 800-833-0478



WARNING! STRICT ADHERENCE TO THESE INSTALLATION INSTRUCTION IS REQUIRED to promote the safety of those installing this product, as well as that of those ultimately using the lift for its intended purpose. Any deviation from these instructions will void the Limited Warranty that accompanies the product. Additionally, any party installing the product who deviates from the Installation Instructions shall be taken to agree to INDEMNIFY, SAVE AND HOLD HARMLESS the manufacturer from any and all loss, liability or damage, including attorney fees, that might arise out of, or in connection with, such deviation.

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This Manual provides instructions for proper installation of this Curved Stair Lift. Please refer to the Owner's Manual for operating instructions. Be sure to provide the *Owner's Manual* to the owner of the lift before it is put into service. Any alterations to the equipment without written authorization by the manufacturer may void the warranty.

Our lifts are designed to install with as little assembly as possible. If you have questions, concerns or comments, please contact Harmar's Technical Service Department at **1-866-378-6848** or email **tech@harmar.com**.

Device Name: Harmar Helix Curved Stair Lift

Indications for Use:

The intended use of the Helix Stair Lift is to assist transfers of patients or mobility impaired persons up and down flights of stairs

NOTE: The following symbols indicate areas where you should take special care to avoid danger to individuals or property.



WARNING
Hazardous situation. If not avoided, could result in serious injury to installer or user.



CAUTION!
Hazardous situation. If not avoided, could result in serious damage to property.

BOX CONTENTS

Before beginning installation, please check the Curved Stair Lift contents and ensure that all components are complete and undamaged. Also check the enclosed illustration to verify specific parts since each lift is customized to the application. Report missing parts or shipping damage to your dealer or the shipping company.

CONTENTS

- Legs
- Rails
- Complete Seat Assembly
- Power Supply
- Wires
- Bag of Screws
- Pipe and Support Caps



Figure 3-1



Figure 3-2

TOOLS REQUIRED

- Ratcheting Allen Wrench (metric)
- Snap ring pliers
- Drill and Drill Bits
- Emery/Sandpaper
- Lightweight Grease
- Towels for cleaning
- Tape Measure (inches and centimeters)
- Angle Meter
- Mirror for checking charger
- Wire Stripper/Crimper
- Fish Tape
- Drill Extension Bit
- Mounting Screws could be needed, based on flooring
- Shims
- Picks
- Optional pull strap / Ratcheting Strap
- Recommended volt OHM meter

Lifts shall be installed so that means of egress is maintained as required by the authority having jurisdiction.

The structure which equipment is installed shall be capable of supporting the loads imposed.

The installation of electrical equipment and wiring shall conform to the requirements of NFPA70

Foot Rest Clearance. At no point in its travel shall the edge of the footrest facing the upper landing be more than 24 inches (600 mm) above the step or landing as measured vertically.

Harmar's Curved Stair Lift is easy to install. The standard installation will normally take only two installers approximately two hours. The time will vary depending on the complexity of the lift ordered and custom designs.

- 1. Review Installation Drawing** The dimensions on the drawing show numbers on the stairs. These numbers indicate the position of the Supports.
- 2. Carry chair/chassis to the location of the installation.** Usually top of stairs. It's best to be a flat section of rail.

WIRING NOTE: You may complete the wiring while putting the rail together or use a fish tape on the completed unit to run the wire.

3. Position Stair Supports

Place on the stair based on the installation drawing but do not bolt anything down at this point. [Figure 5-1]

- 4.** Clean or tap screw threads that hold track together. Check rail inside burs powder coating.

5. Assemble the Rail

Place the rail in the correct position beginning with the first section downstairs. Unwrap the rail, checking the label on the foam packaging for order of placement on stairs. [Figure 5-3 & 5-4]



Figure 5-3



Figure 5-4

Follow the drawing included with the rail system.

Run a wire through the lower rail. There is a hole at the charger location for it to come out. [Figure 5-2]

- 6.** Check both ends of the rail and wipe clean. You may need to clean the ends with Emery paper and add a small amount of grease to help slide the pipes together. [Figure 5-5]

IMPORTANT
Do NOT lay chair on its back.

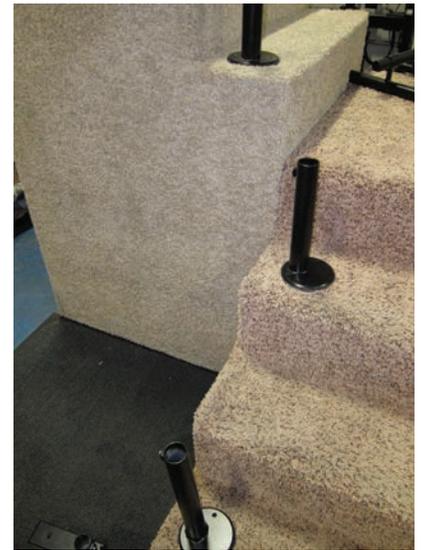


Figure 5-1



Figure 5-2



Figure 5-5

Installation

7. Slide the pipes together one at a time starting at the bottom in the order indicated on the label, in order. Install on the Stair Supports.
[Figure 6-1 – 6-3]

A ratcheting strap can be used to help pull the rails together.

8. Connect parts at the joint with the supplied screws. Carefully tighten as you assemble the rail [Figure 6-4 & 6-5]



Figure 6-4



Figure 6-5



Figure 6-1



Figure 6-2



Figure 6-3

When you arrive upstairs, adjust the position of the Rail and Supports while you compare with the drawing. [Figure 6-6]



Figure 6-6

9. Rail Leveling/Alignment: Using the angle meter, set the rail to the correct angles and check the drawing to verify that all clearances are correct.

10. Supports

Recheck angles then, using the appropriate hardware, attach the Supports to the stairs, starting at a corner. Firmly set the supports to the rail with set screw. Repeat the process at the other corners; recheck angles. Complete all other legs. [Figure 7-1 & 7-2]



Figure 7-1



Figure 7-2

NOTE: When installing to stair, ensure the hardware is long enough. If the carpet is very thick, it might require longer hardware (not supplied).

NOTE: Watch for tack strips. Avoid mounting on them. If you can't avoid them, shims will be required.



Never lay unit on its back.

WARNING!

11. Drive Unit/Seat

Open front of chassis, by removing 4 allen screws on shroud. Set chassis upright on base. Route wire of seat thru seat mounting hole. Install seat [Figures 8-1 & 8-2]. Install at 45° from base so the seat stop does not hit the limit switch. Install snap ring to hold seat.



Figure 8-1

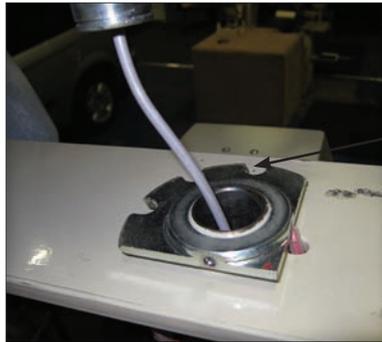


Figure 8-2

Seat Cutoff Switch (Lock)

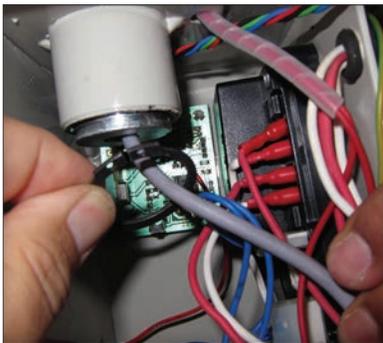


Figure 8-3

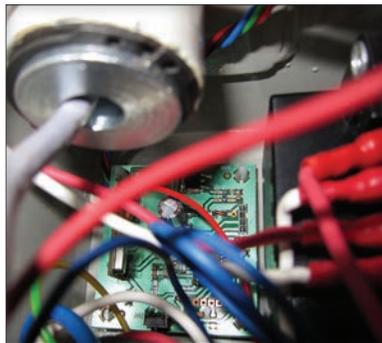


Figure 8-4

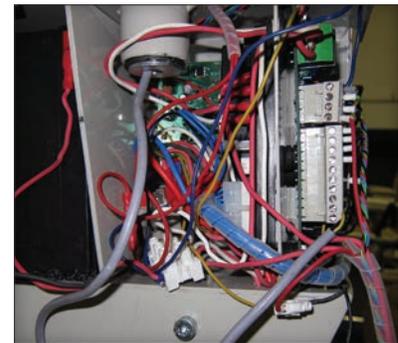


Figure 8-5

12. Install seat lock on with snap ring [Figures 8-3 – 8-5]

Install wires for joystick on wiring block grey wire from seat bottom [Figures 8-6]

Black 1 on wiring block 4th from end

Green on wiring block 3rd from end

Black 2 on wiring block 2nd from end



Figure 8-6

13. Install batteries.

14. Connect battery wire. [Figure 9-1]

15. Replace Shroud



Figure 9-1



Use caution when handling battery.

CAUTION

16. Install chassis.

Bottom roller position. Ensure charging point is on the bottom. [Figure 9-2]

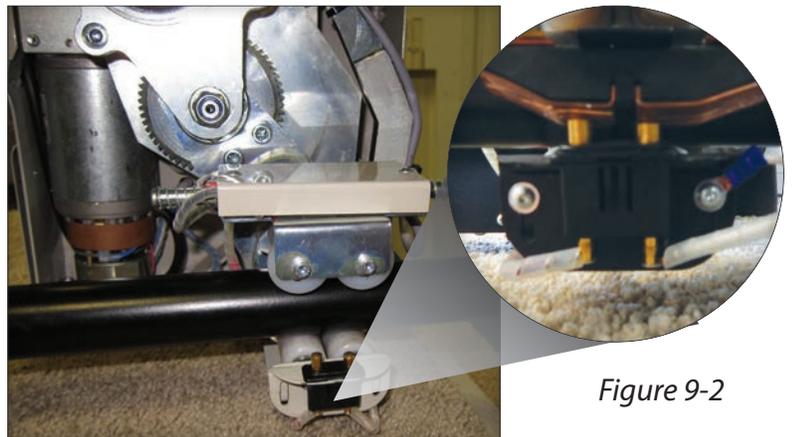


Figure 9-2



Ensure charging fingers are set as low as possible to ensure there is no interference with rail support.

CAUTION

Slide on until drive hits the gear rack. Activate the joystick to drive onto rack, watching the wheels to ensure they go on smoothly.

17. Charging Station

- Route red and black wires through hole provided in pipe by charging station

Determine which end has the AC power for the charger. Connect the charger to the red and black wires with the connectors provided. [Figures 9-3 & 9-4]

Clip off the green wire. (Not used)

NOTE FOR OUTSIDE INSTALLS : The battery charger needs to be placed out of the weather.

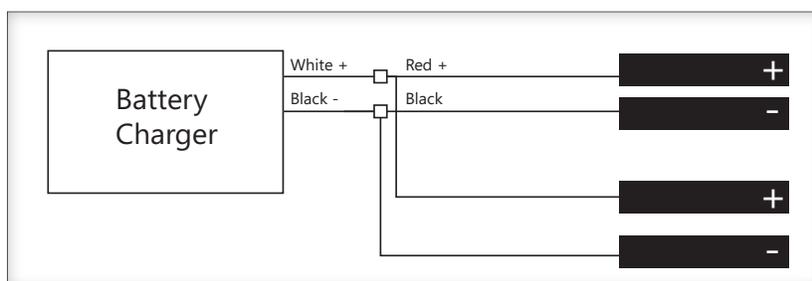


Figure 9-4

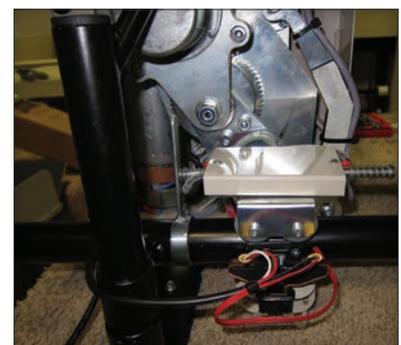


Figure 9-3

Installation



Figure 10-1

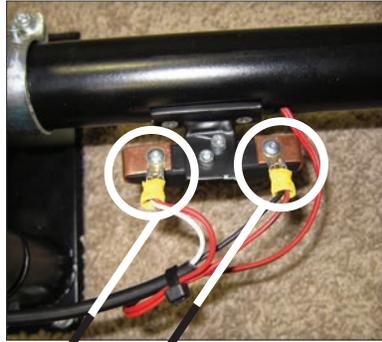


Figure 10-2

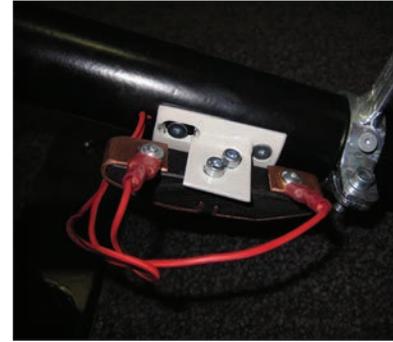


Figure 10-3

Mid station landing

The unit will stop on this when driven with the wireless remote. It will stop for 5 to 6 seconds then continue. It will not stop with the joystick.

Charging Station Alignment

When assembly is complete, align both Charging Stations. Pay attention to the Charging Contacts where the Drive Unit meets the Station. They should be applying pressure to the charging pins.
[Figure 10-4, Figure 10-5 & Figure 10-6]

Adjustment is on the chassis

Drive the unit to the other Charging Station and check the alignment. Adjust as needed.

18. Final Limit

- Install final limit bracket [Figure 10-7]
- Install hard final limit on gear rack [Figure 10-8]
- Pipe end caps and support caps need to be installed

Final limit hard stop [Figure 10-8 & Figure 10-9]



Figure 10-4



Figure 10-5



Figure 10-6



Figure 10-7



Figure 10-8



Figure 10-9

Wireless Remote Reprogramming

The wireless controllers are shipped preprogrammed for the seat.

On the wireless press the little button on the board then hold the up button on the remote for 3 to 4 seconds and it should learn the remote.

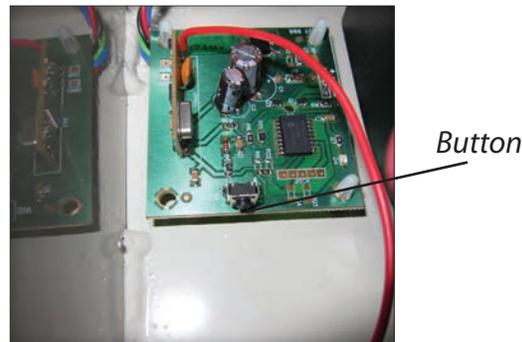


Figure 11-1

Final Checks

Before putting the lift into operation for the user verify the following:

- Check all stops (Top, middle & bottom)
- Foot rest (Both direction of travel)
- Rail (All hardware & mounting hardware are tight)
- Final limit (Both ends of travel)
- Seat swivel (Lift won't run if seat is swiveled)
- Check all clearances to ensure there are no pinch points
- Provide the Owner's Manual and review the lift's operation and stops with the customer.
- Charge for 12 hours after testing is complete.
- Test wireless remote (In both direction of travel)

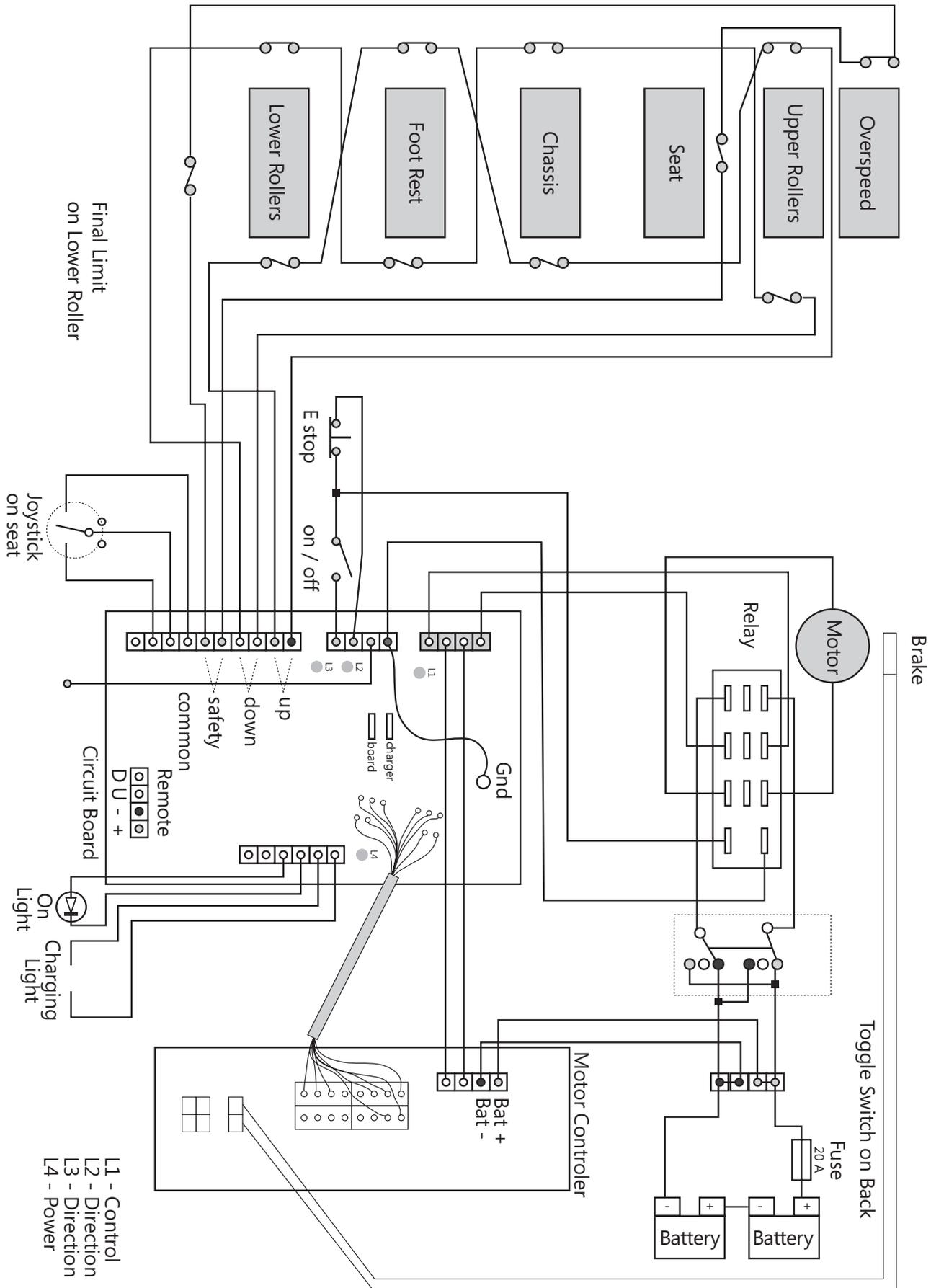
The lift is now ready to use. Remember to leave the Owner's Manual with the end-user and answer any questions they may have on the use of the Curved Stair Lift.

Technical Specifications

Weight capacity:	350 lbs.
Track (rail) Type:	Steel, Powder Coated
Travel:	20' Standard; 164' Maximum
Average Number of Return Trips per Charge (varies with load, length):	10
Symmetrical Lift (Ships and installs non-handed):	No
Control in Armrest: (left or right hand operation)	Yes
Lift Mounts to Steps or Wall:	Steps
Minimum Folded Width:	14.37" (365 mm)
Minimum Footrest Height:	5 1/2" (140 mm)
Clear Distance Between Armrests:	20.47" - 23.6" (520 - 600 mm)
Floor to Seat Height:	24" (610 mm)
Minimum Wall to Stair Side of Rail:	4.7" (120 mm)
Seat Depth:	14.96" (380 mm)
Backrest Height From Top of Seat:	20.47" (520 mm)
Electrical Requirements:	120VAC 15A 240 VAC optional
Operation Power:	24V DC Battery
Speed:	20 fpm
Incline Range: (max. by code):	45°
Drive System:	Rack & Pinion Gear
Safety Features:	Direction Limit Switches Final Limit Switch Footrest Obstruction Switch Seat Swivel/Cut-off Switch Constant Pressure Controls Seat Belt Safety Edges Overspeed Governor Emergency Stop
Safety Design Standards:	Complies with ASME A18.1, CAN/CSA B44.1, ASME A17.5
Warranty:	2-Year on Components



Wiring Diagram



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