



www.LightRail4.com

IMPORTANT SAFETY INSTRUCTIONS

Manufactured by Gualala Robotics, Inc., P.O. Box 774288, Steamboat Springs, CO 80477. *FOR USE WITH GROW LAMPS THAT ARE U.L. LISTED AND / OR C.S.A. CERTIFIED.* RISK OF FIRE AND ELECTRICAL SHOCK, THIS PRODUCT REQUIRES PROPER FIELD WIRING AND IS INTENDED TO BE INSTALLED BY A QUALIFIED ELECTRICIAN ONLY.

Please read these instructions and the operating instructions before installing your unit. The instructions supplied with your unit contain important information. Review all documentation before installing your unit.

1. Dropping this unit will cause serious damage to it.
2. Straight and secure Rail mounting is essential for both safety and operation. Refer to STEP ONE of the mounting instructions inside.
3. If you are using chain and/or hooks to hang your grow light from the drive unit, be sure they are load rated to handle the weight of your grow light.
4. This unit is supplied with a voltage transformer for use on a specific voltage. Never plug the transformer into a voltage other than specified on its label. In addition, the drive unit is rated for a specific electrical current. Never use the drive unit with a different voltage transformer other than the one supplied. There is an order form on the back of these instructions should you ever need a replacement. Also, a surge protector should be installed.
5. After installation, be sure there is plenty of slack in power cords as described in STEP FOUR of instructions.
6. The electrical portion of this unit is non-serviceable. Do not attempt to remove the switch box cover under any circumstances. If unit fails to operate due to an electrical malfunction, unplug, remove from Rail and return to manufacturer.
7. Always unplug unit if: you are adjusting grow light height; removing Drive Unit for service; or any procedure. A moving grow light warrants danger.
8. Warning: Never wire /hook this unit to your lamps /lights ballast it will cause serious damage to the motors circuitry.

INSTALLATION

STEP ONE: RAIL MOUNTING

To mount the Rail above area to be serviced, it is **strongly suggested** that the rail is first mounted to a board. The board should then be mounted to the ceilings mounting points. **If you are mounting to a finished ceiling, be sure to mount to the ceiling joist beneath the dry-wall. Straight, level and secure rail mounting is essential for safety and operation.** If you need help, we recommend you hire a carpenter.

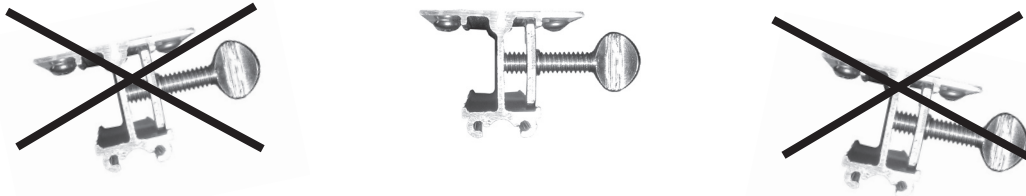


Fig. 1

STEP TWO: VARIABLE SPEED & TIME DELAY

LightRail 4.0 has both variable speed and time delay. By turning the knob on the left side of the switch box all the way to the left, the unit will travel at approximately 2.35 feet per minute. From that point the speed of the unit can be increased by turning the knob to the right until the maximum speed of approximately 3.925 feet per minute is achieved. The knob on the right side of the switch box is for adjusting the time delay. Turning the knob all the way to the left sets the time delay at 2 seconds. From that point, the length of the delay can be increased by turning the knob to the right until the maximum delay of 60 seconds is achieved. The hole just below the speed adjustment knob on the left side of the switch box is for plugging in the power supply.

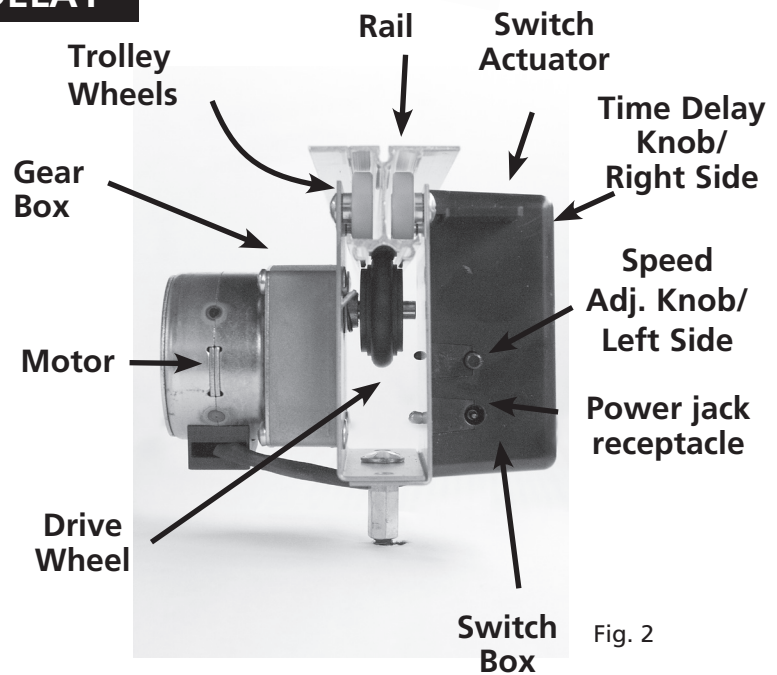


Fig. 2

STEP THREE: INSTALLING DRIVE MOTOR

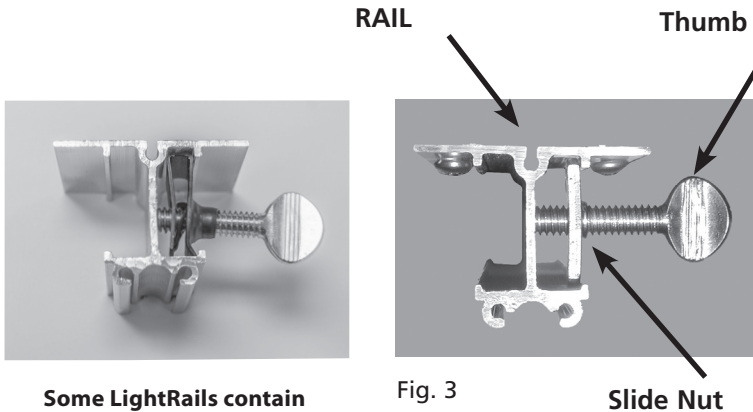
After the Rail is securely mounted above the area to be serviced, the Drive Motor can be installed on the Rail. First, turn the time delay knob counter clockwise until it stops. After plugging the voltage transformer into its power source, plug the power jack into the power jack receptacle under the speed adjustment knob. Place the leading two trolley wheels onto the Rail (Fig 4) while gently pushing upward. The Drive Motor should pull itself onto the Rail. If it wants to come back into your hand, push the switch actuator towards the Rail. Be very careful not to drop the drive unit while installing it on the rail, as it will cause serious damage to it.

STEP FOUR: SWITCH STOPS

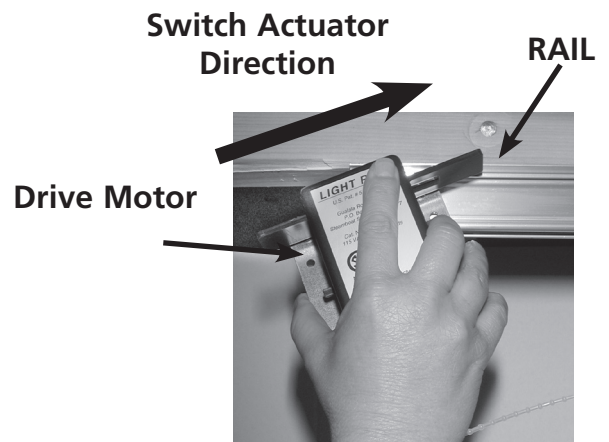
The switch stops are 2 thumbscrews and 2 rectangular nuts (slide nuts). First thread the thumb screws into the rectangular nuts. The switch stops are installed in the Rail's vertical channel (Fig. 3) one on each side of the Drive Motor, at any location along the Rail you desire.

INSTRUCTIONS

To tighten them, hold the slide nut in the Rail's channel and turn the thumb screw clockwise until it contacts the Rail. After tightening, the end tab of the thumb screw needs to be in a vertical position. you may need to use pliers to obtain this position. **It is important that the thumbscrews are tight.**

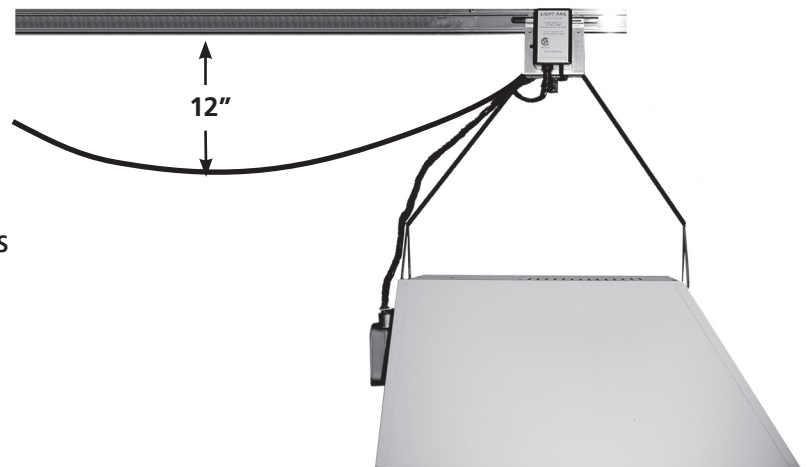


Some LightRails contain new style slide nuts. Install them as above, threads out and down.



STEP FOUR: LAMP HANGING

There are several ways to hang a Grow Lamp from the LightRail's Drive Motor. There are 2 holes at the bottom, these work well with the chain and hook method of lamp hanging. Also supplied is an eye-screw for threading into the coupler nut at the bottom of the Drive Motor. Gualala Robotics, Inc. manufactures a device called "RoboStik" if you are wanting to hang a horizontal reflector perpendicular to the direction of travel. Otherwise the 2 holes work very well. The important issue when hanging a lamp from the Lightrail is: **Be sure to leave enough slack in the cords so the Drive Motor can travel its full distance without restriction. We recommend that there be at least 12 inches distance from the bottom of the rail to the center of the power cords arc when the cords are fully extended and fasten both cords to the bottom of the Drive Motor. You can fasten to either of the two holes or the eye screw described earlier. Please do not fasten to the Motors Wires.**



CONDITIONS OF OPERATION

Adjusting the LightRail 4.0 AdjustaDrive variable time delay will be up to you, as all gardens are different. We suggest first setting the delay to 30 seconds. Then after observing your plant growth you may want to change the length of delay. A longer delay would dictate more light on the ends and less in the middle. A shorter delay would have the opposite effect.

The first few weeks of operation will be the Drive Motors break-in period. The trolley wheels will turn a dark gray as well as shed some nylon. The Drive Wheels O-Ring may turn silver, and it too will shed some skin. These are both normal conditions as the moving parts of the Drive Motor conform to their respective grooves of the Rail.

After several weeks of operation you may notice a slight pause as the Drive Motor changes direction, this is normal. It is the D Hole of the molded Drive Wheel showing some wear and loosening up upon the Drive Motors' shaft. Again this is normal and is a good thing as it will allow the Drive Wheel to self adjust upon the Motors' shaft. As for the pause when the Drive motor changes direction, this also is normal and beneficial. It will reduce the load on the gear train while changing direction.

It is a good idea to use a timer on the Drive Motor. After all, the lamp need not be moving when the lights are out. This period of off time adds up, and will greatly reduce wear on the Drive Motor.

If you are operating under dusty conditions, you may wipe the Rail off with a dry cloth from time to time.

LIGHTRAIL *4.0 LIMITED WARRANTY

1. IF YOUR Lightrail *4.0 DRIVE UNIT SHOULD FAIL TO OPERATE DUE TO MATERIAL DEFECT OR WORKMANSHIP WITHIN TWO (2) YEARS FROM DATE OF PURCHASE, GUALALA ROBOTICS WILL REPLACE, OR, AT OUR OPTION, REPAIR IT AT NO CHARGE TO YOU. PLEASE SAVE YOUR RECEIPT OF PURCHASE FOR THE DURATION OF WARRANTY.

2. LIMITATIONS:

Implied warranties, including those of fitness for a particular purpose and merchantability (an unwritten warranty that the product is fit for ordinary use), are limited to Two (2) years from date of purchase. We will not pay for loss of time, inconvenience, loss of use of your LightRail *4.0 or property damage caused by your LightRail *4.0 or its failure to work, or any other incidental or consequential damages. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATIONS MAY NOT APPLY TO YOU.

3. WARRANTY SERVICE PROCEDURE:

You must send your dated sales receipt along with a detailed description of the failure which occurs, and the drive unit to Gualala Robotics, Inc., 14704 East 33rd Place, Unit H, Aurora, CO 80011, including your NAME, ADDRESS, and TELEPHONE NUMBER.

You must pay shipping to the factory. After repair or replacement of your drive unit, Gualala Robotics will ship it back at no charge.

REPAIR OR REPLACEMENT OF YOUR LIGHTRAIL *4.0 DRIVE UNIT IS YOUR EXCLUSIVE REMEDY.

This warranty does not cover alterations, unauthorized repair, misuse, failure to follow instructions for installation, failure of any part other than the drive unit, fire, flood, and acts of God. We do not warrant that your LightRail *4.0 system, or any part thereof, will be compatible with any other similar product.

THIS WARRANTY IS THE ONLY ONE WE GIVE ON THE LIGHTRAIL *4.0 SYSTEM, AND IT GIVES YOU SPECIFIC RIGHTS. THERE ARE NO OTHER EXPRESS WARRANTIES. THERE ARE OTHER LEGAL RIGHTS WHICH YOU MAY HAVE, WHICH VARY FROM STATE TO STATE.

REPLACEMENT PARTS

The power cable on the LightRail 4.0 is a small diameter so extra care and attention needs to be given when running the cable away from the drive motor. After installation, please observe as the unit is running from end to end, pay close attention to the degree at which the power cable has to bend to achieve full travel. It is important that severe bends are avoided so that as the unit travels back and forth, the constant bending of the cable does not cause the copper wire to break within the cable's plastic insulation. LightRail 4.0 power supply order form is below.

Also:

Gualala Robotics, Inc. offers a consumables kit for sale direct from the factory. It contains one (1) O-RING and DRIVE WHEEL ASSEMBLY as well as one (1) TROLLEY WHEEL KIT with INSTRUCTIONS and FASTENERS. This consumable kit sells for \$12.00. If you are interested in obtaining this kit, you can pay with a credit card on the form below or send a money order payable to Gualala Robotics. We will fill your order promptly. Sorry, no C.O.D. or checks. We also offer a refurbish service at www.lightrail3.com

ORDER FORM POWER SUPPLY \$18.95 AND / OR REFURBISH KIT \$12.00

Please send me _____ LightRail 4.0 Power Supply/s @ \$18.95 (US Dollars) each. _____

Please send me _____ LightRail 4.0 consumables kit/s @ \$12.00 (US Dollars) each. _____

Total _____

Included is my credit card information or money order payable to Gualala Robotics Inc.

Send to: NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

CREDIT CARD NUMBER _____ CVV CODE _____ EXPIRATION DATE _____

NAME ON CARD _____ PHONE# _____

BILLING ADDRESS _____

CITY _____ STATE _____ ZIP _____

MAIL TO: GUALALA ROBOTICS INC. PO Box 774288, Steamboat Springs, CO. 80477