Before assembling or turning on the motor please read and heed all instructions.

• Be sure to have all necessary tools prior to beginning assembly.
• Please do not turn the motor on prior to installation. The unit is positioned at the factory to enable accurate and proper installation. Turning the motor on before completing installation will disrupt the proper position for installation.

Tools required

2 (two) 7/16 inch wrenches
1 (one) 1/2 inch wrench
chain to hang lamps
tools and material to secure Solar Revolution™ and to shelve the ballasts
ASSEMBLY INSTRUCTIONS

1) Remove the Solar Revolution™ from its box and visually inspect the unit for any damage.

2) The Solar Revolution™ should include:

- 1 motor housing with two center bar assemblies attached
- 4 2” arm mounting bolts (already attached to center arm)
- 4 1/4” nuts for mounting bolts (already attached to center arm)
- 4 bolts to attach mounting plate to framing member in ceiling
- 2 aluminum extender arms
- 2 u-bracket assemblies to hang reflectors from the arms
- 8 zip ties

WARNING:

• Be sure that the Solar Revolution™ is fastened to the framing members in the ceiling of your greenhouse or grow room.

• If using multiple reflectors, please follow these directions:
  • Each reflector with bulb should weigh about the same.
  • If reflectors of different brands are used, the weight must be checked and adjusted if necessary.
  • If reflectors of the same brand are used, no adjustments are necessary.
  • The reflectors should be the same distance from the center motor. AHL has “ruler” tape attached to the arms to make this easier.
  • If using multiple lamps do not exceed a combined total of 80 pounds.
  • Make sure the the mounting surface is level.
  • If using only one light, a counter-weight must be used.

• Make sure that the unit has enough circular clearance for the arm to rotate unobstructed. If an arm gets impeded, damage may occur to the unit. Also make sure there are no wires or cords hanging down that could impede the proper revolution of the motor.

If you only read one paragraph in these directions make it this one!
3) Note: one 1/2 inch wrench is necessary for this step of installation. Using the four screws provided attach the mounting plate SECURELY to overhead framing members or other sturdy wooden or metal structure.

**NOTE:**
It is important NOT to move the arm in any way. The arm should only move via the motor.

4) There are two center bars: an upper and a lower. The upper bar has yellow and pink stickers, the lower has green and blue. Unscrew mounting nuts and remove both mounting bolts from the upper bar. Slide one extender arm into the bar with the yellow dot until the holes in the bar and the arm align. Replace bolt, and tighten nuts securely.

Repeat this step for the side of the center bar with the pink dot.

5) AHL has included U-bracket hardware to hang your reflectors.

Take one of the brackets and place it onto one side arm. Take the other and place it onto the other side. The U on the U-bolt should be facing up, thus providing hanging points at the base.

Note: there are 2 nuts per side for safety. One regular, one nyloc.

There is “ruler” tape on the arms to enable placing the lamps at equal distances from the center motor. Position the brackets where you want the lamp to hang and tighten the screws provided. Make sure that they are equally distant from the center.
6) Take one lamp cord and socket and drape it over the U-bracket on the extender arm on the side of the center bar with the yellow dot. Make sure to leave enough slack in the cord between the socket and the U-bracket to enable hanging the reflector at its lowest point. Zip tie the cord to the U-bracket hardware at the top of the arm.

7) Take the lamp cord and zip tie it to the YELLOW eye bolt on the motor. The cord MUST pass on the side of the motor with the GREEN eye bolt—not on the other side! Make sure you leave enough slack in the lamp cord to accommodate proper rotation of the light mover—about a 6” bow should be sufficient.
8) Take the second lamp cord and socket and drape it over the U-bracket on the extender arm on the side of the center bar with the pink dot. Make sure to leave enough slack in the cord between the the socket and the U-bracket to enable hanging the reflector at its lowest point. Zip tie the cord to the U-bracket hardware at the top of the arm.

9) Take the lamp cord and zip tie it to the PINK eye bolt on the motor. The cord MUST pass on the side of the motor with the BLUE eye bolt—not the other side! Make sure you leave enough slack in the lamp cord to accommodate proper rotation of the light mover—about a 6" bow should be sufficient.

10) Note: mounting chain (not included) is necessary for this step; for optimum stability we recommend two chains per reflector.

Attach mounting chain onto each side of the U-bracket. Attach both chains to the reflector and repeat for the other arm of the mover.

A “third hand” (small, empty, sturdy box) may be helpful to hang the reflectors since their weight may over-tilt the arms, potentially damaging the mover.
11) Attach the sockets to each reflector with the hardware provided by the manufacturer.

Each lamp cord should now come from a reflector, up to and attaching to the U-bolt on the arm, past the motor on its left side, attaching to the eye bolt on the opposite side, and finally toward the ballast.

12) Be sure that both lamp cords and the motor cord are securely attached to the ceiling. It is extremely important to make sure that the arms can rotate without obstruction.

13) Ballast positioning: we recommend building shelves to mount the ballasts at a height which allows the cord to easily reach the reflectors. Remember that most ballasts are heavy. The shelf needs to be well built and attached to a wall stud or other sturdy structure.
14) Finally, a note about the original position of the motor assembly. When you purchased the Solar Revolution™ it came positioned from the factory ensuring these instructions are exact. Should the factory position be disrupted or should you want to change the location of your mover, you will have to reset the motor to its original position. When you received your mover, the original position had the side of the center bar with the yellow dot aligned with the pink eye-bolt; the initial direction was counter-clockwise. To return to these conditions turn on the motor and watch for rotation in the clock-wise direction. When the yellow dot on the center bar approaches the pink eye-bolt, the microswitch that changes the direction of the motor will click and the motion will turn to counter clock-wise. Immediately turn off the motor, and your mover will be ready to set up according to these instructions.

IMPORTANT ITEMS TO REMEMBER!

- Always use a counter weight if using just one reflector.
- When using two (2) reflectors, make sure they are positioned at equal distances from the drive motor. Never have one reflector further in on one arm and further out on the other!
- Always make sure that the reflector weights are the same. This only applies if different brands of reflectors are being used.
- Make sure there is enough cord slack for the unit to rotate as described in step 9-10.
- If using chain and/or hooks make sure the “load” rating is adequate to handle the weight.
- Make sure each ballast shelf is extremely secure.
- Make sure the Solar Revolution is mounted to the framing members in the ceiling of the grow room or greenhouse.
- This unit is rated for a specified voltage identified by the label on the drive motor. Never use this unit on a different voltage than specified.
- The unit is equipped with a 3 prong, grounded electrical plug. This unit will only fit into a 3 prong outlet. Do not defeat the grounding connection. If unable to insert into wall outlet, call an electrician to replace the outlet.
- Do not overload your household circuit. Two (2) 1000 watt lamps will consume 75-80% of a standard house 20 amp breaker! The Solar Revolution™ motor uses only 5.5 watts.
- Always unplug the unit if you are adjusting Grow Light height.
- The electrical portion of the unit is not serviceable. Do not attempt to open the unit under any circumstances—this will void the warranty! If the unit fails or malfunctions, call AHL Garden Supply at 505-255-3677 for further instructions.
Four reflector cord configuration

Four reflectors

Original extender arms

Additional extender arms for four lamps

Additional cords must pass over upper (original) extender arms
The photos on the previous page show the socket cord configuration for four reflectors. Two additional extender arms will slide into the lower center bar—the one with the blue and green dots. The cord from the reflector on the side of the center bar with the blue dot ought to attach to the U-bracket, go over the extender arm perpendicular while passing on the side of the motor with the yellow eye bolt, and attach to the blue eye bolt. The cord from the reflector on the side of the center bar with the green dot ought to attach to the U-bracket, go over the extender arm perpendicular while passing on the side of the motor with the pink eye bolt, and attach to the green eye bolt. The same principle applies for each extender arm. The cord comes up from the socket, attaches securely to the U-bracket assembly, passes on the left of the motor, and attaches securely to the eyebolt opposite, leaving about six inches hanging slack. Also, it is very important when using four extender arms that the cord goes OVER the extender arm situated cross-wise to the original.

**LIMITED WARRANTY**

AHL inc. (company) warrants to the original purchaser that said product (Solar Revolution™) will be free from defect in workmanship and materials for a period of two (2) years, one (1) year on all motors from the date of purchase. If there is a perceived problem with the Solar Revolution, contact AHL inc. (505)-255-3677 with a description of the problem. If necessary, AHL will issue a warranty return authorization number. Once received, AHL inc. will inspect the unit and repair or replace any defective part. AHL inc. reserves the right to refuse warranty service if the unit has been opened, misused, damage or modified in any way. If sending the unit, customer is responsible for initial postage, and AHL inc. will cover the postage back within the continental United States. Under no circumstance will AHL inc. accept warranty work without the return authorization number printed on the OUTSIDE of the box! If there is a failure, please contact AHL inc. prior to sending.

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 the date of purchase on workmanship and materials, one (1) year on the drive motor. We will not pay for loss of time, inconvenience, loss of use of your Solar Revolution™ or property damage caused by your Solar Revolution™ 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.