

The Solar Revolution

The Light Revolver for the next millennium!!!

Congratulations! You have purchased the most state of the art, high performance, circular light revolver ever offered to our industry; the Solar Revolution.

Benefits of the Solar Revolution

Heavy duty drive motor

All bearing loaded drive train

Round white powder coated light support arms

Whisper quiet operation

Detachable six foot cord

Compact design provides maximum plant-to-light clearance

No need to cut lamp cords because the universal design accommodates most lamp styles.

The Solar Revolution is compatible with West Coast Growers 4x4 light rack, and all West Coast Growers Grow Stands. It can be mounted to ceilings and rafters as well.

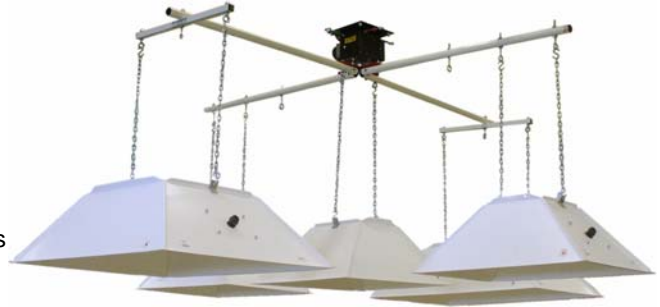
Extremely versatile – the revolver can run two, three, five, six and up to eight lights from the same unit.

The Solar Revolution has factory presets for 90, 180 or 355 degree rotation in the clockwise and counter clockwise direction; therefore no lamp cords become tangled or stretched. This rotation also allows for perfect blending between metal halide and hi pressure sodium lamps.

Light reflectors are easily adjusted in both vertical and horizontal positioning.

When used properly, the Solar Revolution can increase plant yield by 10% to 15% by allowing shadow shifting and deeper light penetration through the plant canopy. The Solar revolution does not minimize the number of lights required over a garden but in turn will enhance the overall effectiveness of the lights. Remember, the average garden requires greater than 50 watts per square foot for heavy fruiting plants.

There is a **2 Year Warranty** against defective workmanship and 1 year warranty on the motor from date of purchase. In the unlikely event of failure, send the unit to West Coast Growers 13481 Colfax Highway, Grass Valley California 95945: or call 888 924-4769



STOP:

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

DO NOT TURN THE MOTOR ON BEFORE READING THESE INSTRUCTIONS

The unit is positioned at the factory to enable accurate and safe installation. Turning the motor on before installation will disrupt proper positioning for reliable operation.

*****Warning*****

NEVER!!!!

Never push on or manually attempt turning the revolver by hand. This will damage the drive mechanism and void the warranty.

Tools required:

2 (two) 7/16 inch wrenches

Bill Of Materials Basic kit:

The Solar Revolution kit includes the following hardware:

1 Solar Revolution motor drive mechanism.

8 sets of ARM fastening nuts and bolts

8 lag bolts to attach drive mechanism to ceiling and attach lamp cords

Solar revolution ARM options:

Two arm kit: good for revolving two and or three reflectors: Typical garden size is 5x5

Four arm kit: good for revolving four up to as many as eight reflectors for 6x6 or 8x8 gardens

Swivel kit: good for revolving two reflectors while providing lamp positioning for 4x4 gardens

TWO ARM KIT



FOUR ARM KIT



SWIVEL KIT



General installation tips and guidelines:

☺ If you read anything in this manual read this!! ☺

- Be sure that the Solar Revolution is fastened to framing members and or joists in the ceiling of your green house or grow room.
- Ensure that the motor drive mechanism is level.
- When using multiple reflectors, please follow these general guidelines:

Never use one reflector; only use pairs of reflectors.

Each reflector assembly should weigh about the same

If the reflectors are of different brands, place reflectors of similar size on opposing arms to promote balance and uniform light delivery

If reflectors require glass ensure opposing reflectors each have glass to ensure a balanced load.

This unit is not compatible with reflectors that have on board ballasts.

This unit is only compatible with remote mount ballasts lighting systems

When hanging four reflectors, hang two reflectors closer to the center while the other opposing pair are positioned farther from the center to optimize light uniformity.

Do not exceed more than 30 pounds per arm when using multiple lights. Total weight should not exceed 120 pounds.

Always mount heavier reflectors towards the center while hanging lighter reflectors further from the center.

When hanging more than four reflectors, ensure that you choose reflectors made from aluminum to minimize weight load.

Multiple smaller wattage lighting systems are preferred over fewer larger wattage reflectors. For example: Six 400 Watt lights provide better light uniformity than four 600 Watt lights while at the same time, both configurations provide the same watts per square foot.

Use the 180 degree motor drive mechanism when two or three reflectors are required.

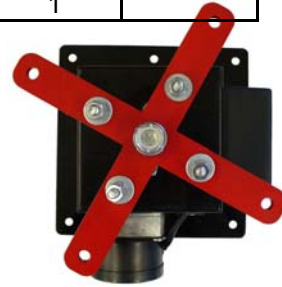
Use the 90 degree motor drive mechanism when more than four reflectors are required.

Make sure enough clearance exists to allow full rotations without obstructions
Make sure no lamp cords impede full rotation distance.

When installing the lamp cords, ensure enough slack is included to move the lamps up and down.

Bill of materials : Solar Revolution				
Item	Description	WCG Part number	QTY	verified
1	1.75" bolt	0030-00075	8	
2	1/4" Hex Nuts	0030-00009	8	
3	Flat cut washer 1/4"	0030-00007	16	
4	Locking washer	0030-00008	8	
5	Flat cut washer 5/8"	0015-00009	4	
6	2.5" Eye Screws	0015-00008	4	
7	Tie Wraps	0015-00003	16	
8	2.5" Eye Bolts	0030-00015	8	
9	Flat cut washer	0030-00007	8	
10	Locking washer	0030-00008	8	
11	Hex nut course thread	0030-00009	8	
12	ARMS	0011-00041	4	
13	Power Cord	0015-00010	1	

Solar Revolution drive mechanism:



Solar Revolution ceiling mount hardware kit:



Solar Revolution ARM kit



Solar Revolution detachable cord:



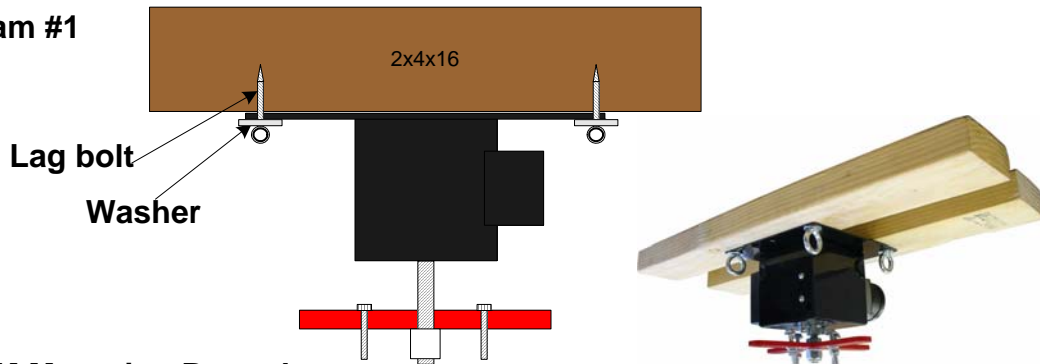
Installation & Assembly instructions

1. Ceiling Mount for the Solar Revolution

You will need two 2x4's cut to approximately 16 inches long. Screw them securely to the joists leaving a 3 inch gap between the two. This will allow the top plate of the Solar Revolution to be securely fastened. Once the 2x4's are fastened to the joists, place the Solar revolution drive mechanism up against the 2x4's so that the holes at the four corners of the mounting plate align with the two 2x4's already attached to the ceiling or joists. Now mark these positions on the 2x4s and use a 1/4" drill bit to drill starter holes at the four locations.

Using the four lag bolts and washers supplied with your kit and an adjustable wrench, turn the lag bolts into the wood until they snug the mounting plate securely against the 2x4's. See diagram #1 for detail.

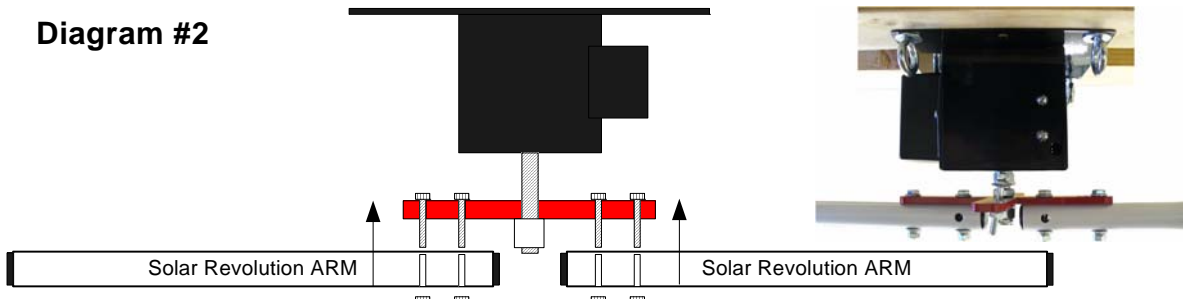
Diagram #1



2. ARM Mounting Procedure

Using the four nuts and bolts, fasten the ARMS to the red spindle located at the bottom of the Solar Revolution. The inner most nuts and bolts are factory installed on the spindle for your convenience. You will need to remove the nuts and washers from the inner most fastening hardware to mount the arms to the spindle as shown in diagram #1. If you are using Swivel Sticks, they will mount the same way as the ARMS are fastened.

Diagram #2



3. Some tips on wiring before you begin:

Assume that you will use 10 feet of a 15 foot lamp cord to wire and dress it properly.

Some lamp cords are stiff if fresh from the box. Use a hair dryer to heat the lamp cord and to straighten the kinks.

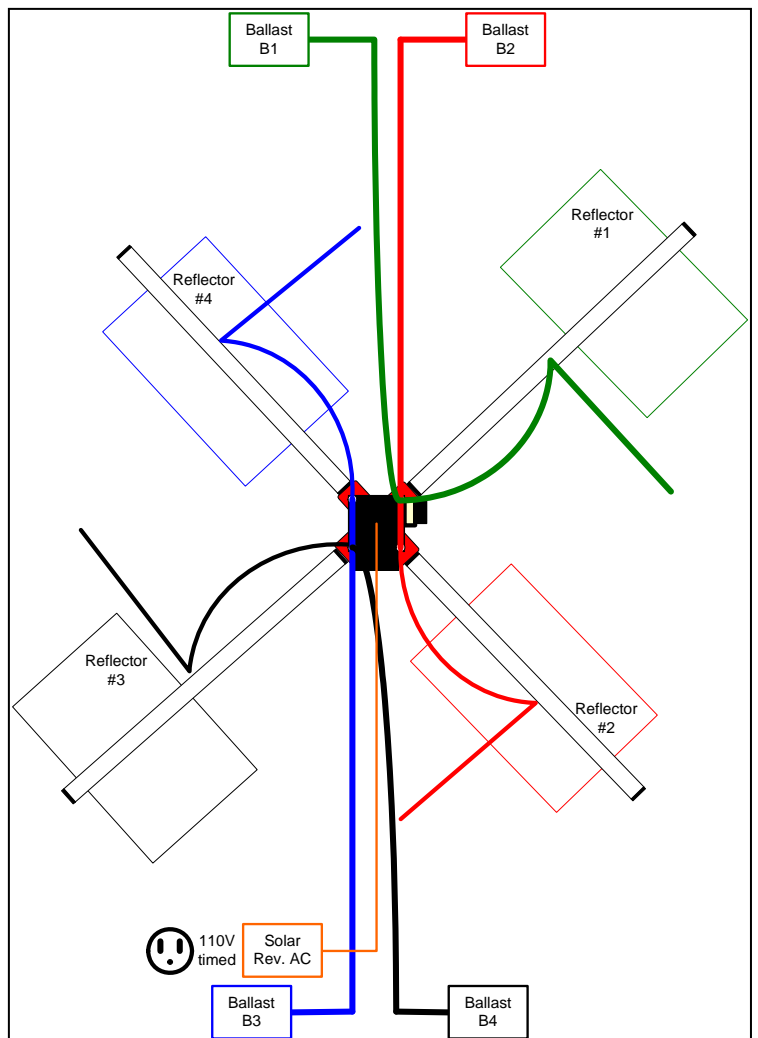
Label the reflector and ballast with corresponding letters or numbers to assist in identification later on.

For best results and optimum flexibility we recommend the West Coast Growers Grow Stand while of course all wiring can be fastened to a ceiling or rafters as well.

Be sure there are no obstructions or tangles that prevent the revolver from moving freely.

Wiring instructions:

The Solar revolution is set to a mid position when it is shipped from the factory. It is important to drape each lamp cords to the left of the arm so when the mechanism is turned on, the arms will begin to move away from the lamp cord. This will prevent long term lamp cord damage.

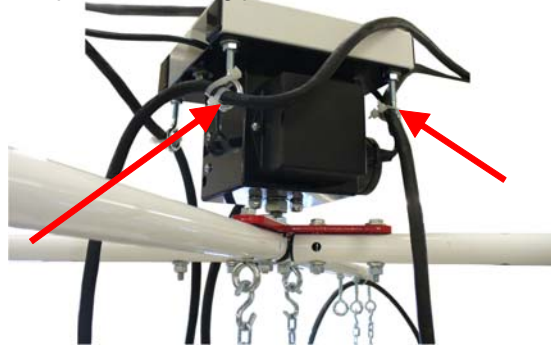


Wiring Instructions continued:

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When placing the lamp cords to the lamp cord mount points on the Solar Revolution ensure that the cord drapes in between the arms so they don't touch the arm. This can be accomplished by tie wrapping the cord to the eye-bolt mount point and then turn the eye-bolt until the wire is half way between the adjacent arms. Repeat this for all associated lamp cords See diagram #4

Lamp cord mounting points



Now tie wrap each wire to the Solar Revolution ARM's at approximately one foot from the end of each ARM. See diagram #5.

If ceiling mounting the Solar Revolution be sure all lamp cords are fasten securely to the ceiling so as not to snag or interfere with the ARM rotation.

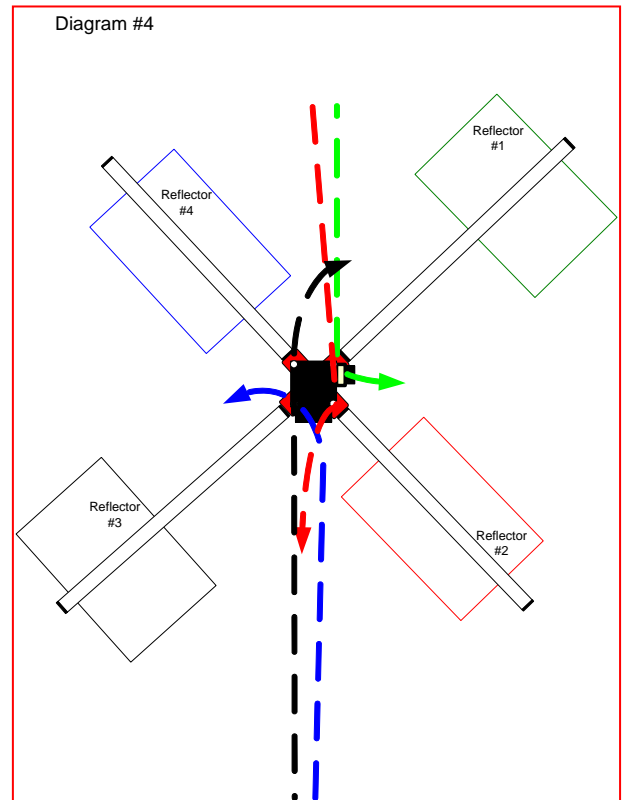
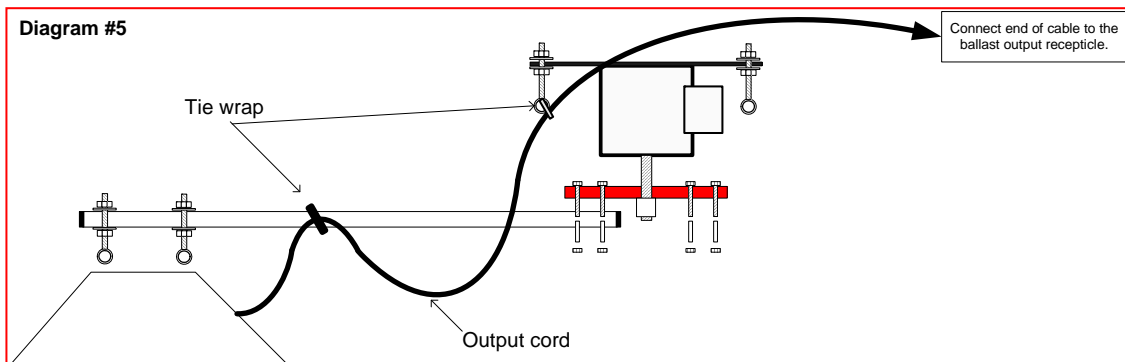
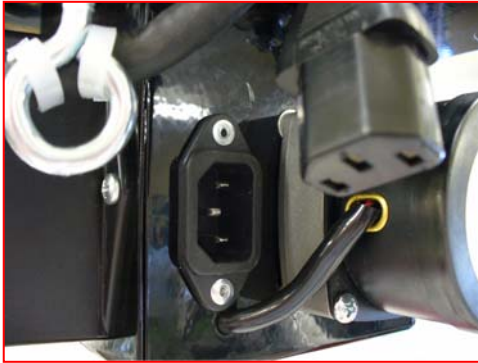


Diagram #5



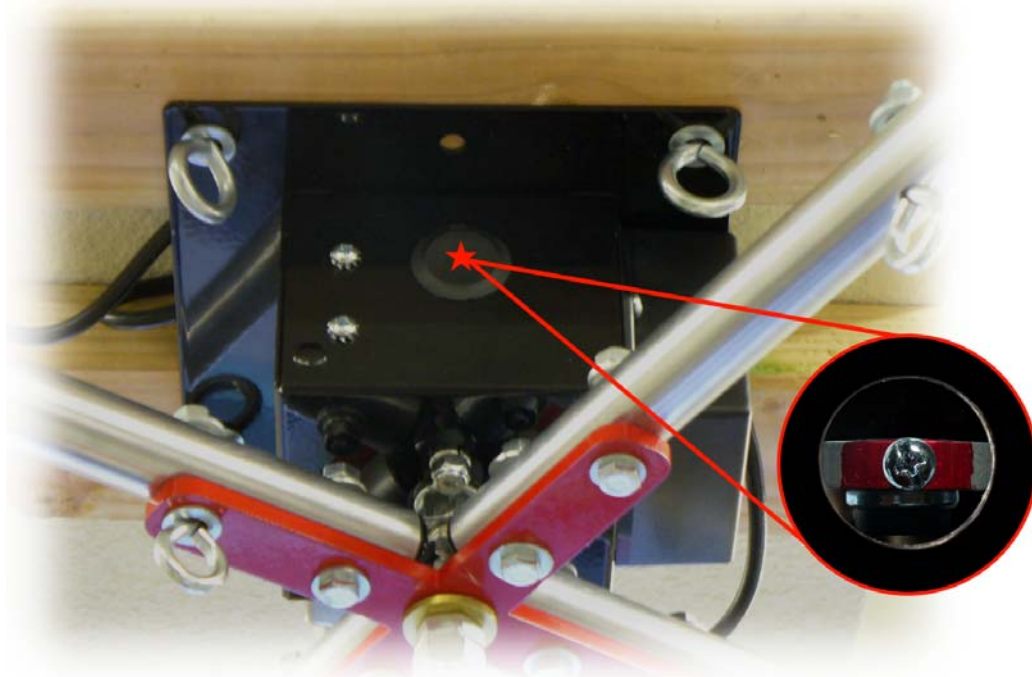
110V AC power receptacle:

Once all the lamps are in place on the ARMs and all lamp cords are properly tie wrapped, plug the AC power cord into the Solar Revolution. Then plug the power cord into a timer or 110V wall receptacle. The Solar revolution will now begin to turn the lights. Watch several rotations to ensure no obstructions or wire snagging exists.



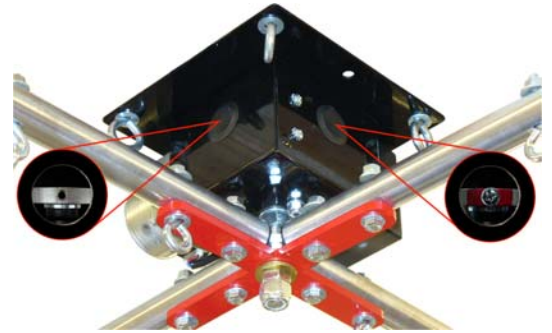
Adjusting the rotation for your Solar Revolution

The Solar Revolution comes factory preset in the "HOME" position and will rotate 90 degrees clockwise and counter clockwise when left in this configuration.



Rotation adjustments continued

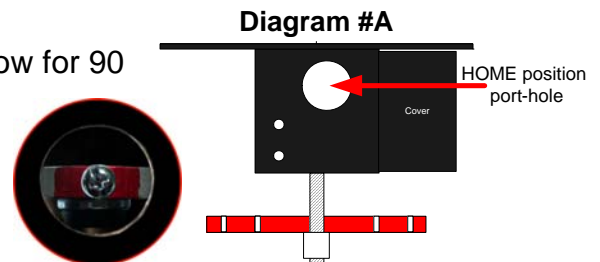
To change the rotation, first remove the porthole covers to gain access to the limit screws. Then ensure that the motor is in the home position as seen in the previous diagram.



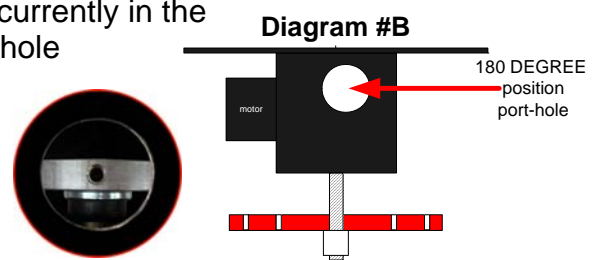
ONLY WHEN THE RED PORTION OF THE TRIGGER WHEEL IS SEEN IN THE "RIGHT-HAND" PORTHOLE COVER CAN THE ROTATION ADJUSTMENT BE RELIABLY ADJUSTED.

If the trigger wheel is not in the home position simply plug in the rotator and allow it to run until the red portion is observed in the RIGHT-hand porthole adjacent to the motor.

The limit screw if left at the factory preset will allow for 90 degree rotation.
(See diagram A)



For 180 degree rotation, remove the limit screw currently in the home position and move it to the secondary porthole located opposite the drive motor.
(See diagram B)



For 355 degree rotation simply remove the limit screw from the home position.

Note: use a magnetized Phillips head screw-driver to remove or change the limit screw. This will ensure that the limit screw can be removed or installed without dropping it into the assembly. Tissue paper put over the head of the Phillips head screw driver will also ensure that the trigger screw will not fall off of the tip of the screw driver.

You are now ready to enjoy even canopy growth and even better yields....Congratulations!!!

Limited Warranty

West Coast Growers (company) warrants to the original purchaser that said product (Solar revolution) will be free from defects in workmanship and materials for a period of two (2) years, one (1) year on drive motors from the date of purchase. If there is a perceived problem with the Solar Revolution, contact West Coast Growers (888) 924-4769 with a description of the problem. If necessary, West Coast Growers will issue an RMA # (Return Material Authorization Number). Once received, West Coast Growers will inspect the unit and repair or replace any defective component. West Coast Growers reserves the right to refuse service if the unit has been opened, misused, damaged or modified in any way. If sending the unit, the customer is responsible for initial postage and West Coast Growers will cover the postage back within the continental United States. Under no circumstances will West Coast Growers accept warranty work without the RMA# printed clearly on the OUTSIDE of the box. If there is a failure, please contact West Coast Growers prior to sending.

Limitations:

Implied warranties, include those of fitness for a particular purpose and merchantability (an in written warranty that the product is fit for ordinary use, are limited to two (2) years from 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 it's failure to work, or any other incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts or exclusion or limitation of incidental or consequential damages, so the above exclusion or limitations may not apply to you.