

Tips

- Always use grounded timers. Always follow ballast manufacturers breaker requirements.
- Never overload a circuit. Two 1000 Watt lamps draw 18 Amps which exceeds a standard 20 Amp household breaker.
- If you are using your 3LS to rotate one or two lamps, use a counterweight on the opposite arm/arms so the weight is balanced.
- A 3LS with three 1000 watt lamps will cover a 16' diameter circle. The optimum is a 9' circle depending on the light requirements of your strain and the efficiency of your lamp and reflector.
- Adjust lamps in or out, up or down, for uniform garden profile.
- We recommend mylar reflective surface at the edge of the growing area.
- If your Sun Circle stops functioning properly, DO NOT OPEN IT UP. Doing so will void your warranty. Call your distributor for guidance.

Customer Suggestions

We constantly improve and enhance our products. One of the most important sources of information and ideas to help us achieve this objective are the people who use Sun Circles, our customers. If you have any questions, comments, or ideas concerning the assembly, operation, or performance of your unit, please take the time to contact us. Your doing so will be greatly appreciated. We can also be reached by e-mail at info@amhydro.com.

Limited Warranty

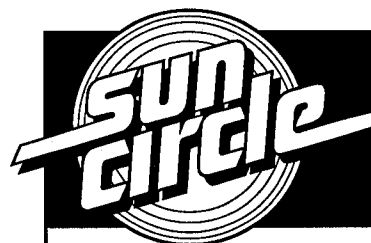
All utilization of concentrated power is potentially dangerous. The degree of hazard can be greatly reduced by proper design, selection, installation, and use, but hazards cannot be completely eliminated. Sun Circle, Inc. (Company) warrants to the original purchaser that this product will be free from defects in material and workmanship for a period of two (2) full years, one (1) year for all motors, from date of purchase. The Company's obligation under this warranty shall be strictly and exclusively limited to the repairing or replacing, at the factory or a service center of the Company, any such equipment and parts thereof which an authorized representative of the Company finds to be defective in material or workmanship under normal use and service within such a period of two years. The Company reserves the right to satisfy such obligation in full by refunding the full purchase price for any such defective equipment. In order to obtain warranty service, contact your distributor. Provide your name, address, proof of purchase, and a description of the problem. We will do our best to expedite your order for replacement parts.

This warranty is expressly in lieu of all warranties expressed or implied, including the warranties or merchantability and fitness in use, and of all other obligations or liabilities on part of the seller. This warranty shall not apply to this product, or any part thereof which has been taken apart, damaged by accident, abused, misused, modified, neglected, altered, or misapplied. This warranty shall apply only within the boundaries of the United States and Canada.

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Tomorrow's Garden Tools...Today!

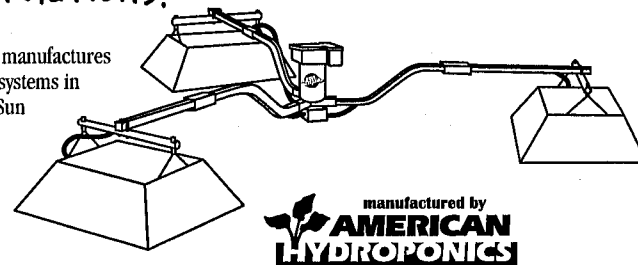
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**AMERICAN
HYDROPONICS**
286 South G St. • Arcata, CA 95521



Model 3LS ^{Series III} Light Rotator System Instructions

Congratulations!

American Hydroponics manufactures the finest light rotating systems in the world. Using your Sun Circle properly will dramatically increase cost efficiency and plant performance.



manufactured by
**AMERICAN
HYDROPONICS**

REG. PAT. #4,734,830

There are a few things you should do before you begin to assemble and install your new Sun Circle. First, read these instructions entirely before beginning assembly. Then make sure all the tools listed below are available in your growing area.

1. screwdrivers, both phillips and standard
2. wire strippers
3. crescent or open end wrench (size 7/16")
4. Exacto™ knife
5. tape measure

Finally, read and heed these two very important warnings.

WARNING #1

BE ABSOLUTELY SURE EVERYTHING IS UNPLUGGED BEFORE YOU START AND FOLLOW OUR WIRING INSTRUCTIONS TO THE LETTER!

WARNING #2

BE SURE THE SUN CIRCLE IS FASTENED TO A FRAMING MEMBER IN THE CEILING OF YOUR GROW ROOM OR GREENHOUSE.

Your Sun Circle will rotate any combination of HPS 1000 or 400, MH 1000 or 400, or Son Agro 430 and lamps will work with either a 120 or 240 volt ballast. Electricity consumption of motor at 120v: 12 RPH .40 amps. 240v. 12 RPH .20 amps.

3LS Series III

Figure 1

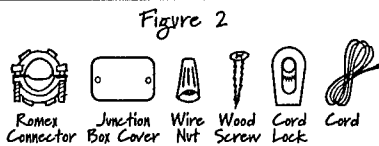
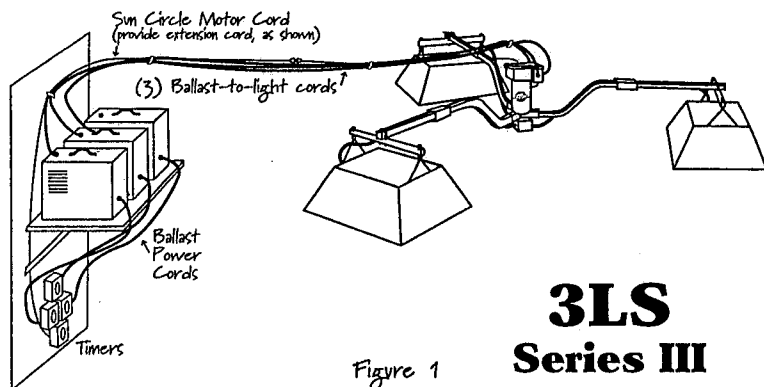


Figure 2

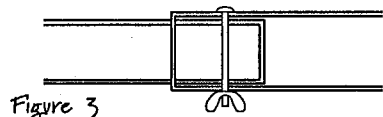


Figure 3

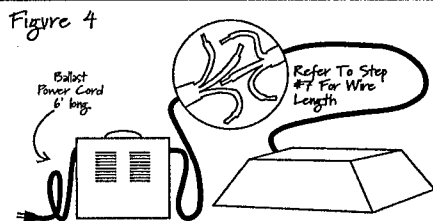


Figure 4

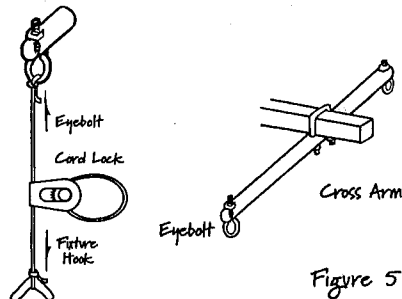


Figure 5

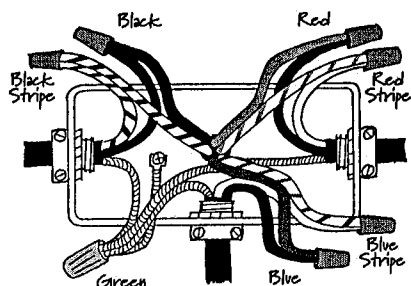


Figure 6

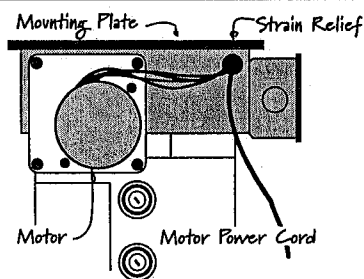


Figure 7

Assembly and Instructions

1. Visually inspect the Sun Circle for shipping damage. If none is found, plug it into a 120v outlet. You should hear a hum and see the shaft begin to turn. It may be a little loud at first but will quiet down once there is a load on it. Contact your distributor if there is any problem. **EITHER WAY, UNPLUG THE SUN CIRCLE NOW!**
2. Install Romex connectors into upper and lower junction box holes (Fig. 6). Tighten nuts securely.
3. Mount Sun Circle firmly to ceiling or other sturdy wooden structure. **REMEMBER WARNING #2!**
4. Slip together the two-piece arms. Install screws and wing nuts as per illustration (Fig. 3).
5. Insert arms into arm mounts on Sun Circle as in (Fig. 1). Secure locking screws.

UNPLUG YOUR LAMPS AND THE SUN CIRCLE!

6. Before hanging your reflectors make sure the bulbs are removed. Observe (Fig. 5) to see how cross arm and height adjusters are installed. Assemble cross arm. Notice it is offset. If you are mounting a vertical reflector, hang lamp from eyebolt closest to arm and use one cord and one cordlock. Either way, this step is best performed with both the reflector and the cross arm next to each other on the floor.

Tie one end of cord tightly on eyebolt. Pass through cord lock (Fig. 5) and tie off on fixture hook. To adjust lamp height, release ratchet with thumb and pull or release loop.

7. Refer to (Fig. 4). You will now cut the electrical cord. To allow for adequate vertical lamp adjustment, make cut six feet from the lamps fixtures. Strip back wire jackets 3 1/2 inches on both sides of each wire you just cut. Then separate the individual wires and strip each of them 1/2 inch.
8. Check the wire lengths (from ballast to Sun Circle) to determine correct mounting shelf height and mount ballasts (Fig. 1). Build a strong shelf that attaches to wall studs.
9. Slide wire from the first ballast through the romex connector on the upper junction box and tighten screws on connector (Fig. 6). Using two orange wire nuts, connect the black wire from the ballast to the red wire and the white wire from the ballast to the red striped wire in the junction box. Then connect the second ballast wires using the black and black striped wires in the junction box. Next, connect the third ballast using the blue and blue striped wires. Finally, connect the ground wires from ballasts to the green wire in the junction box with yellow wire nut. **MAKE SURE YOUR CONNECTIONS ARE TIGHT AND LEAVE NO WIRE EXPOSED.**
10. Repeat Step 9 with the lamp wires in the lower junction box. **REMEMBER, UPPER AND LOWER JUNCTION BOXES MUST BE WIRED EXACTLY THE SAME WAY.**
11. Before installing junction box covers, screw in lamps (following manufacturers instructions) and test lamps by plugging them directly into appropriate outlets. When lamps light, all is well; now install junction box covers. If lamp does not light, call your dealer for advice.
12. Secure lamp wires to Sun Circle arms (Fig. 1). Plug motor wire into 120v outlet or timer (use extension cord).
13. Secure ballast wires and motor wire to ceiling so they will not interfere with lamp rotation.
14. **FOR MANUAL ARM MOVEMENT ALWAYS SPIN ARMS IN OPPOSITE DIRECTION OF ROTATION.**

Looking Up at your Sun Circle

Push Arms Clockwise