

SUN SYSTEMS[®]

EST. **US** 1995

Technical Information Guide



Sunlight Supply, Inc.

National Garden Wholesale[®]

www.sunlightsupply.com • www.nationalgardenwholesale.com

IMPORTANT PRODUCT INFORMATION READ IMMEDIATELY

KEEP ORIGINAL PACKAGING – ALL RETURNS NEED TO BE IN THE ORIGINAL PACKAGING IN ORDER TO AVOID PRODUCT DAMAGE DURING SHIPPING. ANY DAMAGE TO PRODUCTS NOT IN THEIR ORIGINAL PACKAGING WILL NOT BE COVERED UNDER WARRANTY.

SAFETY FIRST!

FAILURE TO OBSERVE THE FOLLOWING SAFETY WARNINGS MAY RESULT IN SERIOUS INJURY. IN ADDITION, FAILURE TO OBSERVE THESE SAFETY WARNINGS WILL RESULT IN A WAIVER OF ALL LIABILITIES ON SUNLIGHT SUPPLY®, INC. AND WILL VOID ALL WARRANTIES.

WARNING:

- If the exterior of the lamp is damaged, replace lamp immediately.
- Disconnect power before re-lamping.
- When re-lamping, make sure lamp has time to cool before touching.
- Make sure power cord and lamp cord are connected properly.
- Do NOT hang by power cord or lamp cord.
- Do NOT make contact with the interior of the socket while the power is on.
- Do NOT operate the light systems in wet locations.
- Do NOT plug this system into a supply voltage other than what is instructed on the ballast.
- Do NOT attempt to open, rewire or reconfigure any components of the light system. It will void the warranty and could cause serious injury or death.
- These products operate at very high temperatures. Keep away from children.
- Do not plug or unplug a lamp cord while the ballast is turned on.
- Do not use with generators. Warranty will be voided.
- The Lite Pipe™, Sun Tube™ and Digital Fusion™ all need to be air cooled.
- Glass required in reflectors when using metal halide (MH) lamps for UL listing to apply. Not required with high pressure sodium (HPS) lamps.



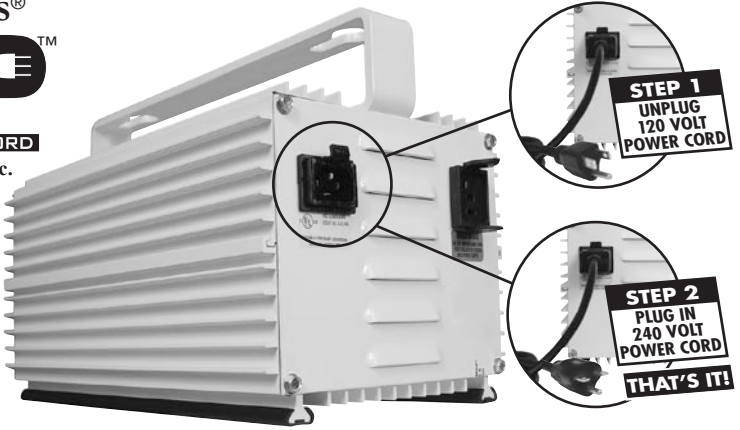
Fig. 2

REMOTE MVP™ SYSTEMS SETUP: (SUN SYSTEM® 1, 6 & 7)

1. Remove the system from the box along with all additional parts.
2. First attach the MVP™ (Multi Volt Powercord) to the system and make sure it properly latches. (See Fig. 1 on next page)
3. **Switchable Units:** When using a SS-6 MH/HPS (Metal Halide/High Pressure Sodium) switchable unit, switch the system to the MH side to run a Metal Halide lamp or HPS to run a High Pressure Sodium lamp. For a SS-6 1000 switchable, select the HPS option of the ballast by pushing the bottom of the switch so that the red part of the switch is visible. Press the top part of the switch for MH. A SS-6 400 switchable is marked HPS400 for the HPS side and MH400 for the MH side.
4. Connect the socket to the hanging reflector (see reflector setup Fig.4). If the lamp cord is included with the reflector, skip this step.

CAUTION
 CONNECT POWER
 CORD TO SYSTEM
 BEFORE PLUGGING
 INTO POWER SOURCE

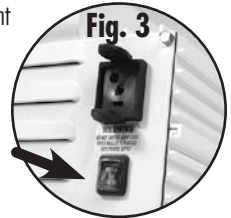
Fig. 1



TECHNICAL INFORMATION

The CWA (Constant Wattage Autotransformer) utilizes a single COMMON wire, which is common to all taps on the ballast. Also, when any tap on the ballast is energized, all taps become energized to that potential. For example, when a system is plugged into 120 volt, the unused 240 volt tap is still energized to approximately 240 volt. Rewiring the ballast from 120 volt to 240 volt only requires the change of a single wire. Additionally there is a required change on the opposite side of the power cord, which is changing the plug from a standard 120 volt plug (NEMA 5-15P) to a standard 240 volt plug (NEMA 6-15P). This sounds simple, but in reality it is not that easy. This requires replacing the 120 volt power cord for a 240 volt power cord in most cases. We designed our MVP™ to reduce the hassle, expense and potential safety hazards.

5. Now connect the lamp cord to the remote ballast (Fig.2). Make sure to attach the securement ears to the plug.
6. Carefully screw the proper lamp into the socket. Refer to lamping instructions on the ballast.
7. For SS-6 units make sure to select the proper setting on the ballast to match the lamp that is being used. Make sure the switch is properly set for either MH or HPS type lamp (Fig.3).
8. Lastly, turn the system on by plugging the power cord into the proper NEMA configured receptacle.
9. You must use a properly rated MVP™ cord (120 or 240 volt) for the power that you are using. *If you energize this ballast with 240 volt power while using a 120 volt MVP™ cord (by cutting the plug off), you will “fry” the ballast and void the warranty. If you want to run this ballast with 240 volt power, you must purchase a 240 volt MVP™ cord separately.*



BULB INFORMATION:

Proper Bulb Care

Bulbs should be replaced every year to maintain maximum lumen output. If a lamp fails to reach brightness, please contact your retail store.

Fluorescent fixtures

If there are bulbs that will not fire, try swapping the bulbs around for others that are working. This will help determine if the bulbs are defective.

REMOTE SMART VOLT™ SYSTEMS SETUP: (SUN SYSTEM® 10, BUDGET GRO™, HARVEST PRO™ & ELITE)

1. Remove the system from the box along with all additional parts.
2. The Smart Volt™ systems come standard with the 120 volt Smart Volt™ power cord. The Harvest Pro™ and Harvest Pro™ Elite have the Power Pointer™ voltage selector. The Sun System® 10 and Budget Gro™ have the Power Slider™ voltage selector. Make sure it is on the 120 volt option to plug in the provided cord. To change the voltage on the Harvest Pro™ & Harvest Pro™ Elite, simply pull out and twist 180° (Fig. 4a). For the Sun System® 10 & Budget Gro™, slide the door to the marked 240 volt side (Fig. 4b). To use the 240 volt you must purchase the 240 volt Smart Volt™ power cord (#903082 or #903084) separately.
3. Follow steps 4 through 6 on the Remote MVP™ Systems Setup.
4. Lastly, turn the system on by plugging the power cord into the proper NEMA configured receptacle.
5. You should use a properly rated Smart Volt™ cord (120 or 240 volt) for the power that you are using. *If you energize this ballast with 240 volt power while the female end of the power cord is plugged into the 120 volt receptacle you will “fry” the ballast and void the warranty. If you want to run this ballast with 240 volt power, you should purchase a 240 volt Smart Volt™ cord separately.*

Fig. 4a



Fig. 4b



REFLECTOR SETUP:

1. See (Fig. 5) for attaching the socket on reflectors which do not include the socket.
2. Some reflectors will come with a built-in socket assembly, while others you will need to purchase one separately.
3. If the reflector does not have a built in socket, use a socket assembly that is sold separately. Choose from Product No. 903055 or 903060.
4. Some reflectors include glass. For other reflectors it may be purchased separately if you choose to use it. Typically people use glass to control air movement through the reflector during air cooling. This also protects/contains the environment of your grow area. Glass is not required when using HPS lamps for the UL listing to apply. It is required for MH lamps for this listing to apply. The glass installation process will vary by reflector type. It is, although, a very simple process for all Sun System reflectors.
5. Use an eyebolt or some other means of hanging securely from the ceiling.
6. V-Hangers (Fig. 6) are used to hang the reflector.
7. SunLifts, #710125, Grow Yo-Yo, #710129 (Fig. 7) or jack chain may be used to adjust the hanging height.

Fig. 5

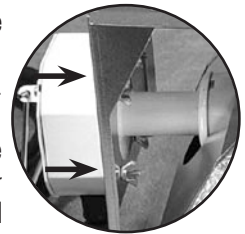
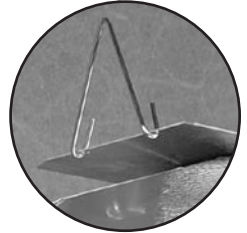


Fig. 6

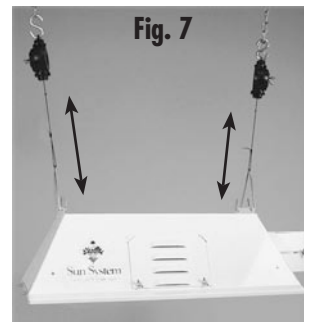


ENCLOSED SYSTEMS SETUP:

(SUN SYSTEM® 2, 3 & 4)

1. Remove the system from the box along with all additional parts.
2. These systems do not require much setup. Carefully screw the proper lamp into the socket, refer to lamping instructions on ballast.
3. Hang the fixture using the V-hangers provided.
4. (On/off switch should be in the off position.) Plug the unit into the proper NEMA configured receptacle.
5. Turn the fixture on using the on/off switch. Some systems may not include this feature.

Fig. 7



COMPACT FLUORESCENT SETUP:

(SUN SYSTEM[®] 8 & BRIGHT WING[®])

1. See reflector setup section for hanging instructions.
2. Insert the self-ballasted compact fluorescent lamp.
3. Do NOT screw the lamp in by holding onto the glass tubes, hold onto the plastic base to screw the lamp in.
4. If the unit has *on/off switches* make sure these are in the *off position* before plugging the system into the outlet.

LINEAR FLUORESCENT SETUP:

(TEK-LIGHT[™], NEW WAVE[®], READY FIT[®] & SUN BLAZE[®])

1. Remove the system from the box along with all additional parts.
2. Hang the unit using the eye bolts, V-hangers and jack chain provided (Optional cable hanger systems can be purchased separately).
3. Insert lamps (refer to label on product for correct lamp) into the system. To do this, slide both ends of the lamp into the lamp holders and rotate the lamp 90° in either direction (Fig. 8a). For the Ready Fit[®] T5 unscrew the water proof protective plastic cover counter clockwise. The protective cover will have to go directly on to the lamp before inserting into the lamp holder (Fig. 8b). Insert lamp and rotate 90° in either direction and slide the water proof protective cover back on and tighten.
4. Some New Wave[®] & Sun Blaze[®] models have the capability to be daisy chained together. Do not exceed 7.5 amps on any fixtures chained together. Do not daisy chain more fixtures together than what is specified on the fixture. Chaining more fixtures together than specified will void the warranty on all fixtures.



Fig. 8a

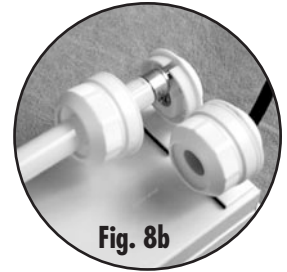


Fig. 8b

Fixture Type	Max # Chained
Sun Blaze [®] 22	12
Sun Blaze [®] 24	6
Sun Blaze [®] 44	5
Sun Blaze [®] 48	3

Fixture Type	Max # Chained @ 120V	Max # Chained @ 240V
New Wave [®] 28	5	9
New Wave [®] 44	5	8
New Wave [®] 48	3	5

REFLECTOR MOUNTING HEIGHTS

A general guideline for the proper hanging height of an H.I.D. lamp would be 12" - 48" depending on wattage (see below). Make sure to check for excessive heat at the top of your plants by placing your hand (palm down) over your plants. If the top of your hand is hot, you need to move your lamp up higher. If the light source is too close to your plants, you can burn them. Remember that as your plants grow you will need to adjust the height of your lamp.

Please keep in mind that the latest air-cooled reflectors, like the Super Sun[®] 2 allow you to place higher wattage bulbs closer to plants than was possible in the past.

When you raise the light up & away from your plants, you need to be aware that the light levels to your plants will be significantly reduced.

As light moves away from its source (the lamp) it diminishes as follows: 1/Distance². For example: 1 ft. = 1000 FTC, 2 ft. = 250 FTC, 3 ft. = 111 FTC, 4 ft. = 63 FTC, 5 ft. = 40 FTC, & 6 ft. = 28 FTC (FTC = foot candle).

COVERAGE AREA

A fluorescent fixture can be placed much closer to plants than an H.I.D. fixture because it produces very little heat. You should place your fluorescent lights as close to the tops of your plants as you can without excluding the outside perimeter of your garden.

H.I.D. AVERAGE COVERAGE AREA BY WATTAGE

150/175 watts covers approximately 2' x 2' area

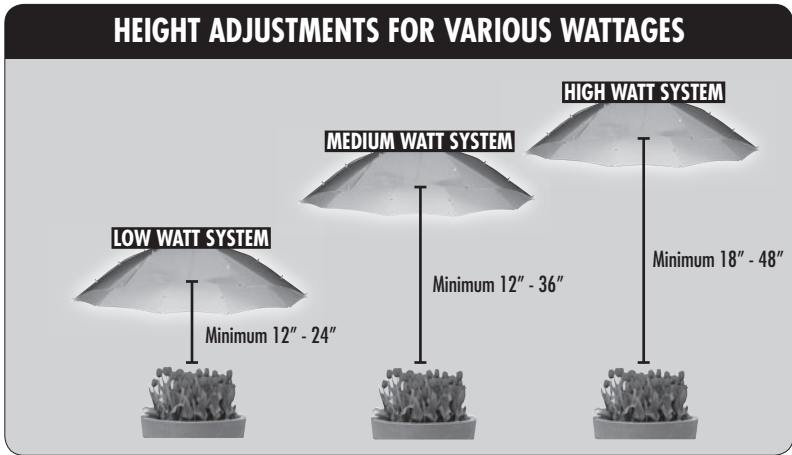
250 watts cover approximately 3' x 3' area

400 watts covers approximately 4' x 4' area

600 watts covers approximately 6.5' x 6.5' area

1000 watts covers approximately 8' x 8' area

NOTE: Coverage area may be reduced if this is your primary light source.



TROUBLESHOOTING... IF YOUR FIXTURE DOES NOT WORK:

1. CHECK YOUR ELECTRICAL SOURCE: Make sure the unit is plugged in properly and that the breaker is not tripped or fuse blown.
2. CHECK THE LAMP: Make sure the lamp is screwed in all the way.
3. FOR T5 FLUORESCENT FIXTURES: Check to ensure lamps are properly locked into place. This is accomplished by turning the lamps ¼ turn in either direction.
4. Try a different lamp if you have one available. Make sure unit is unplugged when changing lamps.
5. Make sure you have the correct lamp for your ballast, i.e. an HPS lamp will not ignite with a MH ballast.
6. MVP™ (Multi Volt PowerCord): When using a MVP™ plug, only use the one distributed with the unit or purchased at one of our Authorized Retailers. DO NOT make any changes to the Power Cord. This will VOID the warranty.

Potential Fixture FAQ's

Symptom: My ballast is humming but the light isn't coming on.

Solution: There may be a couple of reasons for this: 1) the lamp is not screwed in tight enough, or 2) the lamp is defective. Please allow 5 - 10 minutes for lamps to initially ignite. If this does not solve the problem, return the unit to the dealer for testing.

Symptom: *My ballast makes an excessive amount of noise.*

Solution: Keep in mind that the higher the wattage, the louder the humming noise emitted. However, if the noise level is extreme, the transformer may have come loose. In this case, the ballast unit should be returned to Sunlight Supply®, Inc. for repair if it is still under warranty and has been used under normal operating conditions.

Symptom: *Every time I turn on the light fixture, the circuit breaker trips.*

Solution: You may have too many appliances on this circuit. A normal home's circuit has only 15 amps available. These H.I.D. lights use up to 10 amps per unit. Please make sure you are not overloading the circuit with too many appliances and/or lights. Note: The sticker on the ballast will state the number of amps required by that particular unit. If you do require more lights/appliances to all be run off the same circuit, you should consult an licensed Electrician.

Symptom: *I turned off my HID light and now it won't come back on.*

Solution: Your lamp may take up to 20 minutes to cool down before it can be fired up again. Fluorescent lamps should be almost immediate.

Symptom: *My lamp has small pieces of glass inside of it.*

Solution: It is common for small pieces of glass to break loose inside the lamps; this will not affect the lamps output. If there is a crack or hole in the outer glass, it should be replaced.

IF NONE OF THE ABOVE PROCEDURES HELP, PLEASE CONTACT THE RETAIL STORE WHERE YOU PURCHASED THE UNIT.

How do I know my lamps are functioning normally?

FACTS about HID and FLUORESCENT LAMPS:

- It may take HID or T5 fluorescent 10-15 minutes to come to full brightness.
- HID: During the first few hours of use, the light from the lamp might oscillate.
- HID: The light will decrease in intensity during the life of the lamp.
- HID: During the first hours, intensity of the light may fluctuate somewhat, which is normal. However after it reaches 100 hours of "burn in" time, will continue evenly the remainder of it's life (with normal aging reduction).
- Both: Average life of a MH (metal halide) lamp is 12,000 hours for a 1000 watt lamp and 20,000 hours for a 400 watt lamp. The rated hour life of a HPS lamp is 24,000 hours. Most users choose to replace lamps before they cease to operate due to lumen loss and spectral shift. T5 fluorescent lamps offer a rated hour life of 20,000 hours and have a much slower lumen loss and spectral shift than HID lamps.

POWER USAGE:

On average, a light system will increase your electricity cost from \$8 to \$20 per month — the exact amount depends on the size of the system and the number of hours operated. However, since these grow lights are so energy efficient, you are getting huge amounts of light (and growing power) for your money! Make sure your grow room's power circuit can handle the power draw. For safety reasons, do not exceed 75% of the rated ability of the fuse/breaker (for example: use no more than 15 amps on a 20 amp circuit). To calculate your cost, multiply the bulb wattage X hours of operation and divide by 1000. This figure is the number of kilowatt hours of electricity consumed. (Example: a 400 watt bulb running for 18 hours will use 7.2 kilowatt hours). Check your power bill for the cost of each kilowatt hour. Then multiply the number of kilowatt hours by the cost of a kilowatt hour (K/hr) to arrive at the cost per month to run the light in your area.

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 52 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$.37											
6 HRS X 30 DAYS	\$0.37	\$0.56	\$0.75	\$0.94	\$1.12	\$1.31	\$1.50	\$1.68	\$1.87	\$2.06	\$2.25	\$2.43
8 HRS X 30 DAYS	\$0.50	\$0.75	\$1.00	\$1.25	\$1.50	\$1.75	\$2.00	\$2.25	\$2.50	\$2.75	\$3.00	\$3.24
10 HRS X 30 DAYS	\$0.62	\$0.94	\$1.25	\$1.56	\$1.87	\$2.18	\$2.50	\$2.81	\$3.12	\$3.43	\$3.74	\$4.06
12 HRS X 30 DAYS	\$0.75	\$1.12	\$1.50	\$1.87	\$2.25	\$2.62	\$3.00	\$3.37	\$3.74	\$4.12	\$4.49	\$4.87
14 HRS X 30 DAYS	\$0.87	\$1.31	\$1.75	\$2.18	\$2.62	\$3.06	\$3.49	\$3.93	\$4.37	\$4.80	\$5.24	\$5.68
16 HRS X 30 DAYS	\$1.00	\$1.50	\$2.00	\$2.50	\$3.00	\$3.49	\$3.99	\$4.49	\$4.99	\$5.49	\$5.99	\$6.49
18 HRS X 30 DAYS	\$1.12	\$1.68	\$2.25	\$2.81	\$3.37	\$3.93	\$4.49	\$5.05	\$5.62	\$6.18	\$6.74	\$7.30

* A 48 watt lighting fixture uses 52 watts per hour. For use with the New Wave® 22, Sun Blaze® 22 & Ready Fit® 2 ft.

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 104 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$.75											
6 HRS X 30 DAYS	\$0.75	\$1.12	\$1.50	\$1.87	\$2.25	\$2.62	\$3.00	\$3.37	\$3.74	\$4.12	\$4.49	\$4.87
8 HRS X 30 DAYS	\$1.00	\$1.50	\$2.00	\$2.50	\$3.00	\$3.49	\$3.99	\$4.49	\$4.99	\$5.49	\$5.99	\$6.49
10 HRS X 30 DAYS	\$1.25	\$1.87	\$2.50	\$3.12	\$3.74	\$4.37	\$4.99	\$5.62	\$6.24	\$6.86	\$7.49	\$8.11
12 HRS X 30 DAYS	\$1.50	\$2.25	\$3.00	\$3.74	\$4.49	\$5.24	\$5.99	\$6.74	\$7.49	\$8.24	\$8.99	\$9.73
14 HRS X 30 DAYS	\$1.75	\$2.62	\$3.49	\$4.37	\$5.24	\$6.12	\$6.99	\$7.86	\$8.74	\$9.61	\$10.48	\$11.36
16 HRS X 30 DAYS	\$2.00	\$3.00	\$3.99	\$4.99	\$5.99	\$6.99	\$7.99	\$8.99	\$9.98	\$10.98	\$11.98	\$12.98
18 HRS X 30 DAYS	\$2.25	\$3.37	\$4.49	\$5.62	\$6.74	\$7.86	\$8.99	\$10.11	\$11.23	\$12.36	\$13.48	\$14.60

* A 96 watt lighting fixture uses 104 watts per hour. For use with the New Wave® 24 & Sun Blaze® 24.

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 117 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$.84											
6 HRS X 30 DAYS	\$0.84	\$1.26	\$1.68	\$2.11	\$2.53	\$2.95	\$3.37	\$3.79	\$4.21	\$4.63	\$5.05	\$5.48
8 HRS X 30 DAYS	\$1.12	\$1.68	\$2.25	\$2.81	\$3.37	\$3.93	\$4.49	\$5.05	\$5.62	\$6.18	\$6.74	\$7.30
10 HRS X 30 DAYS	\$1.40	\$2.11	\$2.81	\$3.51	\$4.21	\$4.91	\$5.62	\$6.32	\$7.02	\$7.72	\$8.42	\$9.13
12 HRS X 30 DAYS	\$1.68	\$2.53	\$3.37	\$4.21	\$5.05	\$5.90	\$6.74	\$7.58	\$8.42	\$9.27	\$10.11	\$10.95
14 HRS X 30 DAYS	\$1.97	\$2.95	\$3.93	\$4.91	\$5.90	\$6.88	\$7.86	\$8.85	\$9.83	\$10.81	\$11.79	\$12.78
16 HRS X 30 DAYS	\$2.25	\$3.37	\$4.49	\$5.62	\$6.74	\$7.86	\$8.99	\$10.11	\$11.23	\$12.36	\$13.48	\$14.60
18 HRS X 30 DAYS	\$2.53	\$3.79	\$5.05	\$6.32	\$7.58	\$8.85	\$10.11	\$11.37	\$12.64	\$13.90	\$15.16	\$16.43

* A 108 watt lighting fixture uses 117 watts per hour. For use with the Tek-Light™ 42, New Wave® 42 & Ready Fit® 4 ft.

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 165 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$ 1.19											
6 HRS X 30 DAYS	\$1.19	\$1.78	\$2.38	\$2.97	\$3.56	\$4.16	\$4.75	\$5.35	\$5.94	\$6.53	\$7.13	\$7.72
8 HRS X 30 DAYS	\$1.58	\$2.38	\$3.17	\$3.96	\$4.75	\$5.54	\$6.34	\$7.13	\$7.92	\$8.71	\$9.50	\$10.30
10 HRS X 30 DAYS	\$1.98	\$2.97	\$3.96	\$4.95	\$5.94	\$6.93	\$7.92	\$8.91	\$9.90	\$10.89	\$11.88	\$12.87
12 HRS X 30 DAYS	\$2.38	\$3.56	\$4.75	\$5.94	\$7.13	\$8.32	\$9.50	\$10.69	\$11.88	\$13.07	\$14.26	\$15.44
14 HRS X 30 DAYS	\$2.77	\$4.16	\$5.54	\$6.93	\$8.32	\$9.70	\$11.09	\$12.47	\$13.86	\$15.25	\$16.63	\$18.02
16 HRS X 30 DAYS	\$3.17	\$4.75	\$6.34	\$7.92	\$9.50	\$11.09	\$12.67	\$14.26	\$15.84	\$17.42	\$19.01	\$20.59
18 HRS X 30 DAYS	\$3.56	\$5.35	\$7.13	\$8.91	\$10.69	\$12.47	\$14.26	\$16.04	\$17.82	\$19.60	\$21.38	\$23.17

* A 150 watt lighting fixture uses 165 watts per hour. For use with the Sun System® 4 & Sun System HPS 150.

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 196 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$1.41											
6 HRS X 30 DAYS	\$1.41	\$2.12	\$2.82	\$3.53	\$4.23	\$4.94	\$5.64	\$6.35	\$7.06	\$7.76	\$8.47	\$9.17
8 HRS X 30 DAYS	\$1.88	\$2.82	\$3.76	\$4.70	\$5.64	\$6.59	\$7.53	\$8.47	\$9.41	\$10.35	\$11.29	\$12.23
10 HRS X 30 DAYS	\$2.35	\$3.53	\$4.70	\$5.88	\$7.06	\$8.23	\$9.41	\$10.58	\$11.76	\$12.94	\$14.11	\$15.29
12 HRS X 30 DAYS	\$2.82	\$4.23	\$5.64	\$7.06	\$8.47	\$9.88	\$11.29	\$12.70	\$14.11	\$15.52	\$16.93	\$18.35
14 HRS X 30 DAYS	\$3.29	\$4.94	\$6.59	\$8.23	\$9.88	\$11.52	\$13.17	\$14.82	\$16.46	\$18.11	\$19.76	\$21.40
16 HRS X 30 DAYS	\$3.76	\$5.64	\$7.53	\$9.41	\$11.29	\$13.17	\$15.05	\$16.93	\$18.82	\$20.70	\$22.58	\$24.46
18 HRS X 30 DAYS	\$4.23	\$6.35	\$8.47	\$10.58	\$12.70	\$14.82	\$16.93	\$19.05	\$21.17	\$23.28	\$25.40	\$27.52

* A 175 watt lighting fixture uses 196 watts per hour. *For use with the Sun System® 4*

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 234 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$ 1.68											
6 HRS X 30 DAYS	\$1.68	\$2.53	\$3.37	\$4.21	\$5.05	\$5.90	\$6.74	\$7.58	\$8.42	\$9.27	\$10.11	\$10.95
8 HRS X 30 DAYS	\$2.25	\$3.37	\$4.49	\$5.62	\$6.74	\$7.86	\$8.99	\$10.11	\$11.23	\$12.36	\$13.48	\$14.60
10 HRS X 30 DAYS	\$2.81	\$4.21	\$5.62	\$7.02	\$8.42	\$9.83	\$11.23	\$12.64	\$14.04	\$15.44	\$16.85	\$18.25
12 HRS X 30 DAYS	\$3.37	\$5.05	\$6.74	\$8.42	\$10.11	\$11.79	\$13.48	\$15.16	\$16.85	\$18.53	\$20.22	\$21.90
14 HRS X 30 DAYS	\$3.93	\$5.90	\$7.86	\$9.83	\$11.79	\$13.76	\$15.72	\$17.69	\$19.66	\$21.62	\$23.59	\$25.55
16 HRS X 30 DAYS	\$4.49	\$6.74	\$8.99	\$11.23	\$13.48	\$15.72	\$17.97	\$20.22	\$22.46	\$24.71	\$26.96	\$29.20
18 HRS X 30 DAYS	\$5.05	\$7.58	\$10.11	\$12.64	\$15.16	\$17.69	\$20.22	\$22.74	\$25.27	\$27.80	\$30.33	\$32.85

* A 216 watt lighting fixture uses 234 watts per hour. *For use with Tek-Light™ 44, New Wave™ 44 & Sun Blaze® 44.*

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 275 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$ 1.98											
6 HRS X 30 DAYS	\$1.98	\$2.97	\$3.96	\$4.95	\$5.94	\$6.93	\$7.92	\$8.91	\$9.90	\$10.89	\$11.88	\$12.87
8 HRS X 30 DAYS	\$2.64	\$3.96	\$5.28	\$6.60	\$7.92	\$9.24	\$10.56	\$11.88	\$13.20	\$14.52	\$15.84	\$17.16
10 HRS X 30 DAYS	\$3.30	\$4.95	\$6.60	\$8.25	\$9.90	\$11.55	\$13.20	\$14.85	\$16.50	\$18.15	\$19.80	\$21.45
12 HRS X 30 DAYS	\$3.96	\$5.94	\$7.92	\$9.90	\$11.88	\$13.86	\$15.84	\$17.82	\$19.80	\$21.78	\$23.76	\$25.74
14 HRS X 30 DAYS	\$4.62	\$6.93	\$9.24	\$11.55	\$13.86	\$16.17	\$18.48	\$20.79	\$23.10	\$25.41	\$27.72	\$30.03
16 HRS X 30 DAYS	\$5.28	\$7.92	\$10.56	\$13.20	\$15.84	\$18.48	\$21.12	\$23.76	\$26.40	\$29.04	\$31.68	\$34.32
18 HRS X 30 DAYS	\$5.94	\$8.91	\$11.88	\$14.85	\$17.82	\$20.79	\$23.76	\$26.73	\$29.70	\$32.67	\$35.64	\$38.61

* A 250 watt lighting fixture uses 275 watts per hour. *For use with Sun System® 2 & 4.*

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 460 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$ 3.31											
6 HRS X 30 DAYS	\$3.31	\$4.97	\$6.62	\$8.28	\$9.94	\$11.59	\$13.25	\$14.90	\$16.56	\$18.22	\$19.87	\$21.53
8 HRS X 30 DAYS	\$4.42	\$6.62	\$8.83	\$11.04	\$13.25	\$15.46	\$17.66	\$19.87	\$22.08	\$24.29	\$26.50	\$28.70
10 HRS X 30 DAYS	\$5.52	\$8.28	\$11.04	\$13.80	\$16.56	\$19.32	\$22.08	\$24.84	\$27.60	\$30.36	\$33.12	\$35.88
12 HRS X 30 DAYS	\$6.62	\$9.94	\$13.25	\$16.56	\$19.87	\$23.18	\$26.50	\$29.81	\$33.12	\$36.43	\$39.74	\$43.06
14 HRS X 30 DAYS	\$7.73	\$11.59	\$15.46	\$19.32	\$23.18	\$27.05	\$30.91	\$34.78	\$38.64	\$42.50	\$46.37	\$50.23
16 HRS X 30 DAYS	\$8.83	\$13.25	\$17.66	\$22.08	\$26.50	\$30.91	\$35.33	\$39.74	\$44.16	\$48.58	\$52.99	\$57.41
18 HRS X 30 DAYS	\$9.94	\$14.90	\$19.87	\$24.84	\$29.81	\$34.78	\$39.74	\$44.71	\$49.68	\$54.65	\$59.62	\$64.58

* A 400 watt lighting fixture uses 460 watts per hour. *For use with Sun System® 1, 2, 4, 6, 10 Harvest Pro™ & Harvest Pro™ Elite.*

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 468 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$ 3.37											
6 HRS X 30 DAYS	\$3.37	\$5.05	\$6.74	\$8.42	\$10.11	\$11.79	\$13.48	\$15.16	\$16.85	\$18.53	\$20.22	\$21.90
8 HRS X 30 DAYS	\$4.49	\$6.74	\$8.99	\$11.23	\$13.48	\$15.72	\$17.97	\$20.22	\$22.46	\$24.71	\$26.96	\$29.20
10 HRS X 30 DAYS	\$5.62	\$8.42	\$11.23	\$14.04	\$16.85	\$19.66	\$22.46	\$25.27	\$28.08	\$30.89	\$33.70	\$36.50
12 HRS X 30 DAYS	\$6.74	\$10.11	\$13.48	\$16.85	\$20.22	\$23.59	\$26.96	\$30.33	\$33.70	\$37.07	\$40.44	\$43.80
14 HRS X 30 DAYS	\$7.86	\$11.79	\$15.72	\$19.66	\$23.59	\$27.52	\$31.45	\$35.38	\$39.31	\$43.24	\$47.17	\$51.11
16 HRS X 30 DAYS	\$8.99	\$13.48	\$17.97	\$22.46	\$26.96	\$31.45	\$35.94	\$40.44	\$44.93	\$49.42	\$53.91	\$58.41
18 HRS X 30 DAYS	\$10.11	\$15.16	\$20.22	\$25.27	\$30.33	\$35.38	\$40.44	\$45.49	\$50.54	\$55.60	\$60.65	\$65.71

* A 432 watt lighting fixture uses 468 watts per hour. *For use with Tek-Light™ 48, New Wave® 48 & Sun Blaze® 48.*

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 680 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$ 4.90											
6 HRS X 30 DAYS	\$4.90	\$7.34	\$9.79	\$12.24	\$14.69	\$17.14	\$19.58	\$22.03	\$24.48	\$26.93	\$29.38	\$31.82
8 HRS X 30 DAYS	\$6.53	\$9.79	\$13.06	\$16.32	\$19.58	\$22.85	\$26.11	\$29.38	\$32.64	\$35.90	\$39.17	\$42.43
10 HRS X 30 DAYS	\$8.16	\$12.24	\$16.32	\$20.40	\$24.48	\$28.56	\$32.64	\$36.72	\$40.80	\$44.88	\$48.96	\$53.04
12 HRS X 30 DAYS	\$9.79	\$14.69	\$19.58	\$24.48	\$29.38	\$34.27	\$39.17	\$44.06	\$48.96	\$53.86	\$58.75	\$63.65
14 HRS X 30 DAYS	\$11.42	\$17.14	\$22.85	\$28.56	\$34.27	\$39.98	\$45.70	\$51.41	\$57.12	\$62.83	\$68.54	\$74.26
16 HRS X 30 DAYS	\$13.06	\$19.58	\$26.11	\$32.64	\$39.17	\$45.70	\$52.22	\$58.75	\$65.28	\$71.81	\$78.34	\$84.86
18 HRS X 30 DAYS	\$14.69	\$22.03	\$29.38	\$36.72	\$44.06	\$51.41	\$58.75	\$66.10	\$73.44	\$80.78	\$88.13	\$95.47

* A 600 watt lighting fixture uses 680 watts per hour. *For use with Sun System® 1, 10, Harvest Pro™ & Harvest Pro™ Elite.*

POWER COST ESTIMATION GUIDE PER MONTH (ASSUMES 30 DAY MONTH)

COST PER KW/HR	4¢	6¢	8¢	10¢	12¢	14¢	16¢	18¢	20¢	22¢	24¢	26¢
HRS. PER DAY X 30 DAYS	EXAMPLE: 6 HRS X 1100 WATTS* ÷ 1000 X \$.04 PER KWH X 30 DAYS = \$ 7.92											
6 HRS X 30 DAYS	\$7.92	\$11.88	\$15.84	\$19.80	\$23.76	\$27.72	\$31.68	\$35.64	\$39.60	\$43.56	\$47.52	\$51.48
8 HRS X 30 DAYS	\$10.56	\$15.84	\$21.12	\$26.40	\$31.68	\$36.96	\$42.24	\$47.52	\$52.80	\$58.08	\$63.36	\$68.64
10 HRS X 30 DAYS	\$13.20	\$19.80	\$26.40	\$33.00	\$39.60	\$46.20	\$52.80	\$59.40	\$66.00	\$72.60	\$79.20	\$85.80
12 HRS X 30 DAYS	\$15.84	\$23.76	\$31.68	\$39.60	\$47.52	\$55.44	\$63.36	\$71.28	\$79.20	\$87.12	\$95.04	\$102.96
14 HRS X 30 DAYS	\$18.48	\$27.72	\$36.96	\$46.20	\$55.44	\$64.68	\$73.92	\$83.16	\$92.40	\$101.64	\$110.88	\$120.12
16 HRS X 30 DAYS	\$21.12	\$31.68	\$42.24	\$52.80	\$63.36	\$73.92	\$84.48	\$95.04	\$105.60	\$116.16	\$126.72	\$137.28
18 HRS X 30 DAYS	\$23.76	\$35.64	\$47.52	\$59.40	\$71.28	\$83.16	\$95.04	\$106.92	\$118.80	\$130.68	\$142.56	\$154.44

* A 1000 watt lighting fixture uses 1100 watts per hour. *For use with Sun System® 1, 6, 10, Harvest Pro™ & Harvest Pro™ Elite.*

Returning Units: Please contact your retail store for returns.

WARRANTY SERVICE: Please read warranty information first

If after reviewing the troubleshooting tips the light will still not work, you should return the light to the dealer where you purchased it. They will be able to further evaluate the light and test its various components and quite possibly will be able to identify and/or fix any problems. Often the problem is as simple as a defective lamp. If the dealer is unable to fix the light, they will return it to us for factory repair. Many dealers have loaner ballasts that you may check out until yours is returned (usually not more than 7-10 days).

If there are no dealers in your area, you may contact us directly for technical support. If we cannot help you resolve the problem over the phone, we will issue you a RMA # (return merchandise authorization) authorizing you to return the system to us for factory reconditioning (if the unit is under warranty). Contact a Sunlight Supply® service center closest to you for a RMA and shipping address. Complete the form below and include it with your lighting fixture. Also please write the RMA # on the outside of the box.

Please package the light carefully in its original packaging. If it is damaged in shipment we cannot be responsible.

Once we receive the light back, we will repair it within 48 hours (business) and return it to you freight prepaid via FedEx or UPS ground shipment.

Include the following if returning directly to Sunlight Supply®, Inc.

- Proof of purchase
- This completed form
- RMA # on the outside of the box

Return Merchandise Authorization Number **(Required):** _____

Company Name: _____

Contact Name: _____

Address: _____

Phone #: _____

Email address: _____

What is the nature of the problem? _____

Send to your nearest location – shipping address will be given when the RMA # is issued:

Technical Support Numbers: West 888.582.2762

East 888.583.2762

Pompano Beach, FL 877.649.3567

IMPORTANT: PROOF OF PURCHASE REQUIRED FOR RETURNS

**SUN SYSTEM® SERIES = 5 Year Warranty
SUN SYSTEM® 3, BUDGET GRO™, TEK-LIGHT™
& NEW WAVE® = 2 Year Warranty
READY FIT® = 1 Year Warranty**

Returning Units: Please contact your retail store for returns.

WARRANTY INFORMATION:

Sunlight Supply®, Inc. warrants to the original purchaser of this product against defects in material and workmanship under normal use for five (5) years on any SUN SYSTEM®, two (2) years on SUN SYSTEM® 3, BUDGET GRO™, TEK-LIGHT™ & NEW WAVE® and one (1) year on READY FIT® from the date of purchase. During the warranty period, Sunlight Supply® will, at our option, and without charge, repair or replace this product if the unit or any of its components fail or malfunction.

This warranty is expressly in lieu of all other warranties, expressed or implied, including the warranties of merchantability and fitness for use and of all other obligations or liabilities on the part of the seller. This warranty shall not apply to this product or any part thereof which has been damaged by accident, abuse, misuse, modification, negligence, alteration or misapplication. Sunlight Supply® makes no warranty whatsoever in respect to accessories or parts not supplied by Sunlight Supply®. This warranty shall apply only to the United States, including Alaska, Hawaii and territories of the United States.

NOTE: Sunlight Supply®, Inc. is a manufacturer of supplementary lighting systems. All sales offerings to the public are done through a nationwide group of dealers. No sales offerings will be made directly to the general public.