

Control Sun System® ① Etelligent™ Ballasts  
with the same controller—operating on 2 separate channels.

Sun System® ①



ETELLIGENT™  
CONTROLLER



# INSTRUCTION MANUAL



Sunlight Supply, Inc.

Vancouver, WA • Eureka, CA • Livermore, CA • Ontario, CA  
Denver, CO • Detroit, MI • York, PA • Nashville, TN  
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# SUN SYSTEM ONE CONTROLLER MANUAL

Thank you for purchasing the Etelligent™ Controller for programming the Sun System® ① Etelligent Ballasts with signal ports for on/off/dimming functions. This is a dual zone controller which can control up to 400 lights (up to 200 in each of 2 zones).

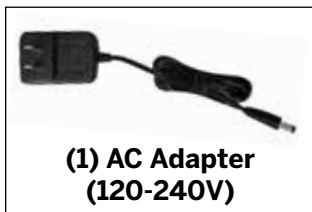
## 1. Sun System One Controller

This low profile Etelligent Controller is designed to be paired with Sun System ① Etelligent Electronic Ballasts. The Etelligent Controller enables a timed on/off function, accurate temperature readings, thermal protection shut off and a timed sunrise/sunset function.

NOTE: Before connecting to controller, please make sure the knob is rotated to RC position first.



## 2. Sun System One Controller accessories



(1) AC Adapter  
(120-240V)



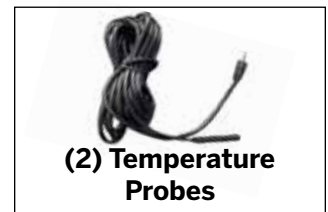
(1) Patch Cord

For connecting ballast to ballast.  
No magnetic ring on cable.



(2) Control  
Cables

For connecting ballast to controller.  
Magnetic rings on cable.

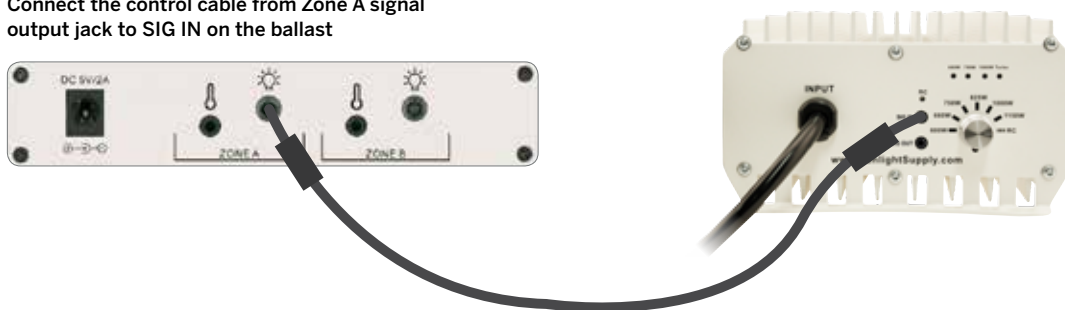


(2) Temperature  
Probes

## 3. Connection between ballast and controller

### Control up to 400 Sun System® ① Ballasts with 1 Etelligent™ Controller

Connect the control cable from Zone A signal output jack to SIG IN on the ballast



The Sun System® 1 Etelligent™ Controller Kit #902245, allows wired control of the on/off/dimming capabilities of Sun System® 1 ballast(s).

## 4. Keypad operation

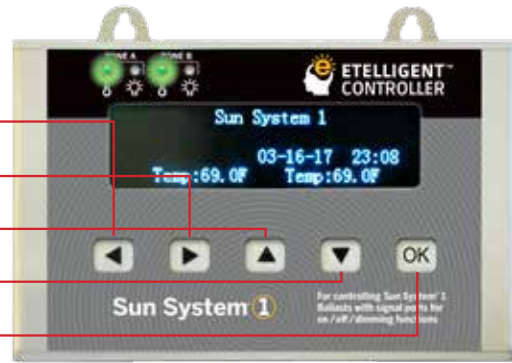
Page up or page down ◀

Right shift ▶

Increase parameters ▲

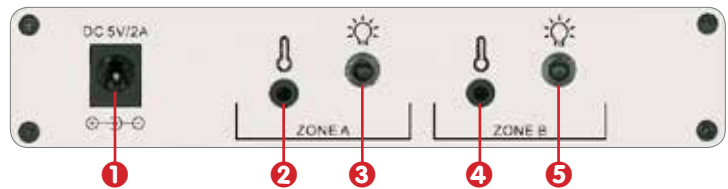
Reduce parameters ▼

Confirm/save ok



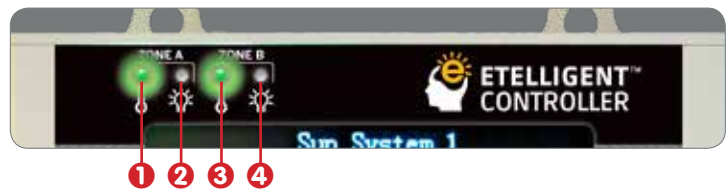
## 5. Interface connections

- 1 Power input jack.
- 2 ZONE A temperature probe input jack.
- 3 ZONE A signal output jack.
- 4 ZONE B temperature probe input jack.
- 5 ZONE B signal output jack.



## 6. Indicator lights

- 1 LED ON: Normal status (Temperature probe is working normally).  
LED OFF: Temperature Control line not connected or temperature control fail.



LED SLOW FLASH: High temperature warning (reached preset value), ballast dimming down to decrease temperature.

LED FAST FLASH: High temperature, exceeded preset value. Ballast turned off.

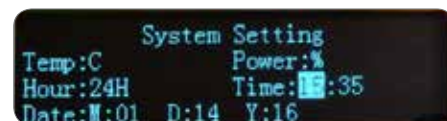
- 2 LED LIGHT ON: Lamp on. LED LIGHT OFF: Lamp off.
- 3 Same as 1.
- 4 Same as 2.

## OPERATIONAL SETUP

### 7. Setting the time

NOTE: Set controller time to your time zone.

- 1 Press “◀ or ▶”, enter into “SYSTEM SETTING”.
- 2 Press “◀ or ▶”, to the parameter you want to set (Time for example: Hour / Minutes).
- 3 Press “▲”, “Hour” value will increase, Press “▼”, “Hour” value will decrease.
- 4 Move cursor to set “M”, “D”, “Y”, “Hour”, “Time” or “Power” (W or%).
- 5 Press “OK”. Time and Date setup is complete.





## 8. Setting the ZONE parameters

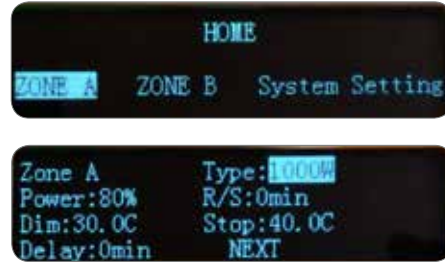
EXAMPLE: "ZONE A: 1000W".

- 1 Press "OK", enter into "HOME".
- 2 Press "**◀ or ▶**", select "ZONE A" or "ZONE B".  
Select "TYPE" power options: 250W, 400W, 600W or 1000W.  
Select "POWER" options: Dimming 0% (OFF), 60% - 110% (ON).

R/S: Sunrise/Sunset options: Select duration time of 0 - 30 min.

Dim options: Temperature control range 32° - 104° F (0° - 40° C), power reduced 60%.  
Delay: Protection delay time of 0 - 30 min.

- 3 Press "**◀ or ▶**", move cursor to the item you want to set.
- 4 Press "**▲ or ▼**", to increase or decrease the value.  
Press ",", "Hour" value will decrease.
- 5 After setting, "**◀ or ▶**", to "NEXT", then press "OK" to enter into the "Time Setting".



## 9. Setting the timer dimming

- 1 Press "NEXT", then "OK" to enter into "ZONE A".  
NOTE: Follow this same setup for ZONE B.
- 2 Press "**◀ or ▶**", choose "", choose time and power percentage, press "**▲ or ▼**", to "".
- 3 Then press "**◀ or ▶**", to choose the time and power percentage, and press "**▲ or ▼**", to increase or decrease the time and power percentage value.

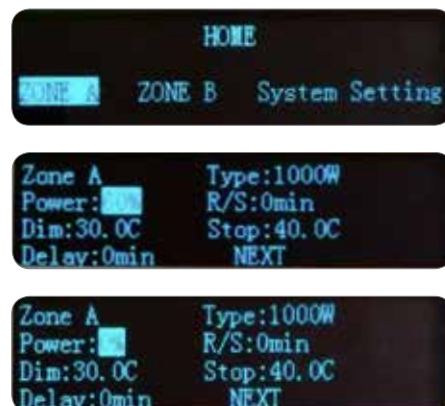


- 4 After all value settings are set, press "OK" to save and enter into the HOME page.

## 10. Setting output power

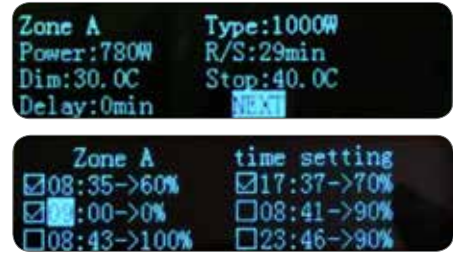
- 1 Press "OK", enter into "HOME".
- 2 Press "**◀ or ▶**", enter into "ZONE A" or "ZONE B".
- 3 Press "**◀ or ▶**", the choose "Power: ".
- 4 Press "**▲ or ▼**", to set the output power.
- 5 Press "OK" to save the output power you set.

NOTE: If there is no activity for 10 seconds—while setting up your unit, the controller will automatically go back to the "HOME" page.



## 11. Operation example settings

Example: ZONE A control 1000W ballast, output power is 780W, sunrise time 08:35, (60% power), sunset time 9:00 (turn off), Sunrise and sunset duration time is 29min, if ambient temperature is  $30^{\circ}\text{C} \leq \text{temperature} \leq 40$ , dimming down automatically to decrease power and temperature. If temperature  $>40^{\circ}\text{C}$ , turn off and enter into protection status.



## 12. Sun System® 1 Etelligent™ Controller technical parameters

Power	DC5V/2A
Match ballasts	600W and 1000W
Control command time interval	2S
Power Dimming Scope	600W: 40%-110% (240W-660W) 1000W: 60%-115% (600W-1150W)
Power regulation accuracy	1%
Temperature-controlled adjustable inspection scope	32° - 104°F (0° - 40°C)
Temperature-controlled protection inspection scope	50° - 122°F (10° - 50°C)
Sunrise and sunset duration	0-30 min
Turn on delay protection time	0min, 5min, 10min, 15min, 20min, 25min and 30min

## 13. Sun System® 1 Etelligent™ Controller TROUBLESHOOTING

Problem	Inspection method	Troubleshooting
Controller doesn't have any display after plugging in power	Check the power supply	Reset power supply
	Check the adapter	Change to another adapter
	Check the controller	Change to another controller
Fail to control ballasts	Check the connection of controller and ballasts, make sure each connection is good	Reconnect the wires
Controller doesn't have any temperature display after temperature probe connected	Check if the temperature probe is damaged	Change to another temperature probe
Fail to turn on the lamp	Check the LED on the ballast to ensure the LED indicator above the out plug is flashing normally	Reconnect the wire
Ballast does not appear to be functioning on desired setting sent via controller	Check the sunrise and sunset time setting	Reset sunrise or sunset time
	Check the temperature probe and temperature-controlled value you selected	Change the temperature-control value you set
When some ballasts are not functioning properly on a channel	Check if the connection wire between ballasts is functioning properly	Replace connection wire or unplug and then plug in again
	Check the connection of the power cable	Plug in and out to try again
	Check if the ballast is functioning properly	Check the LED on ballast

## 14. LED failure indicator on electronic ballast

No	Condition	Status	LED
1	Maximum number of ignition attempts done without success. This condition is also used to indicate a locked or failed driver. (Ignition intervals 1-5-5-5-5)	Ballast locked	Flash*1
2	Lamp stopped for unknown reason	Output errors	Flash*2
3	Mains voltage is too low	Low input voltage	Flash*3
4	Maximum driver temperature exceeded	Over temperature	Flash*4
5	Mains voltage is too high or DC-bus voltage too high.	High input voltage	Flash*5
6	Ballast is trying to ignite the lamp.	Ignition busy	Flash*6
7	Lamp voltage is too high or too low	Lamp fault	Flash*7

Note:

**1** Without controller connected:

Dimming LED indicator will remain on. If failure occurs, the Turbo LED indicator will flash (one of seven possible issues listed above).

**2** With controller connected:

The controller LED will remain on and flash. (Controller LED will flash every 2 seconds, indicating the controller is functioning normally).

If ballast does not receive signal from controller, either signal has been lost or the controller has failed. This will be a rapid flash on the controller LED indicator on the ballast.