

SUNTECH



SUNTECH LIGHTING CONTROLLER

USER MANUAL

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1. SAFETY INFORMATION

Warning! Please read the following information carefully before installing and using.

- Please read and understand this manual completely before installing and using the product.
- Keep the Suntech Lighting Controller away from fire, excessive heat, water, ducts and contamination.
- Do not open or disassemble the Suntech Lighting Controller. Opening the controller will void its warranty immediately.
- The input voltage should be kept above 11.5V and below 12.5V DC; the input current should not be lower than 700mA; otherwise, the product may not work properly.
- Suntech Lighting Controller should only be used to control compatible Suntech Lighting. Do not connect the Suntech Lighting Controller to other products, as this can be dangerous and may cause the connected equipment to malfunction. Doing so will void the warranty.
- Do not place the LCD in a hot or humid environment or expose the LCD screen to direct sunlight or strong fluorescent light for long periods.
- Do not leave the Suntech Lighting Controller unsecured from wall-mount brackets.

2. KEY FEATURES

Suntech Lighting Controller is a dual channel smart controller designed for large scale lighting control for indoor or outdoor growing, supporting both LED lights and HID lights with precise environmental data monitoring.

- Dual channel, with each controlling up to 60 Suntech fixtures or ballasts.
- Independent control of each channel with manual and cycle patterns.
- Spectrum tuning for different stages of growth (with compatible LED lights).
- Environmental data, including temperature, humidity, VPD, and CO₂, is clearly displayed on the screen to monitor the plant's growing environment.
- Auto dim and auto shutdown functions protect plants if the environmental temperature exceeds the desired level.

3. PRODUCT CONTENTS



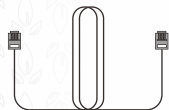
Suntech Lighting Controller
x 1 pc



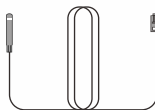
Iron Plate
x 1 pc



Expansion Screws
x 2 pcs



RJ11 6P6C Cable (3m)
x 2 pcs



Temperature/Humidity
Sensor (7m)
x 2 pcs



Power Adapter
(120-240V AC - 12V DC)
x 1 pc



Cable Tie
x 3 pcs



Wire Tie
x 1 pc

Note: CO₂ sensor sold separately.

4. SPECIFICATIONS

Technical Specifications

Adapter Input	100-240V, 50/60Hz 0.2A
Controller Input	12V, 1A
Lighting Control Channels	2
Lighting Control Level	OFF/25%/40%/50%/60%/80%/100%/115%(HID)
Number of Fixtures Per Channel	80
Total Number of Fixtures	160
Sensors	Temperature and Humidity sensor, CO₂ sensor
Temperature Range	-20-80°C (-4-176°F)
Temperature Accuracy	±0.2 °C
Humidity Range	0-100%

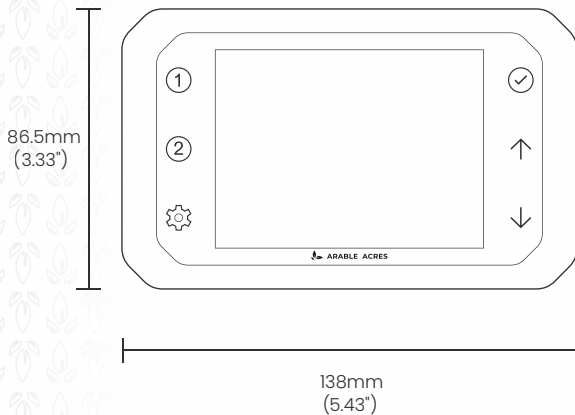
4. SPECIFICATIONS

Technical Specifications

Humidity Accuracy	±2%
CO ₂ Range	10-5000 PPM
CO ₂ Accuracy	±(50PPM + 3%F-S)
Working Environment	Temperature: 0-50°C(32-122°F), Humidity≤80%
Weight	0.48 lb
Dimensions	L: 5.43 in W: 3.33 in H: 1.04 in
Installation	Wall mount with screws, magnet
Warranty	3 years *See Section 9: Warranty section for additional information.

4. SPECIFICATIONS

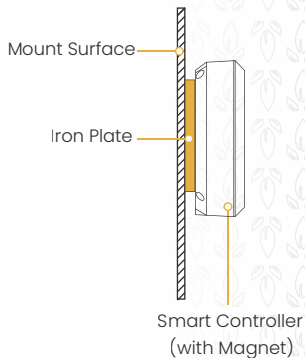
Dimensions



5. INSTALLATION

Mount with 3M Adhesive

Remove the tape cover from the iron plate and paste the plate on the mount surface where you want the controller located. Then you can place the Suntech Lighting Controller on the iron plate via a built-in magnet on its back.

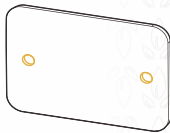


5. INSTALLATION

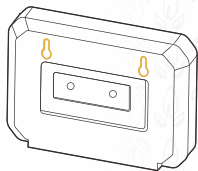
Mount with Expansion Screws

This installation method requires drilling holes where you plan to mount the Suntech Lighting Controller. First, measure the distance between the holes on the iron plate and mark the distance on the mounting surface. Next, use a drill to create the necessary holes and push the plastic expansion pipes in. Then line the iron plate's holes with those holes, and screw it into place using the expansion screws. Now the Controller can be placed directly onto the iron plate thanks to its built-in magnet!

You can also hang your Suntech Lighting Controller directly on the screws without using the iron plate. First, measure the center distance of 74mm and drill an expansion screw on each point. Next, hang the Suntech Lighting Controller directly on the screws by sliding the slotted hanging holes over the screws, and then allowing the Suntech Lighting Controller to hang down.

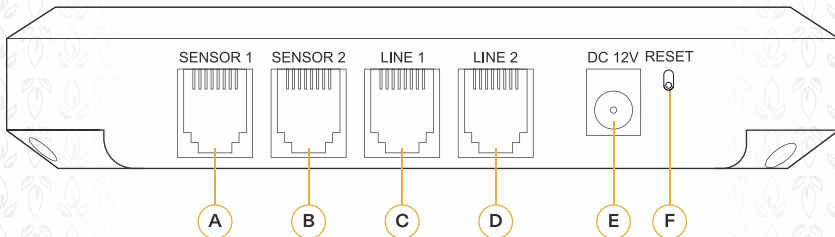


Mounting Hole



Slotted Hanging Holes

6. CONNECTION

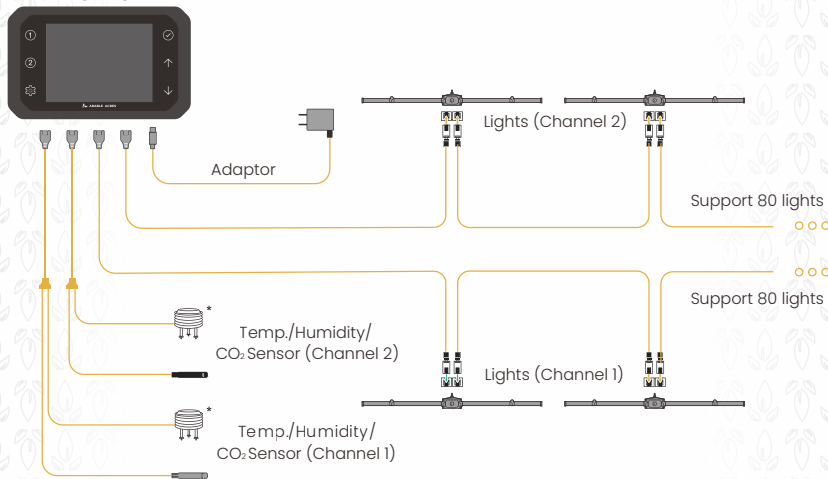


A	RJ11 Network interface: Temperature/Humidity Sensor (Channel 1)
B	RJ11 Network interface: Temperature/Humidity Sensor (Channel 2)
C	RJ11 Network interface: Light control (Channel 1)
D	RJ11 Network interface: Light control (Channel 2)
E	Power Input: 12V 1A DC
F	Reset

6. CONNECTION

System Connection

Suntech Lighting Controller



* CO₂ sensor and splitters are sold separately

7. CONTROL INTERFACE

① Channel 1 Button

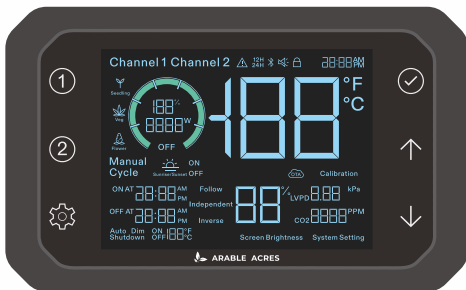
Press to enter Channel 1.
Long press to select light spectrums.

② Channel 2 Button

Press to enter Channel 2.
Long press to select light spectrums.

⚙️ Setting Button

Press to set Manual/Cycle mode, Auto dim and Auto shutdown. Long press to lock the settings.



✓ Confirm Button

Press to confirm settings.
Long press to calibrate light wattage.

↑ Up Button

Press to increase value of current setting. Long press to enter system setting.

↓ Down Button

Press to decrease value of current setting.

7. CONTROL INTERFACE

1. Channel Display

Channel 1 or Channel 2 setting and status.

2. Green Bars

Light intensity level with wattage.

5. Spectrum

Displays the current light spectrum: Seedling, Veg or Flower.

6. Sunrise/Sunset

Turn on/off of Sunrise/Sunset in cycle mode.

3. Cycle Time

Set on/off time of light.

4. Mode

Manual/Cycle mode of current Channel.

9. Alarm Icon

Indicates a system abnormality.

10. Time Mode

Set 12H or 24H time mode.

11. Button voice

Turn on/off the button voice.

12. Current Time

Displays the current time.

13. System Lock

Indicates system is locked and cannot operate.

14.Environment Status

Displays current Temp., RH, VPD & CO₂ data.

15. OTA Icon

Indicates the system is under OTA status.

16. Calibration

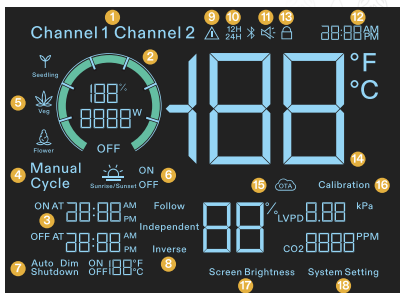
Indicates the system is under calibration status.

7. Auto Dim & Auto Shutdown

Set trigger temp. for each channel.

8. Channel Mode

Set Independent/Follow/Inverse mode for Channel 2.



17. Screen Brightness

Set brightness of the screen.

18. System Setting







System settings of button voice, 12H/24H, time, °C/°F, Screen Brightness.

8. OPERATION

8.1 First Time Setup






Turn on the Suntech Lighting controller by connecting it to the power adaptor included. Make sure the adaptor is plugged into an appropriate AC outlet (120v - 240V ac) Connect the RJ11 cable included between lights and light control port (Port A for Channel 1, Port B for Channel 2) on the controller. Plug the Temp./Humidity Sensors into Port C (Channel 1) and Port D (Channel 2). Place the sensors in appropriate positions.

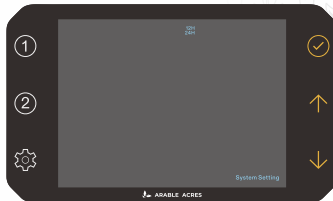
Setting Button Voice

Long press  for 3 seconds to enter the system setting, and the button voice icon will be flashing. Press   to turn on the voice:  or turn off the voice: . Press  to confirm.



Setting Time Mode (12H/24H)

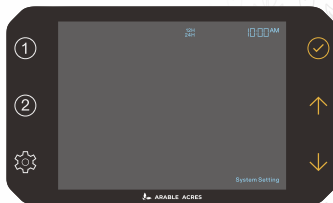
Long press  for 3 seconds to enter the system setting. Press  until the 12H/24H icon flashes. Press   to switch between 12-hour time and 24-hour time. Press  to confirm.



8. OPERATION

Calibrating Time

Long press \uparrow for 3 seconds to enter the system setting. Press \checkmark until the time display flashes. Press $\uparrow \downarrow$ to set the current time, and press \checkmark to confirm.



Switching Temperature Units ($^{\circ}\text{F}/^{\circ}\text{C}$)

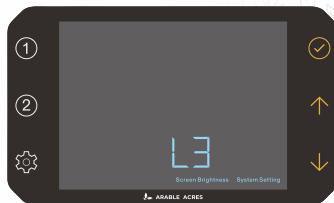
Long press \uparrow for 3 seconds to enter the system setting. Press \checkmark until the temperature unit icon flashes. Press $\uparrow \downarrow$ to select the unit, and press \checkmark to confirm.



8. OPERATION

Adjust Screen Brightness

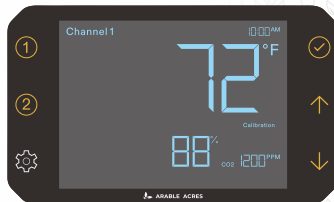
Long press \uparrow for 3 seconds to enter the system setting. Press \odot until the Screen Brightness displays. Press $\uparrow \downarrow$ to adjust the brightness and press \odot to confirm.



Calibrating Temp./Humidity/CO₂

Press ① or ② to enter the channel 1 or 2 to calibrate separately. Then Long press \odot for 3 seconds to enter the calibration setting. Press \odot until the temp./humidity/CO₂ Values flashes. Press $\uparrow \downarrow$ to adjust the values and press \odot to confirm.

Note: Temperature/humidity/CO₂ calibration will be skipped if the sensor is not plugged in.



8. OPERATION

8.2 Light Control

Suntech Lighting Controller provides two independent channels to control LED lights or HID lights.

8.2.1 Channel 1

Press any button to wake up the screen and press ① to enter Channel 1 for the following settings.

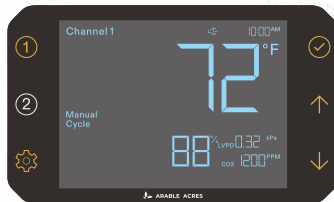
Calibrating Light Wattage

Long press ② for 3 seconds to enter the calibration setting and the power value inside green bar will flash. Press \uparrow \downarrow to adjust the power to the total power of the lights connected to Channel 1 when 100% On and press ② to confirm.



Selecting Manual/Cycle Mode

Press ① and ② to enter the Channel 1 settings. Then press ② to enter the Manual/Cycle select mode. Press \uparrow \downarrow to select Manual or Cycle mode. Press ② to confirm and enter the detail settings of Manual or Cycle mode.



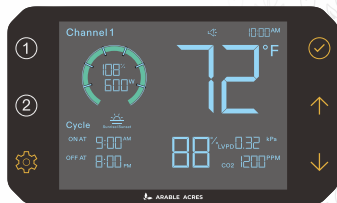
8. OPERATION

Cycle Mode (Detail Settings)

After selecting and confirming the Cycle Mode, the green bar will flash. Press \uparrow \downarrow to set the dimming level and press \odot to confirm (dimming level can not be set to 0 or OFF in the cycle mode). Then the ON/OFF time setting will flash. Set the start time (ON AT) and off time (OFF AT) of each day by press \uparrow \downarrow . Press \odot to confirm and jump to the Sunrise/Sunset setting. Press \uparrow \downarrow to turn on or off the Sunrise/Sunset function. Note: In Cycle mode, the light can not be dimming by pressing \uparrow \downarrow directly. Adjust the dimming level in the Cycle mode settings if you need to change.

About Sunrise/Sunset Mode

This function can simulate a more natural environment for plants to reduce pressure. If Sunrise/Sunset is on, light intensity will slowly increase/decrease to the setting level/OFF in 10 minutes when lights turn on/off everyday.

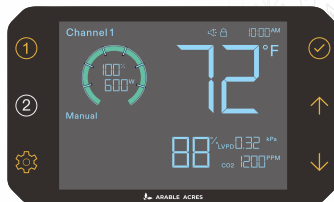


8. OPERATION

Manual Mode (Detail Settings)

After selecting and confirming the Manual Mode, the green bar will flash. Press \uparrow \downarrow to set the dimming level of lights in Channel 1 and press \checkmark to confirm. In the Manual Mode, light intensity can be dimmed directly by press \uparrow \downarrow .

Note: Dimming level of 25% is for Suntech Matrix series ONLY, and 115% is only for Suntech HID lights ONLY.



8. OPERATION

8.2.2 Channel 2

Press any button to wake up the screen and press \odot to enter the Channel 2 for following settings.

Calibrating Light Wattage

Long press \odot for 3 seconds to enter the calibration setting and the power value inside, the green bar will flash. Press \uparrow \downarrow to adjust the power to the total power of the lights connected to Channel 2 when 100% On and press \odot to confirm.



Selecting Channel Mode

Press \odot and \odot to enter the Channel 2 settings. Then choose a channel mode among Independent, Follow and Inverse modes for Channel 2 by press \uparrow \downarrow and \odot to confirm.

Independent Mode: Channel 2 will be set and running independently;

Follow Mode: Channel 2 will follow the current settings (Manual/Cycle/Sunrise/Sunset) as Channel 1;

Inverse Mode: Channel 2 will run inversely to Channel 1. This mode can be only chosen when Channel 1 is on 12H ON/12H OFF setting.











8. OPERATION

8.2.3 Auto Dim And Auto Shutdown

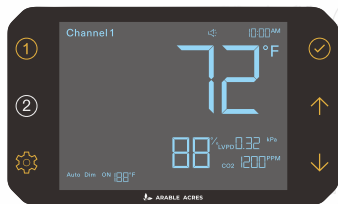
Auto dim/shutdown can be set to dim the lights when the temperature hits a certain value, and to turn off the lights if it reaches shutdown temperature.

Setting Auto Dim

Press any button to wake up the screen and press ① or ② to enter the Channel 1 or Channel 2 screen. Press  twice and  to enter the Auto Dim and Auto Shutdown setting. Press   to turn on or off the Auto dim. Press  to confirm. if you choose to turn on, then set the trigger temperature by pressing   and  to confirm. The lights will be dimmed to 50% of the current setting when the temperature of the same channel reaches the setting value.

Note: The Auto temperature setting range is 30°C/86°F to 90°C/194°F and cannot be set higher than the Auto Shutdown temperature. The auto dim function will continue to dim the lights until the environmental temperature drops to 0.5°C/0.9°F below the auto dim temperature and stay for 30 seconds.

It is important to set an appropriate trigger temperature and leave enough buff range according to your growing environment and HVAC capacity. Set the temperature to at least 2°C/3.6°F above the setting value of your temperature control system

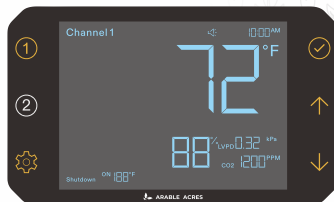


8. OPERATION

Setting Auto Shutdown

After finishing the Auto Dim setting. Press ⚙️ to skip to the the Auto Shutdown setting. Press ↑ ↓ to turn on or off the Auto Shutdown. Press ✓ to confirm. If you choose to turn on, then set the trigger temperature by pressing ↑ ↓ and ✓ to confirm. The lights will be shutdown when the temperature of the same channel reaches the setting value.

Note: The default auto shutdown temperature is set from 32°C/90°F to 92°C/198°F. If auto shutdown is occurred, a manual reset is required. Auto shutdown will not cut off the power of the lights.



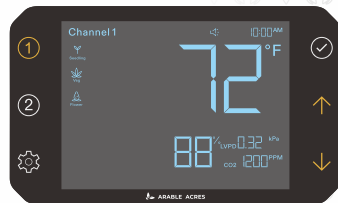
8. OPERATION

8.2.4 Spectrum Tuning

Suntech Lighting Controller provides spectrum tuning functions for compatible LED lights. Channel 1 and Channel 2 can be set to different spectrums separately.

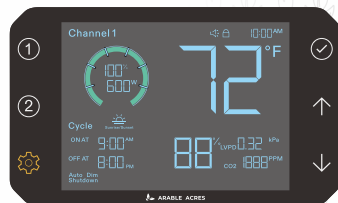
Press any key to wake up the screen and enter the main screen. Long Press ① or ② to enter the spectrum setting of each channel. Press \uparrow \downarrow to select the spectrum among Seedling \uparrow , Veg \downarrow , and Flower Δ .

Note: Spectrum may vary for the same mode when different spectrum-tunable lights connected.



8.2.5 Screen Lock

To avoid false triggering during running, in the main screen long press ⊞ to lock the screen and ⊞ will display. To unlock the screen, long press ⊞ again until ⊞ disappears.



9. WARRANTY

MORR, Inc warrants the mechanical and electronic components of Suntech Lighting Controller and guarantees the materials and workmanship to be free of defects if used under normal operating conditions, for a period of three (3) years from the original date of the purchase.

If you find that there are any defects with this product that relate to either the workmanship or the materials but are not due to improper use or user error, MORR, Inc shall, at its discretion, either replace or repair the product using the appropriate new or reconditioned parts.

In the case that MORR, Inc decides to replace the entire product, the date of the limited warranty shall apply to the replacement from the date of the purchase of the initial product for three (3) years.

For service inquiries, please contact MORR, Inc at: sales@morr.com



Designed by **Arable Acres** in California.

Made in China