

## MASTER CONTROLLER INSTRUCTION

The Lumen-King master controller is a dual channel module, each channel is programmable, allowing the user to control two separate grow areas or rooms. This controller uses a LCD touchscreen for easy navigation.

The controller timers operate on a standard 12-hour clock (standard time) or 24-hour clock (military time, hours 1:00-24:00).

(Note: Controller clock may show am and pm time, the timers are set 1-24 hours, 1:00=12:00am and hour 24:00=12pm.) Example, the clock would read 6:00pm coinciding with timers set at 18:00) There is no timer setting for am and pm.

The Lumen\_King master controller has two cycle options to choose from.

The Daily Cycle which operates within a 24-hour time frame (1-24 hours) and Custom Cycle which is operate within a 48-hour cycle (1-48 hours).

Please, be aware of these setting when programming the timer. Sunrise/ Sunset settings allow you to slowly dim on and off your lights mimicking the natural light cycle.

The master controller also utilized safety features to dim or shut off lights, in the event the grow area experiences excessive heat that could harm the harvest such as HVAC failure.

## TECHNICAL SPECIFICATIONS

The Lumen-King master controller utilizes a 2-channel system allowing you to control two different cultivation areas, controlling up to 100 units. Both channels providing heat protection shutdown set by the user. This controller has dimming options and can simulate sunrise and sunset cycle from increments of 10-60 minutes. Use the LCD touchscreen to navigate, view and modify the current settings for each channel easily. Output voltage is 0-11.5v DC.

<b>Control voltage outputs</b>	<b>2 Groups, A/B</b>
<b>Numbers of ballasts per output</b>	<b>120 pcs Max</b>
<b>Max cable length per group</b>	<b>120 meters</b>
<b>Over heat protection</b>	<b>Yes</b>
<b>Sunrise/sunset period</b>	<b>Yes</b>
<b>Input voltage</b>	<b>DC5V/1000mA</b>
<b>Weight</b>	<b>1.0kg</b>
<b>Warranty</b>	<b>3 years</b>

## SAFTY WARNING



Keep and mount master controller in a cool and dry environment away from dirt, dust, heat and moisture.



Make sure all RJ cables and power cords are safely routed away from excessive heat, moisture, mechanical movement or any thing that may damage cords



Do not attempt to disassemble or repair the master controller. This will void controller warranty.



Do not use abrasives, acids or solvents to clean master controller. Use a soft, dry cloth to clean controller.



The master Controller and fixtures are specifically designed to work in conjunction with each other. Using non-Lumen-King fixtures with Lumen-King controller may cause malfunctions and may void warranty. For best results use Lumen-King controller and fixtures together.



The Lumen-King controllers are designed to work with Lumen-King RJ14 data cords. Using other brand or non-RJ14 data cords could cause malfunctions and may void warranty

**DISPOSAL: THIS PRODUCT CONTAINS A BATTERY AND OTHER MATERIALS, WHICH MUST BE DISPOSED OF PROPERLY AND IN A LAWFUL WAY, THROUGH AN ELECTRIC RECYCLING CENTER.**

# INCLUDED IN THE PACKAGE



X2



X2



## POWER SUPPLY AND INITIAL SET-UP

1). Mount controller onto a secure surface using the screws supplied with the controller.

**NOTE: Make sure the controller is mounted level and away from heat sources.**

**NOTE: The distance between the center of each mount hole is 12.5cm**



2). Connect the power cord into the master controller and power source.

**Temp Sensor Information and installation:**



1). Connect the temperature sensor plug into the master controller temperature sensor port A. Hang the sensor at canopy height making sure the sensor and cord are hung and routed away from direct heat sources. Repeat install with port B, if necessary.

**Connecting the master controller to light fixtures:**



1). Connect one end of the RJ14 cord to the master controller A port, the other end to the A port of the light fixture.

2). For additional fixtures, connect one end of the RJ14 cord to the "B port" of the last light fixture and connect the other cord end to the "A port" of the added fixture.

## CONTROLLER MENU DISPLAY



Touch the green tab and slide it right, to put the slide block in its place and unlock the screen.

**NOTE:** Fixtures with “EXT” settings must set fixture to “EXT” when using the master controller. When programming timers, “Dimming” should be in OFF mode.

The screenshot shows the 'Master Controller' interface. At the top, there is a banner with the 'LUMEN-KING' logo on the left, the text 'Master Controller' in the center, and the date and time 'Mon 00:00:00 May 22, 2019' on the right. A white arrow points to the 'Master Controller' text. Below the banner, the interface is divided into two columns for 'Group A' and 'Group B', both of which are 'ON'. Each group has a green status bar showing '60%' and '600 W' for Group A, and '110%' and '1100 W' for Group B. Below these are 'Manual' control buttons, each accompanied by temperature and humidity icons. At the bottom, there are 'Auto-Dim' and 'Shut-Down' settings, both set to 'Disable'.

Group A		ON	Group B		ON
60 %	600 W		110%	1100 W	
Manual	-- °C -- %RH		Manual	-- °C -- %RH	
Auto-Dim	Disable		Auto-Dim	Disable	
Shut-Down	Disable		Shut-Down	Disable	

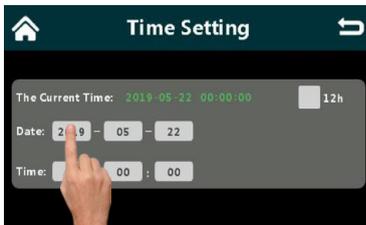
Touch the **Master Controller** banner to access Main Menu

The screenshot shows the 'Menu' interface. At the top, there is a dark blue header with the word 'Menu' in white and a white back arrow icon on the right. Below the header, there are six green square icons arranged in a 2x3 grid, each with a white icon and a label below it: 'Dimming' (circular arrow), 'Auto Pilot' (eye with gear), 'Sunrise/Sunset' (sun with up/down arrows), 'Environment' (shield with water drop), 'System' (gear), and 'About' (information 'i' icon).

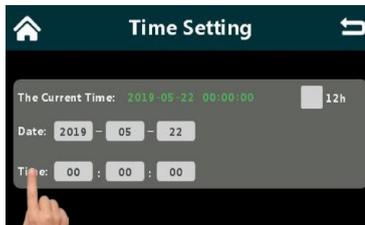
Menu		
Dimming	Auto Pilot	Sunrise/Sunset
Environment	System	About



Touch the **date and time** for access to the controller clock calendar



Touch **Date** options to set master controller date



Touch **Time** options to set master controller clock

**LUMEN-KING** **Master Controller** Mon 00:00:00  
May 22, 2019

Group A	ON	Group B	ON
<b>60 %</b>	<b>600 W</b>	<b>110%</b>	<b>1100W</b>
<b>Manual</b>	-- °C -- %RH	<b>Manual</b>	-- °C -- %RH
Auto-Dim	Disable	Auto-Dim	Disable
Shut-Down	Disable	Shut-Down	Disable

Displays power level in percent and watts. Touch this tab to access the "Dimming Menu"

**Dimming**

Group A	Group B
<b>DIMMING LEVEL</b> <b>110 %</b>	<b>AUTO-PILOT Enable</b>
	<b>MANUAL ON</b>
	<b>OFF</b>
	<b>FIXTURE TYPE</b> <b>1000W</b> <b>60 - 115 %</b>

**LUMEN-KING** Master Controller Mon 00:00:00  
May 22, 2019

Group A		Group B	
60 %	600 W	110%	1100W
Manual	°C %RH	Manual	°C %RH
Auto-Dim	Disable	Auto-Dim	Disable
Shut-Down	Disable	Shut-Down	Disable

Displays “Auto Dim” mode. Touch for access to temp and auto dim settings. Shows ambient temperature and relative humidity readings.

**Environment**

Group A		Group B	
Light	Relay	Light	Relay
Status: Disable		Status: Disable	
Range: 0~122 °F		Range: 0~122 °F	
Auto-Dim Ta	Shut-Down Ta	Auto-Dim Ta	Shut-Down Ta
104 °F	122 °F	104 °F	122 °F
Active	Disable	Active	Disable



Touch **“Dimming”** to access power level settings.

Touch **“Auto Pilot”** to access **“Daily or Custom Cycle”** options and program timer settings.

Touch **“Sunrise/Sunset”** options to set graduated timers, activate and deactivate settings.

Touch **“Environment”** for access to emergency dim and shut off options that protect the crop from excessive heat in the event the environment exceeds selected a temp range.

Touch **“System”** for access to general settings and system options.



Touch to select **Group A** or **Group B** to adjust or view settings.

Touch **“Dimming Level”** to adjust dim settings from 50%-115% with HID and 15%-100% with LEDs.

Touch to enable **“Auto Pilot”** , select: **OFF**, **ON** or **AUTO-Pilot Enable**.



Touch **“Fixture Type”** to select fixture type and power levels.

Touch and select fixture type or select **“Custom”** if wattage is not shown.

Touch **“Dimming Range Setup”** to program min. and max. Power levels.



Touch **“Minimum”** or **“Maximum”** to set dimming range.

Once range is selected press **“Confirm”** to save settings.

**NOTE:** Minimum settings for HID must be at 50% or higher for lamps to ignite and Minimum setting for LED 15% or higher.

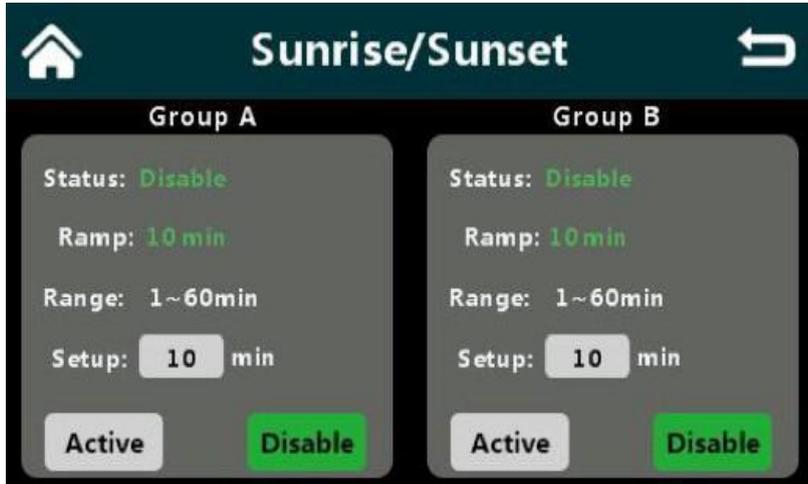


Touch and choose **“Daily Cycle”** to run dimmer in conjunction with the clock.

Touch and choose **“Custom Cycle”** to select the number of hours the clock fixture will be on or off.

Touch **“On”** and **“Off”** time settings to adjust Auto Pilot timers. Be aware of cycle setting when programming timers.

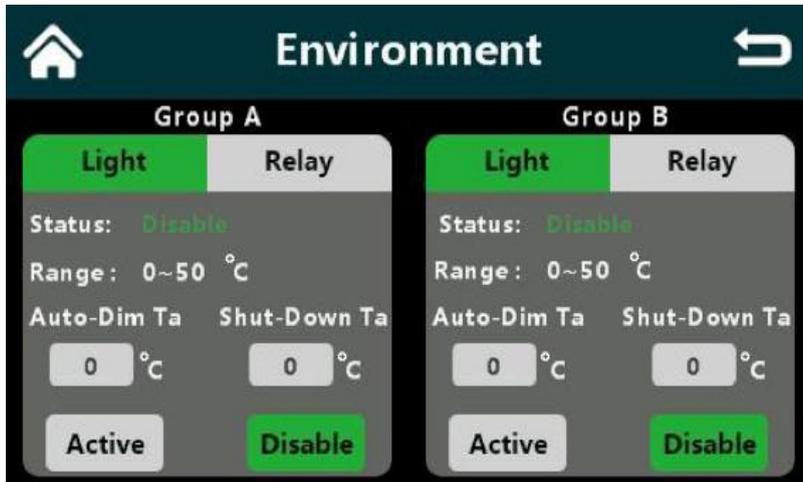
**NOTE:** Custom Cycle example setting 8:00 and 18:00 would mean the light is set for 8 hours on and 18 hours off and NOT on at 8:00 and off 18:00 hours.



Touch the minute value to adjust "Sunrise/Sunset" settings from 10-60 minutes.

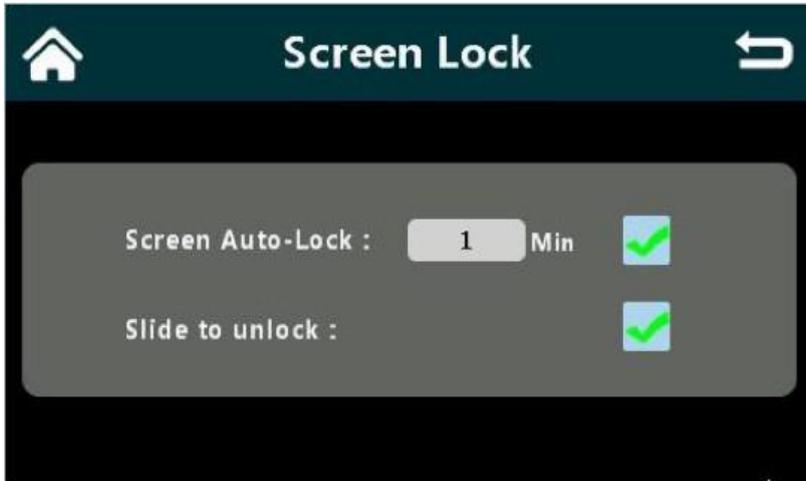
Touch to **Activate** or **Disable** the **Sunrise/Sunset** settings.

**NOTE:** Sunset setting will dim lights before scheduled off time and lights will be off by scheduled time.



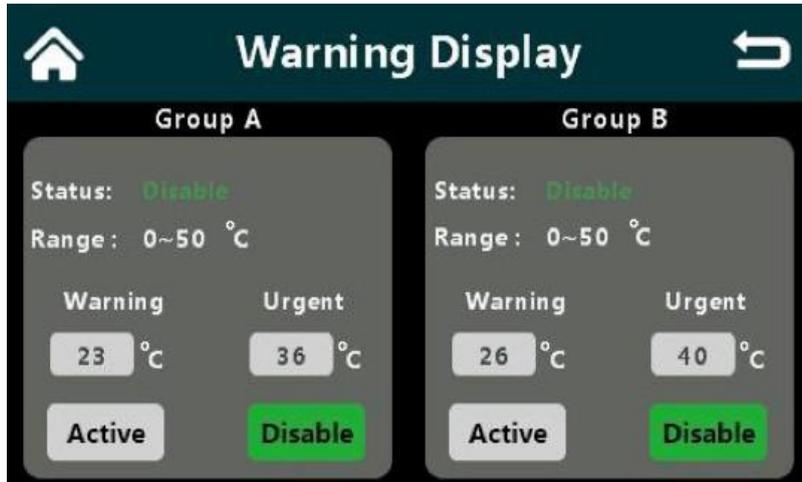
Touch **“Auto-Dim”** to set the temperature at which the controller will dim the lights in case of excessive heat.

Touch **“Shut-Down”** to set the temperature at which the controller will turn off lights in case excessive heat continues.



Touch **“Screen Auto-Lock”** to activate or deactivate screen lock and enter time before screen locks using the **“min”** option.

Touch to select the **slide lock** to be **on** or **off**.

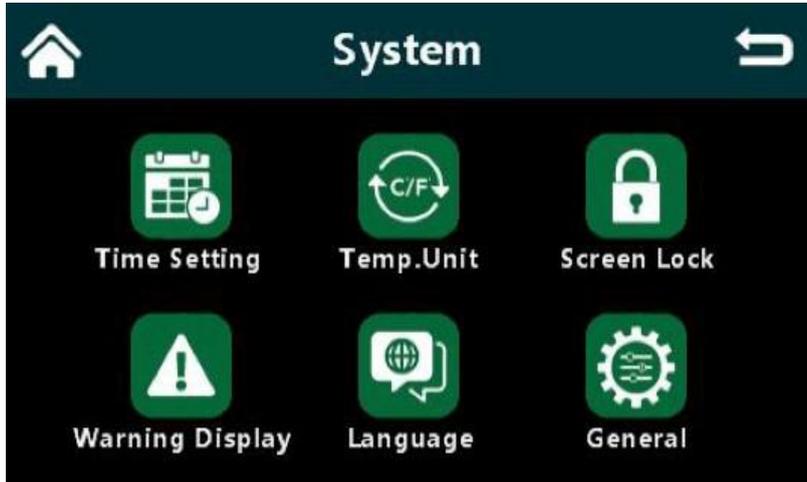


Touch **“Active”** or **“Deactivate”** to turn **Warning Display, On or Off.**

Touch to enter **“Warning”** level temperature value.

Touch to enter **“Urgent”** level temperature value.

**NOTE:** In “Warning Display mode”, the screen will display in yellow for “warnings” and will turn red for “urgent”. If the environment is not corrected, the protective measures are activated and the lights will shut off. When the environment is managed within the chosen settings of safe operation the screen with reset back to a green display.



Touch for access to **“Time Settings”**.

Touch for access to **Fahrenheit** or **Celsius** temperature selection.

Touch for access to **“Screen Lock”**.

Touch for access to **“Warning Display”**.

Touch for access to **“Language”** choice.

Touch for access to **“General”** settings.



