LIGHTHOUSE CONSTANT CURRENT LED CONTROLLER USER MANUAL

The CONSTANT CURRENT LED CONTROLLER utilizes the latest in High Frequency Switch-Mode technology and provides accurate and repeatable results for most LED lighting needs. It is available in both a 6-channel and single channel configuration and can be controlled using the integral keypad or via an RS232 computer interface. When active, the CONTROLLER will supply current to the respective LED lighting modules ranging from 0 - 500mA on the 6-channel unit and 0 - 1 Amp on the single channel unit – all while maintaining uniform intensity through the integration of close-looped current control. The module selected as well as the percentage of intensity is clearly shown on the LCD Display.

The 6-channel CONTROLLER is configured so that four of those channels can be used for Quadrant lighting. Channels 1 to 4 will all be set at the same current level and channels 5 & 6 can be set independently of the others. Since different light configurations require different current requirements set points can be easily changed and are shown as a percentage ranging from 0.0% to 100% on the LCD display. Please note that when using the computer interface the operator has the additional flexibility of setting each of the quadrant intensities at a different level.

Set Up:

1. Connect the external power supply to the 24VDC power input jack on the back of the CONTROLLER.
2. Connect the light interface harness to the OUTPUT 15-pin connector on the back of the CONTROLLER.
3. The CONTROLLER should be off when connecting and disconnecting the light modules.
4. When using the computer interface, connect the 9-pin connector into the back of the controller and computer using Com 1 or 2.
5. Connect the lighting modules to the interface harness.
6. While simultaneously pressing the UP and DOWN arrow buttons for the desired channel to be set on the CONTROLLER press the POWER button located on the front of the CONTROLLER. Once the CONTROLLER turns on release the arrow buttons. The CONTROLLER will now enter the set-up mode and prompt the operator to enter a new set point. This is the maximum current output at 100%. The default current setting will be displayed. Adjust this to the new current set point. This is done by using the UP and DOWN arrow buttons. Once the maximum desired amount of current is set, press the CENTER button to enter this value for the channel that is being set. The CONTROLLER will now run through the calibration procedure and display the value for each of the values as the setup completes.

NOTE 1: The initial set up procedure must be done manually from the CONTROLLER front panel.

NOTE 2: During the calibration procedure the LED lights may vary in intensity. Once the set point has been established the lights will turn off and the CONTROLLER will return the respective channel to 0%. When setting up the TOP LIGHT the CONTROLLER will go through channels 1-4 before returning to 0%.

7. Repeat the initial set-up procedure for each channel. After the current levels have been set there values are stored in the nonvolatile memory of the CONTROLLER.
8. Turn on the CONTROLLER using the POWER button. The current set points for each channel will scroll across the LCD display.
9. For adjustment of intensity use the UP and Down arrow keys for the channel that will be adjusted, the bar graph for that channel will be shown in the LCD display increasing and decreasing accordingly.

Adjustment of Light Output:

The light output of the CONTROLLER can easily be adjusted by the use of the UP and DOWN arrow key corresponding to that channel. A channel can also be turned on or off by using the UP and Down arrow keys. Scrolling down to 0% will turn that channel off. Pressing the light icon button for a channel will turn that channel on at a 50% intensity level. If a channel is turned off using the light icon button it will return at the same intensity when the CONTROLLER is turned back on. When a channel is turned off the respective green indicator lights will also turn off.

Quadrant control is achieved with the use of the TOP LIGHT buttons. Each of the 4 channels will have the same current set point. By selecting which of the quadrants is on or off, the lighting can be adjusted depending on application requirements. The QUADRANT CONTROLS are located just above the TOP LIGHT controls on the CONSTANT CURRENT CONTROLLER and each quadrant has a corresponding indicator light. Pressing the button next to the indicator light will turn that quadrant on or off. The intensity level may still be adjusted using the UP and DOWN arrow keys for the TOP LIGHT.

Computer Control:

The CONTROLLER can be used manually using the integral keypad, through the use of the computer interface and software (included), or with popular software such as Metronics' QC-5000. The CONTROLLER must be connected to the computer via a serial communication cable attached to the RS232 port on the rear of the unit.

Troubleshooting:

Light channel will not set:

1. Is the CONTROLLER in the set up mode? If not, turn the CONTROLLER off and follow the steps for set up.
2. Check interface harness for connection to CONTROLLER.
3. Make sure that the light module is connected to the channel that is being set.

Specifications:

Input Voltage (AC to Power Supply)	100-230VAC,50/60 Hz
Input Voltage (DC to Controller)	24VDC – 36VDC
Power Connector	2.1MM X 5.5MM DC Jack, center positive
Output Connector	15 Pin D-Sub, male
Output Current	0-500mA (6-Channel) 0-1Amp (Single-Channel) Current Regulated
Serial Protocol	Baud=19200, Data Bits=8,Stop Bits=1, Parity=0
Serial connector	9 Pin D-Sub, male

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