

# RapidLED DDC-01 Daylight Dimming Controller

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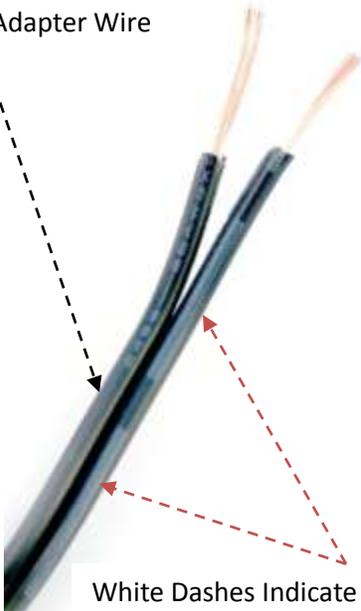
## Overview

The Rapid LED DDC-01 PWM Daylight Controller is a lighting controller for the MeanWell ELN-60-48P driver. There are two modes of operation, the first is manual mode and the second is one of three daylight programs. Manual mode enables the user to manually set the output intensity for 3 individual output channels. Daylight programs have a fixed sunrise, day length, and sunset. Maximum intensity can be changed manually in daylight program mode for all channels simultaneously only.

## Wiring the DDC-01 to the Included AC Adapter

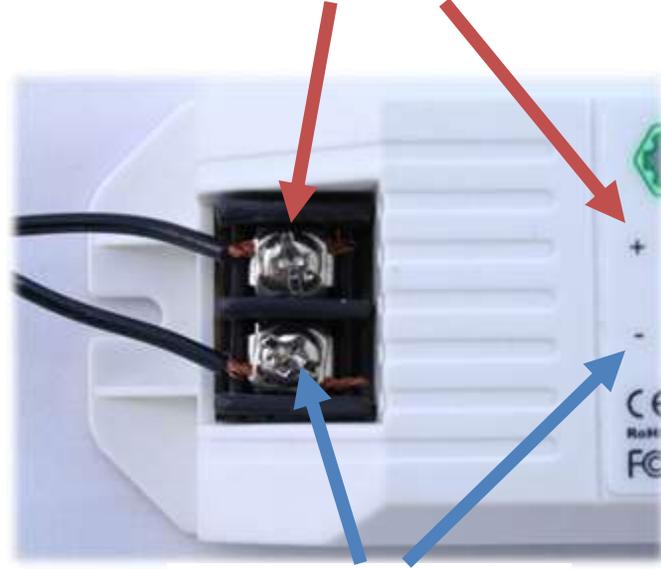
Ensure the AC adapter is not plugged in when performing this step. To connect the included AC adapter to the DDC-01, insert the wire with the white dashes on it into the positive terminal, which is the top screw terminal on the left side of the unit, and screw it down snug. Insert the other wire from the AC adapter into the – terminal directly below the + terminal and screw it down snug. When wired correctly it should look similar to the photo below on the right.

No Dashes Indicates –  
Negative AC Adapter Wire



White Dashes Indicate +  
(positive) AC Adapter Wire

Positive (top) terminal  
connected to AC adapter +



Negative (bottom) terminal  
connected to AC adapter –

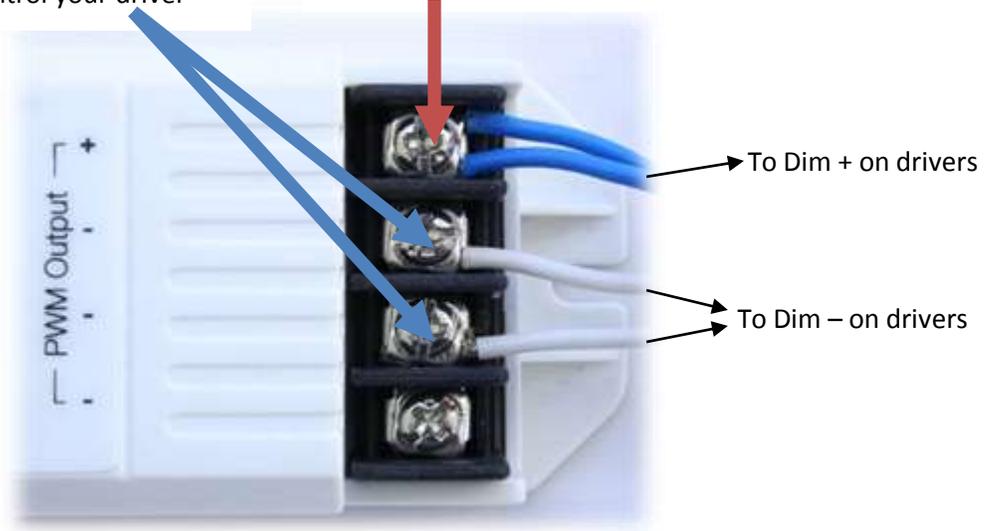
### Wiring the DDC-01 to Your Driver(s)

To wire your ELN-60-48P driver(s) to the DDC-01, ALL DIM + (blue) wires from your drivers attach to the + PWM output terminal as labeled on the right side of the DDC-01. The – channels control dimming. Attach the DIM – (white) wire(s) from your drivers to the PWM Output – you wish to control them. Multiple drivers can be connected to each – PWM output on the DDC-01. If you have two or three drivers connected to one LED color, connect them to the same – channel and connect the other drivers powering the other color(s) to a different – channels.

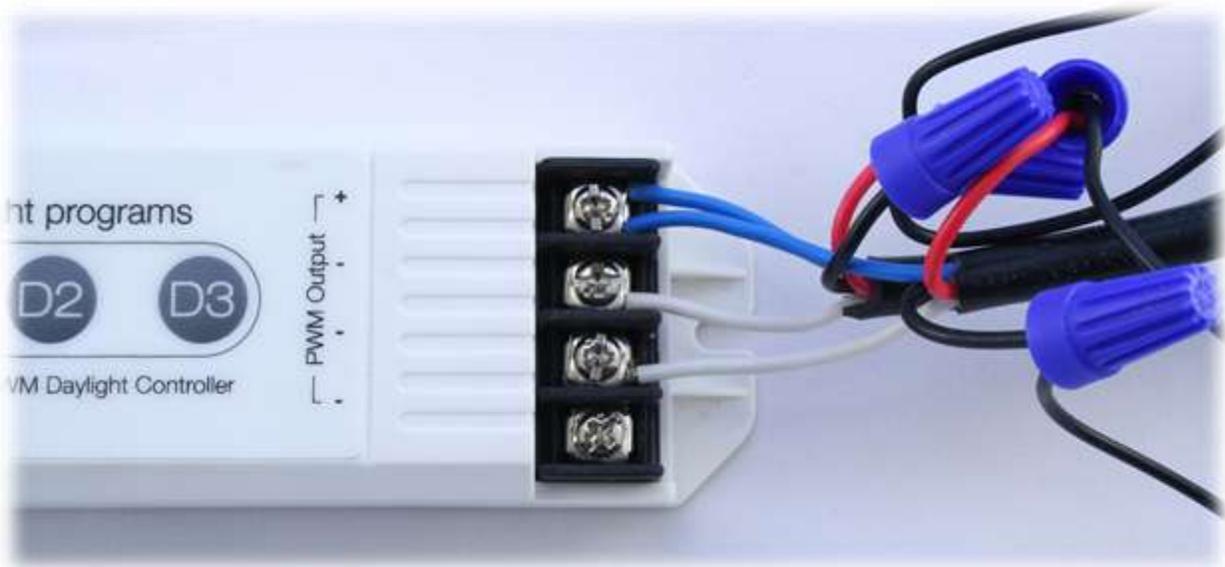
In the photo below, we are controlling two drivers. The DIM + (blue) wires from both ELN-60-48P drivers are attached to the + PWM output of the DDC-01. The DIM – (white) wires from the ELN-60-48P drivers are attached to separate PWM Output – terminals so they can be controlled separately.

Attach "Dim -" wires to the "PWM Output" channel you want to control your driver

ALL "Dim +" wires from your drivers attach to the DDC-01 + PWM Output



Here are some extra wiring Photos:



## Usage Notes

- The DDC-01 daylight programs (D1, D2, D3) run once and only once from power on. After sunset, nothing happens until the DDC-01 is power cycled. The AC adapter included with the DDC-01 will need to be connected to a wall timer set to turn on at the time of your preference.
- Daylight program times are fixed for sunrise, daylight, and sunset, but maximum intensity can be adjusted after sunrise has completed.
- If powered off, the controller will start in the previous mode when power is restored.
- When adjusting intensity, press the + and – buttons slowly (1 press / second) to ensure the last adjustment took place.

## Power Cycling



01

When power cycled by either pressing the “01” power button to turn the DDC-01 off and back on or unplugging the AC adapter and plugging it back in, the DDC-01 will automatically start in the mode it was previously in. Intensity settings are remembered for manual mode when power cycled, while daylight programs start from the beginning (sunrise) when power cycled.

For example, when in manual mode, if channels 1, 2, and 3 are set to 50%, 80%, and 90% intensity, if the AC adapter is unplugged, the DDC-01 will turn off and so will your lights. If the AC adapter is plugged in again, the DDC-01 will power on in the previously set manual mode, which was intensity of channels 1, 2, and 3 set to 50%, 80%, and 90% respectively.

## Using the DDC-01 with a Wall Timer

The DDC-01 does not have the capability to turn on and off at a specific time each day. If you would like it to turn on at a specific time and off at another, the AC adapter powering the DDC-01 will need to be connected to a wall timer that turns off and on at those times.

Since the DDC-01 resumes the last program (either manual mode or daylight program d1, d2, or d3) it was running when power cycled, you would use it as follows:

Manual Mode:

1. Set the intensity of PWM Output channels 1, 2, and 3 as desired (see manual mode section)
2. Set your wall timer to turn off and on at the times you desire
3. Plug in the DDC-01 AC adapter to the wall timer and ensure both the wall timer and DDC-01 are on (press power on DDC-01)
4. That’s it!

After the wall timer turns off for the day, when it turns on the next day, the DDC-01 will resume your manual program with previously set intensities.

Daylight programs mode:

1. Set your wall timer for a time slightly longer than the duration of the respective daylight program (Durations: 8 hours for D1, 10 hours for D2, 12 hours for D2)
2. Turn on the wall timer to the beginning of its cycle
3. Plug the DDC-01 AC adapter into the wall timer, turn the DDC-01 on, and press D1, D2, or D3 to enter that daylight program

The DDC-01 should now be running in the selected daylight program. When the wall timer turns off and then back on the next day, the DDC-01 will resume, from the beginning, the previously selected daylight program. If the intensity of the lights has been adjusted in any daylight program (see daylight programs section), the controller will remember this setting the next time the program starts up.

## Buttons and their Functions



- Button 01 – This is the red “power” button. Press it to power cycle the DDC-01.
- Button 02 – This is the “mode” button. Pressing it enters manual mode. While in manual mode, pressing it again cycles through the output channel you are controlling
- Button 03 – This is the brightness “+” button. Press this button in manual mode to increase intensity ~5%. Press this button in daylight program mode (after and only after sunrise) to increase maximum intensity by ~5%.
- Button 04 – This is the brightness “-” button. Press this button in manual mode to decrease intensity ~5%. Press this button in daylight program mode (after and only after sunrise) to decrease maximum intensity by ~5%.
- Button D1 – Press this button to enter daylight program D1
- Button D2 – Press this button to enter daylight program D2
- Button D3 – Press this button to enter daylight program D3

## Manual Mode

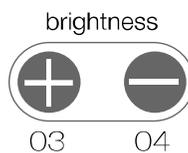


02

Manual mode on the DDC-01 allows intensity adjustment of individual channels, one at a time. The intensity of each channel is remembered when the DDC-01 is power cycled (power button pressed or AC adapter unplugged and plugged back in).

To enter manual mode, press the “mode” button. Repeatedly pressing “mode” will switch between individual channel adjustment modes and then to “three channels simultaneous” mode. Intensity cannot be adjusted for all channels simultaneously.

When in an individual channel mode, pressing the + or – button will increase or decrease intensity of the channel you are controlling by ~5%.



Along the right side of the controller, near each of the – PWM Output terminals, you will find tiny *indicator LEDs* that light up corresponding to the channel you are currently controlling. If you are in output 1 mode, an indicator led will light up near the corresponding PWM output. If you are in output 2 mode, an indicator led will light up near its corresponding output – the same goes for mode 3. When in mode 4, all three indicator led’s will light up indicating they are all on. The indicator LEDs are there for your convenience. Keep in mind the controller will remember the intensity of each channel when power cycled.

If the controller is at 100% intensity for a given channel, pressing + will result in 0% brightness. When at 0% brightness, pressing – will result in 100% brightness. Using this knowledge, you can determine a reference point for intensity as there is no display. When adjusting intensity with the + and – buttons, press them slowly ~1 time per second to ensure the adjustment has taken place.

## Daylight Programs



The DDC-01 has 3 fixed daylight programs. Pressing D1, D2, or D3 will instantly start that program.

Sunrise, daylight, and sunset times are fixed as follows:

- D1 – 30 minute sunrise, 7 hours of daylight, 30 minute sunset – 8 hours total
- D2 – 45 minute sunrise, 8.5 hours of daylight, 45 minute sunset – 10 hours total
- D3 – 1 hour sunrise, 10 hours of daylight, 1 hour sunset – 12 hours total

Once the sunrise period has passed and only after it has passed, pressing + or – will increase or decrease the intensity of all output channels by approximately 5%. This intensity will be remembered the next time the DDC-01 is power cycled.

For example, if after sunrise has passed in D1 mode, pressing the – button 4 times will decrease intensity from 100% to 80% (4 presses \* 5% decrease per press = 20% decrease = 80% intensity). The next time the unit is power cycled, the maximum intensity will be 80% for all portions of the daylight program: sunrise, daylight, and sunset. To change the intensity back to 100%, after sunrise is over in D1 mode, press + until the driver goes to 0% intensity and then press the – button one time to return to 100% intensity. The same procedures can be applied to D2 and D3

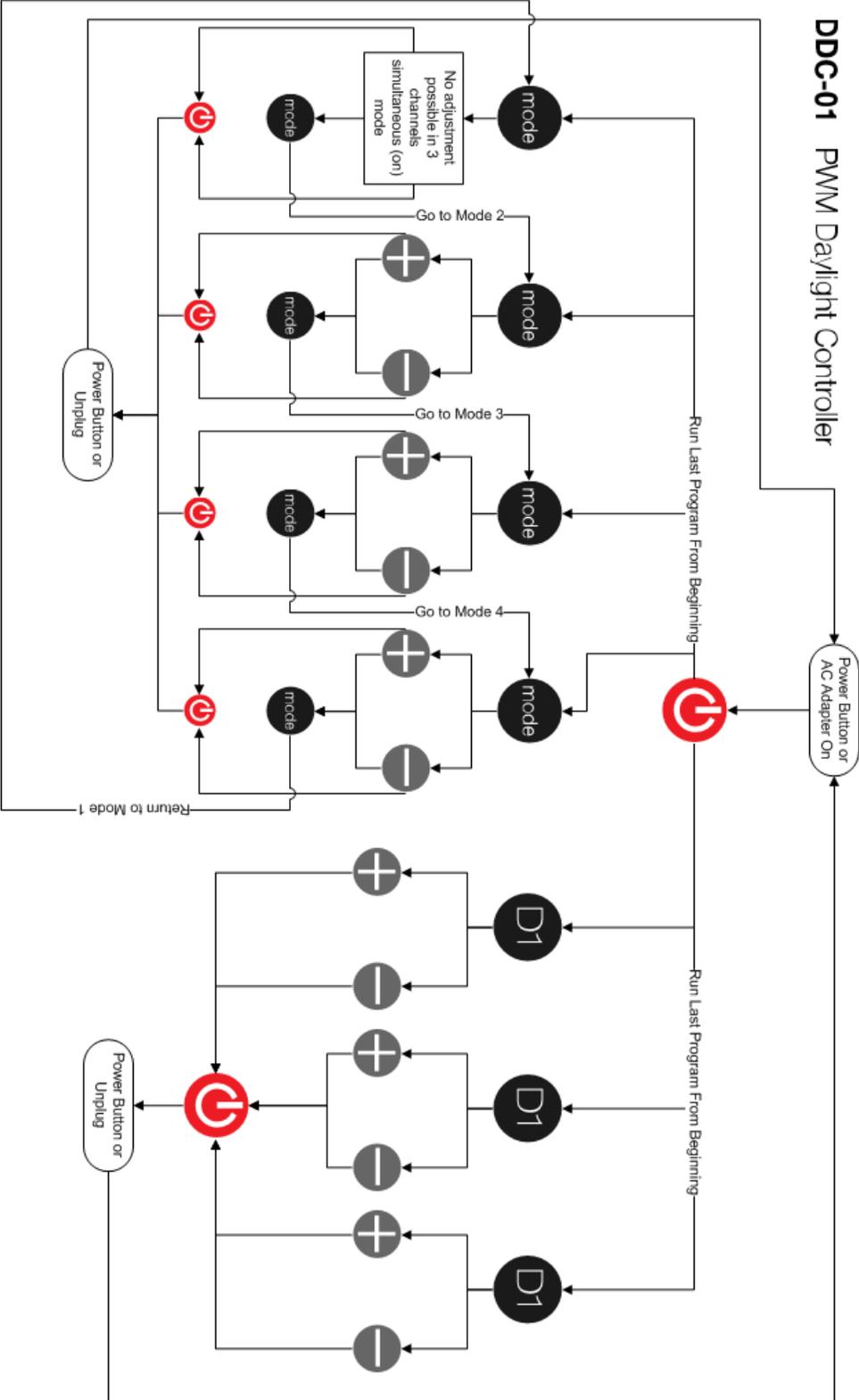
## Remote Control

For those of you who have purchased the Remote Control with your DDC-01, the buttons are as follows:

- Button 1: “+”
- Button 2: “-”
- Button 3: “Mode”
- Button 4: Daylight Program “D1”
- Button 5: Daylight Program “D2”
- Button 6: Daylight Program “D3”



DDC-01 PWM Daylight Controller



Function Map