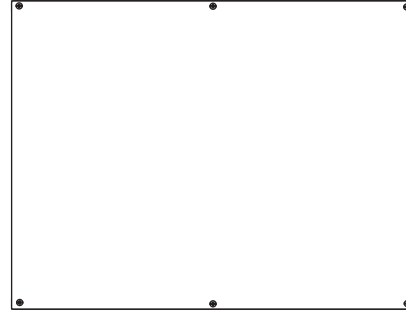**PURE EDGE**
LIGHTING

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# Installation Instructions for **2 X 100 / 3 X 100 / 4 X 100 Watt 24 Volt DC RGB DMX LED Power Supply**

**SAVE THESE INSTRUCTIONS!**

ETL
Intertek

## GENERAL INFORMATION

- **RISK OF FIRE:** This product must be installed by a qualified electrician. Turn the power to the electrical box off during installation. Read the "Important Safety Instructions" before installation.

- **NOTE:** To avoid overheating the power supply, install it in a ventilated remote location where air flows. Maintain proper spacing among power supplies when multiple power supplies are installed in the same remote location.

- This product is not suitable for wet locations. It is approved for the use at any height above the finished floor.

- A typical installation is shown. Specific installation must be in accordance with the local electrical codes.

- **TO REDUCE RISK OF FIRE,** it is important to wire the power supply for the system as described in this installation instruction.

- Load each power supply to **MAXIMUM 100** Watts.

- Use CDP color dial or CTP color touch screen controller or CDMX RGB/RGBW Touch Controller with RGB LED soft strip.

## IMPORTANT SAFETY INSTRUCTIONS

- Do not install this power supply in a wet location.

- To reduce the risk of the system overheating and possibly causing a fire, make sure all the connections are tight.

- Do not install *LED fixture closer than three inches or as specified in the *LED fixture installation instructions to curtains or similarly combustible materials. Keep insulation at least 3" away from the enclosure.

- Turn the electrical power off before modifying the lighting system in any way.

- The system is "ETL" listed for USA and Canada only when all the products used are supplied by PureEdge Lighting.

* See LED fixture installation instructions for proper placement.

| 100W, 24VAC LOW VOLTAGE WIRE SIZE CHART | | | | | |
|---|---|---|---|---|---|
| **3% VOLTAGE DROP** | **WIRE LENGTH IN FT** | **UP TO 31FT** | **32FT-49FT** | **50FT-81FT** | **82FT-124FT** |
| | **WIRE SIZE** | 14 AWG | 12 AWG | 10 AWG | 8 AWG |
| | **VOLTAGE AT END OF THE WIRE** | 23.28 VAC | 23.29 VAC | 23.28 VAC | 23.28 VAC |

## Section One: LED Power Supply with RGB Soft Strip & CDP, CTP, or CDMX RGB/RGBW Controller

**A**

PHILLIPS SCREW

COVER

ENCLOSURE
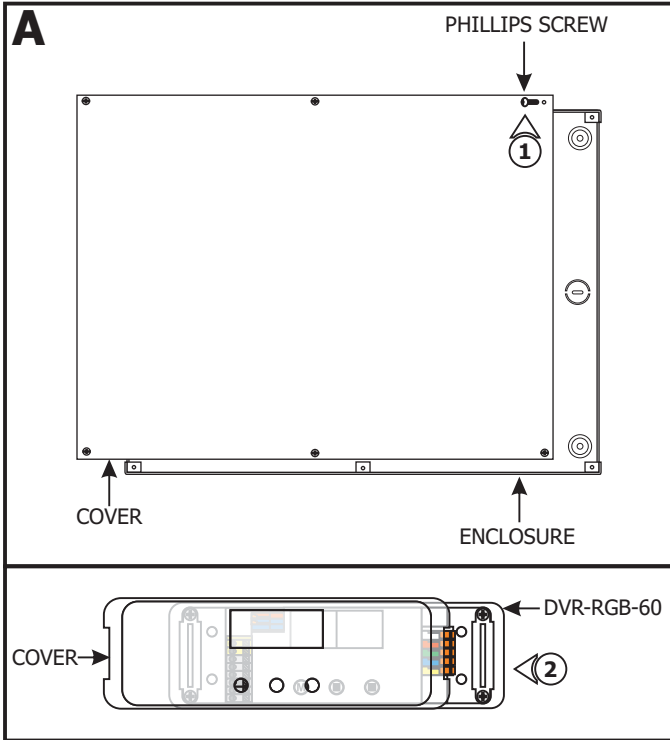
COVER→

DVR-RGB-60

**NOTE: Refer to Section Two if using alternative driver with LED power supply.**

**1:** Loosen the six Phillips screws on front of the power supply to remove the cover.

**2:** Carefully pull off the cover from the DVR-RGB-60 driver.

---

**NOTE:** Use a deep double gang boxes to fit the controller and controller power supply.

**NOTE:** Refer to the "Configuring and Operating Dim Wheel" on pages 5 and 6 to properly operate the controller.

**3:** Connect one end of a red wire to the "VDC+" terminal of the controller and the other end to the "+24VDC" terminal of the controller power supply.

**4:** Connect one end of a black wire to the "Ground" terminal of the controller and the other end to the "-24VDC" terminal of the controller power supply.
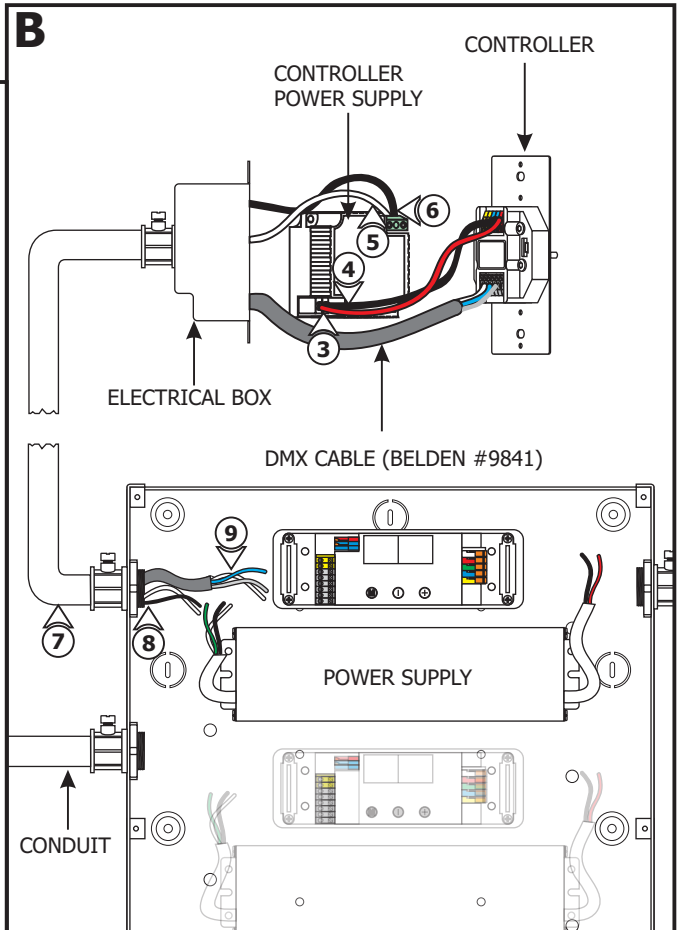
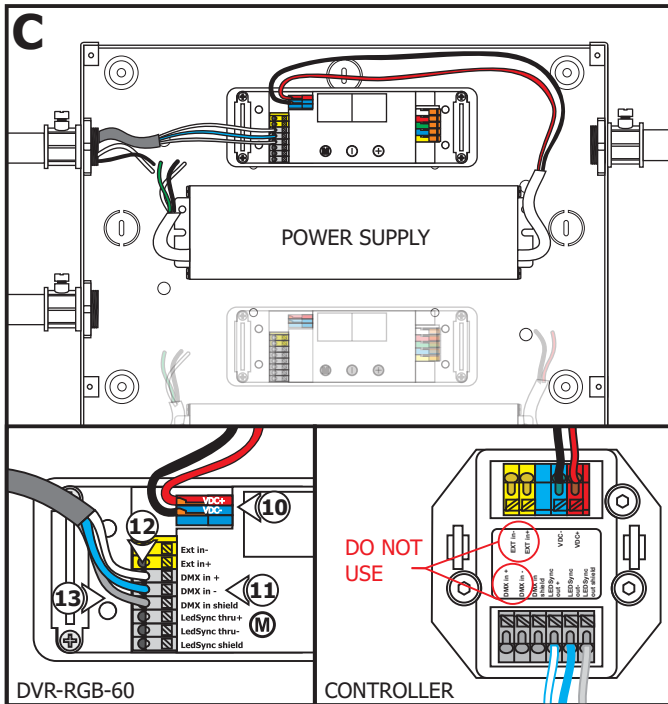**5:** Connect the white wire to the "N" terminal of the controller power supply.

**6:** Connect the black wire to the "L" terminal of the controller power supply.

**7:** Install conduits from the controller, main panel (line voltage), and soft strip to the power supply enclosure.

**8:** Run the black and white line voltage wires coming from the controller power supply to the power supply enclosure.

**9:** Run the proper size DMX cable **(Belden #9841 recommended)** with three data wires from controller to the power supply box.

**B**

CONTROLLER

CONTROLLER POWER SUPPLY

ELECTRICAL BOX

DMX CABLE (BELDEN #9841)

POWER SUPPLY

CONDUIT

**C**

**POWER SUPPLY**

DVR-RGB-60

Ext in-
Ext in+
DMX in +
DMX in -
DMX in shield
LedSync thru+
LedSync thru-
LedSync shield

VDC+
VDC-

(10)
(12)
(13)
(11)
(M)

CONTROLLER

DO NOT USE

**10:** Install a red wire from the power supply to DVR-RGB-60 "VDC+" red terminal and a black wire from power supply to DVR-RGB-60 "VDC-" blue terminal.

**11:** Connect one end of a data wire (blue with white stripes wire) to controller "LEDSYNC OUT–" terminal. Connect the other end into the DVR-RGB-60 "DMX in –" terminal.

**12:** Connect one end of a data wire (white with blue stripes wire) to controller "LEDSYNC OUT+" terminal. Connect the other end into the DVR-RGB-60 "DMX in +" terminal.

**13:** Connect one end of a data wire (bare shield wire) to controller "LEDSYNC SHIELD" terminal. Connect the other end into the DVR-RGB-60 "DMX in shield" terminal.

**NOTE:** "DMX in+", "DMX in-", "EXT in+" & "EXT in-", controller terminals are not used on controller.

**D**

MASTER LED DRIVER

VDC+
VDC-

Ext in-
Ext in+
DMX in +
DMX in -
DMX in shield
LedSync thru+
LedSync thru-
LedSync shield

(15)
(14)
(16)
(M)

DMX CABLE (BELDEN #9841)

COMPANION LED DRIVER

VDC+
VDC-

Ext in-
Ext in+
DMX in +
DMX in -
DMX in shield
LedSync thru+
LedSync thru-
LedSync shield

(15)
(14)
(16)
(M)

**NOTE:** Use instructions below to wire master LED driver to additional companion LED drivers.

**14:** Connect one end of a data wire (blue with white stripes wire) to master LED driver "LEDSYNC OUT–" terminal. Connect the other end into the DVR-RGB-60 "DMX in –" terminal.

**15:** Connect one end of a data wire (white with blue stripes wire) to master LED driver "LEDSYNC OUT+" terminal. Connect the other end into the DVR-RGB-60 "DMX in +" terminal.

**16:** Connect one end of a data wire (bare shield wire) to to master LED driver"LEDSYNC SHIELD" terminal. Connect the other end into the DVR-RGB-60 "DMX in shield" terminal.

**17:** Repeat steps 14-16 for additional companion LED drivers.

**E**

POWER SUPPLY

POWER SUPPLY

(19)
(18)
(20)
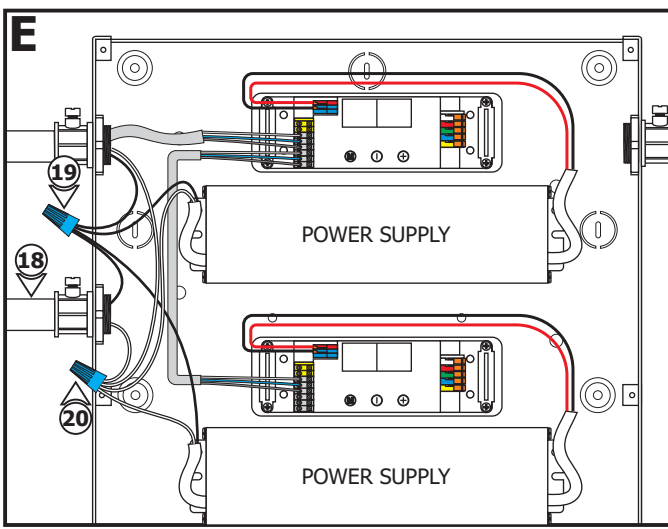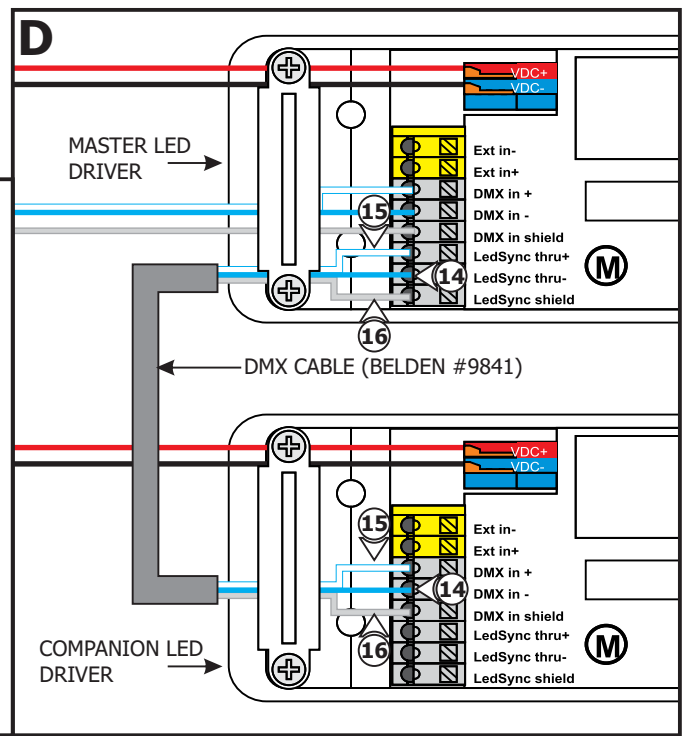
**18:** Run the line voltage power wires into the power supply.

**19:** Connect the hot power wire to the black wires of each power supply and the black controller power supply wire using a wire nut.

**20:** Connect the neutral power wire to the white wires of each power supply and the white controller power supply wire using a wire nut.

**21:** Make sure the power supply is grounded in accordance with local electrical codes.

3

**F**








LED SOFT STRIP ──────▶
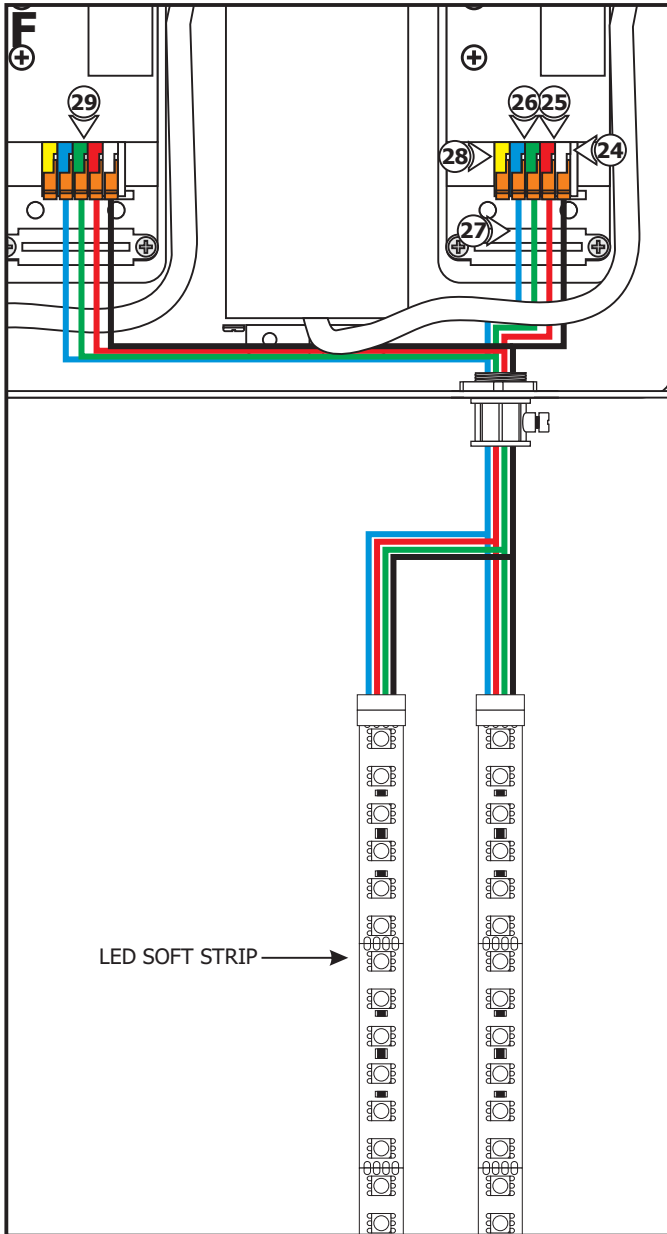
**NOTE:** The DVR-RGB-60 terminals adapt maximum 18 AWG size. To avoid voltage drop, use 6" of 18 AWG size in RGB terminals connected inline to proper size gauge wire attached to the RGB LED wires with wire nuts. See the "Low Voltage Wire Size Chart" on page 1.

**NOTE:** Do not exceed the maximum wattage of the power supply.

**NOTE:** Use only 24 volt LED RGB soft strip with this power supply.

**22:** Use the "Low Voltage Wire Size Chart" on page 1 to determine proper wire size connecting to the DVR-RGB-60 terminals.

**23:** Run the proper size black, red, green, blue, and white wires from the RGB LED soft strip to the power supply enclosure.

**24:** Connect the black wire into the DVR-RBG-60 "LED SUPPLY +" white terminal. Connect the other end to the black wire(s) of the RGB soft strip.

**25:** Connect the red wire into the DVR-RBG-60 "Group 1-" red terminal. Connect the other end to the red wire(s) of the RGB soft strip.

**26:** Connect the green wire into the DVR-RBG-60 "Group 2-" green terminal. Connect the other end to the green wire(s) of the RGB soft strip.

**27:** Connect the blue wire into DVR-RGB-60 "Group 3-" blue terminal. Connect the other end to the blue wire(s) of the RGB soft strip.

**28: Optional:** For RGB+W, connect the white wire into the DVR-RGB-60 "Group 4-" yellow terminal. Connect the other end to the white wire of the RGB+W soft strip.

**29:** Repeat steps 22 through 28 for additional DMX controllers and soft strips.

**30:** Replace the DVR-RGB-60 cover.

**31:** Replace the power supply cover and secure it by tightening the six Phillips screws.

**G**



4

**H**

CONTROLLER  FACE PLATE  1.5MM ALLEN WRENCH  PUSH BUTTON

(32)  FLAT HEAD SCREW

(33)
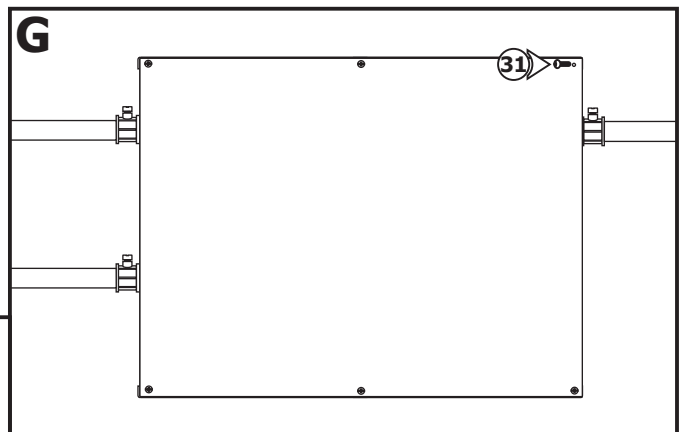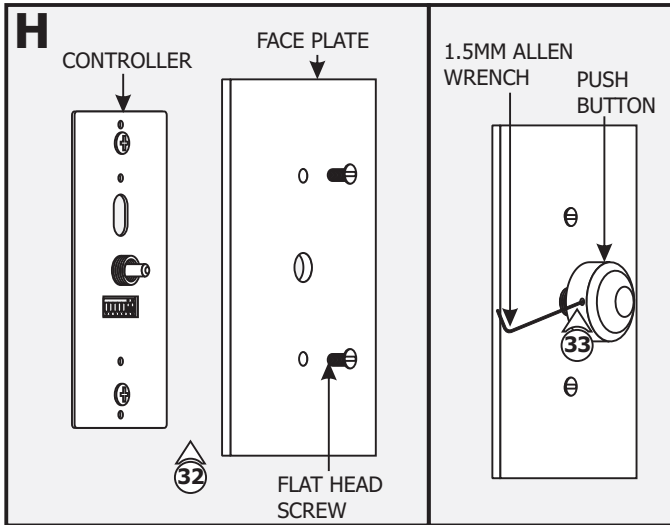
**32:** Align the face plate to the controller and secure using the two flat head screws.

**33:** Attach the push button onto the controller center rod and secure by tightening the M3 set screw with the 1.5mm Allen wrench provided.

# Configuring and Operating Dim Wheel

## Selecting Modes

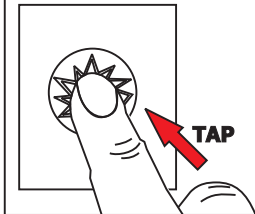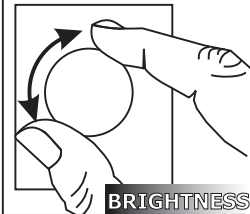**Configure your CDP by setting the DIP switches on the front:**

| O N 1 2 3 4 5 6 7 | COLOR MODE |

| O N 1 2 3 4 5 6 7 | CHASE MODE |

**NOTE:** The DIP switches must remain accessible after installation. When making changes in the DIP switch settings, disconnect and reconnect the power supply to activate new settings.

## Operating CDP

1- Turn the light on     **TAP**

2- Change brightness     BRIGHTNESS

3- Turn the light off     **TAP**
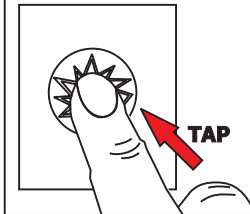
## Advanced Operation for Color Mode

1- Turn the light on     **TAP**

2- Activate configuration mode     **2 SEC**
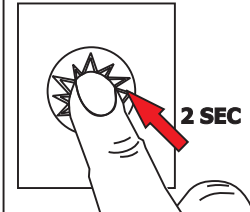
3- Set Color

4- Save color saving     **TAP**
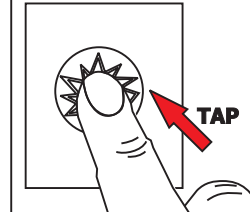
## Advanced Operation for Chase Mode

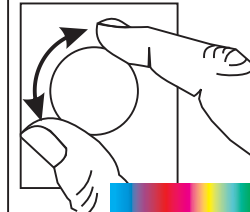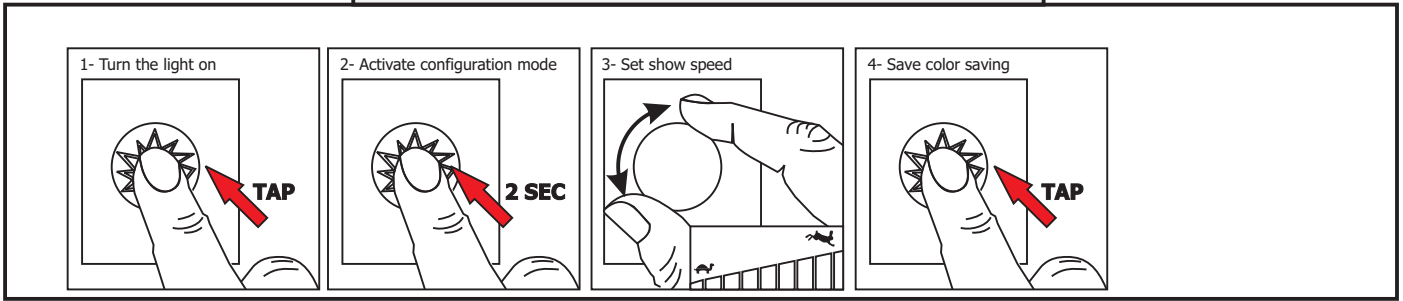| 1- Turn the light on | 2- Activate configuration mode | 3- Set show speed | 4- Save color saving |
|---|---|---|---|
| TAP | 2 SEC | | TAP |

## Advanced Operation for RGBW

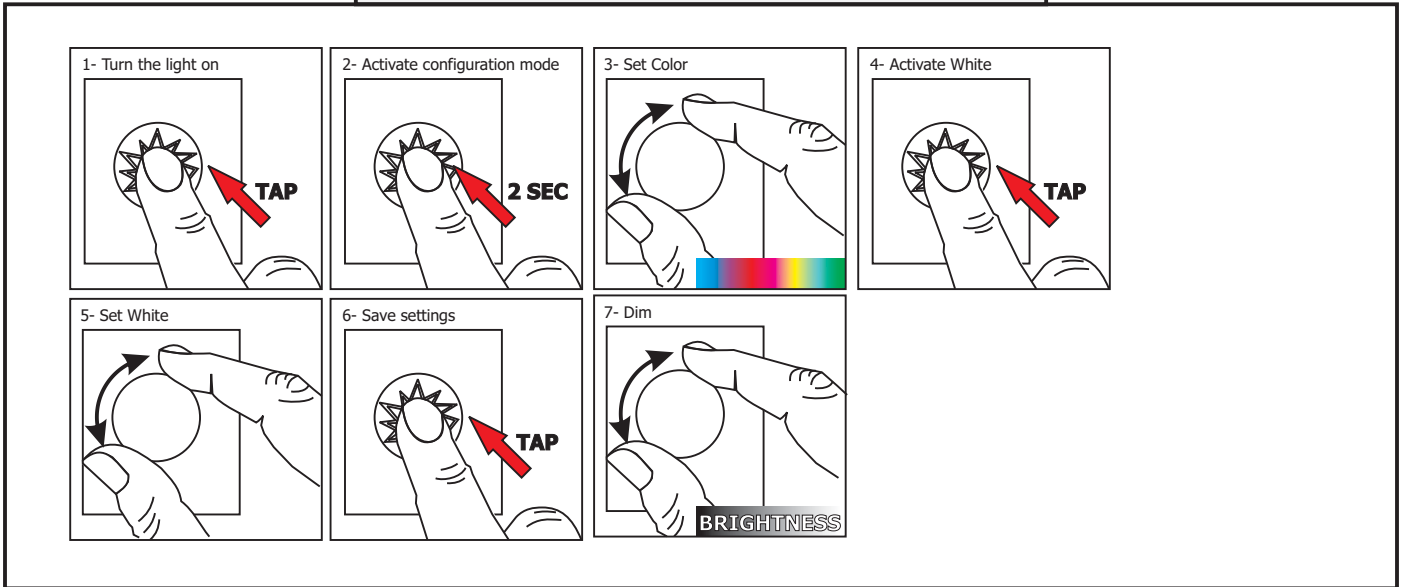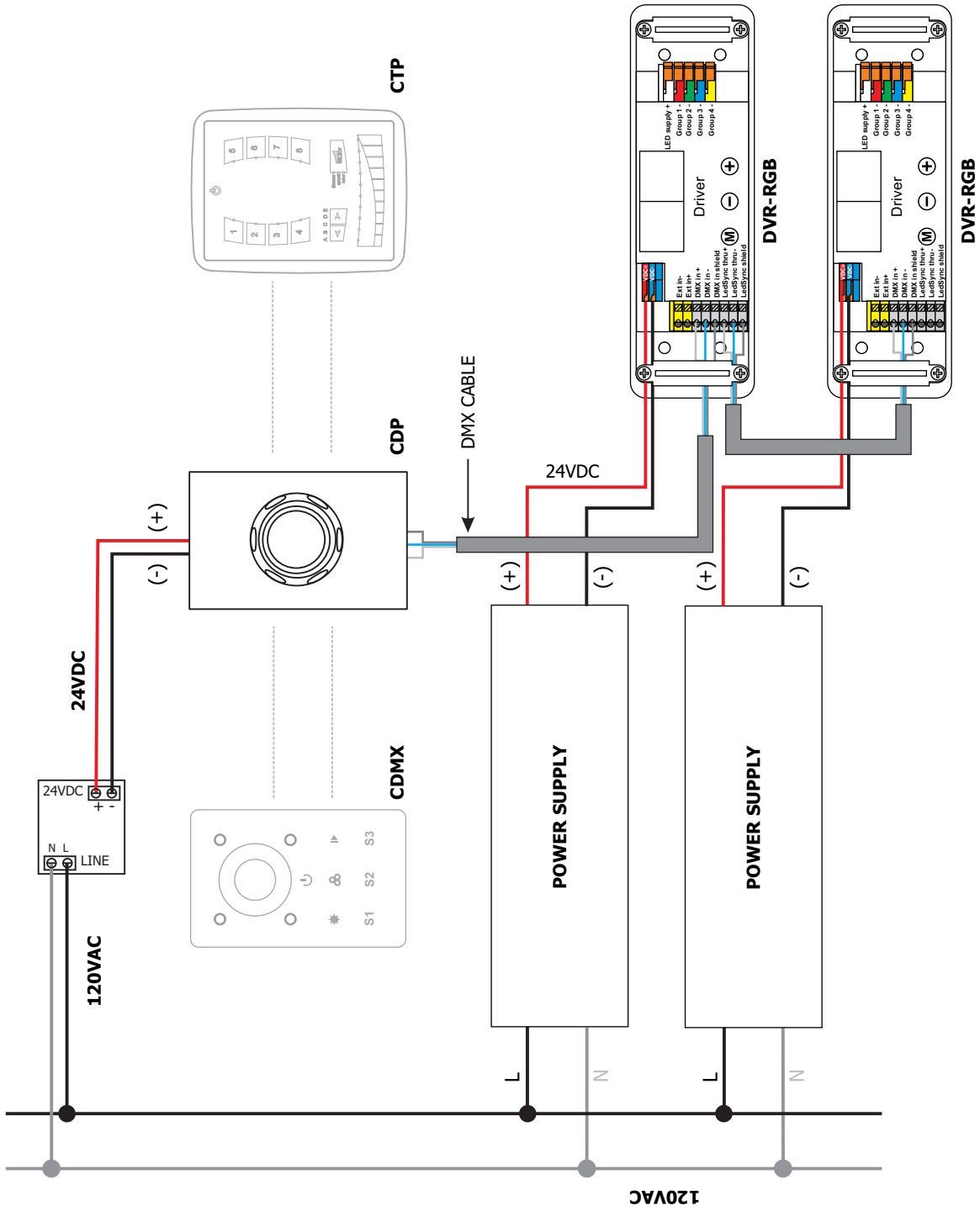| 1- Turn the light on | 2- Activate configuration mode | 3- Set Color | 4- Activate White |
|---|---|---|---|
| TAP | 2 SEC | | TAP |

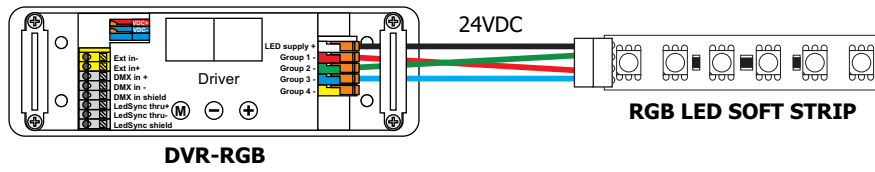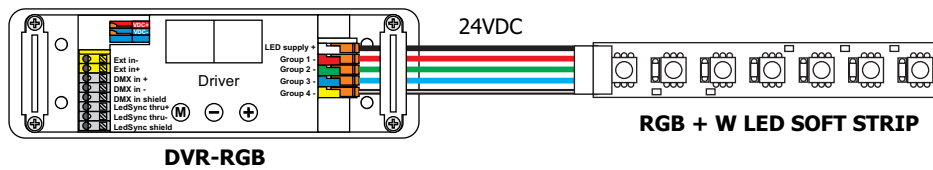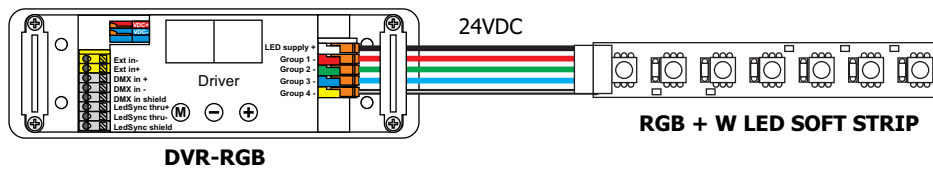| 5- Set White | 6- Save settings | 7- Dim |
|---|---|---|
| | TAP | BRIGHTNESS |

6

# Input Wiring Diagram for 2x100W (Shown)

# Output Wiring Diagram for 2x100W (Shown)

## RGB
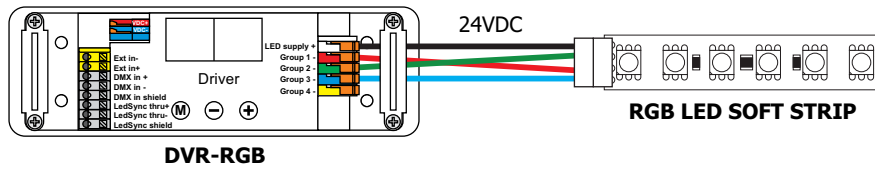


## RGB+W

# Section Two: Alternative Driver with LED Power Supply with RGB/RGB+W Soft Strip

**I**

PHILLIPS SCREW

COVER

ENCLOSURE

PHILLIPS SCREW
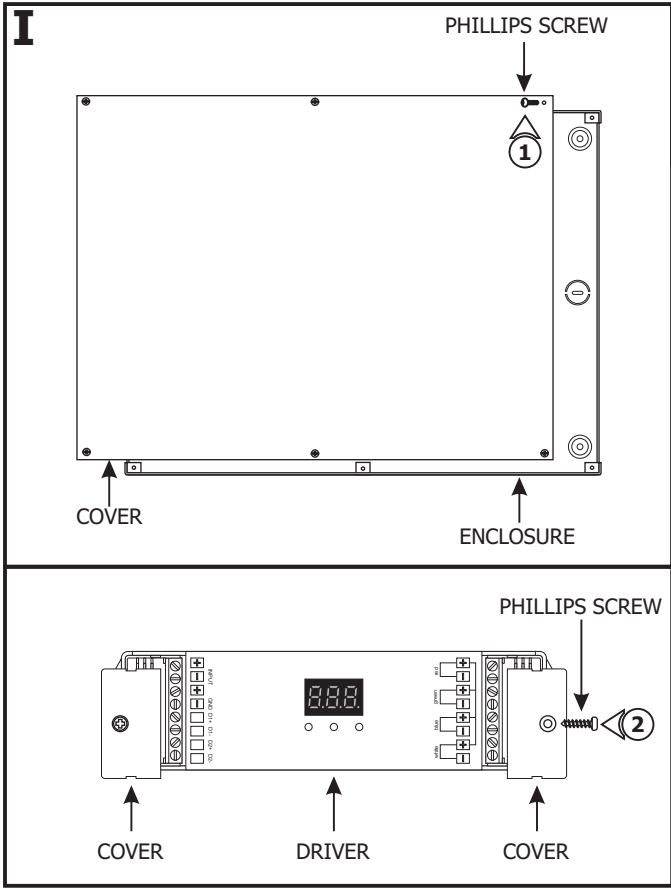
COVER

DRIVER

COVER

**1:** Loosen the six Phillips screws on front of the power supply to remove the cover.

**2:** Loosen the two Phillips screws on the driver to remove the cover.

**J**

CONTROLLER POWER SUPPLY

CONTROLLER

ELECTRICAL BOX

DMX CABLE (BELDEN #9841)

POWER SUPPLY

CONDUIT

**3:** Refer to steps 3 through 9 on Page 2 to connect the controller to the controller power supply, install conduits, and run the proper size line voltage wires and DMX cable wires to the power supply enclosure.

**K**

POWER SUPPLY WIRES

DRIVER

RED+

BLACK-

DMX CABLE

DO NOT USE

CONTROLLER
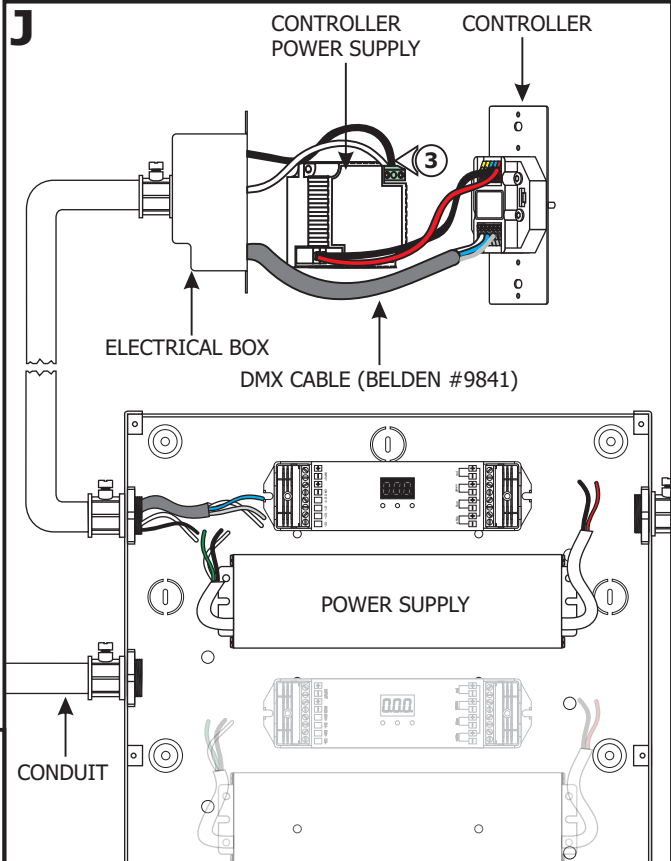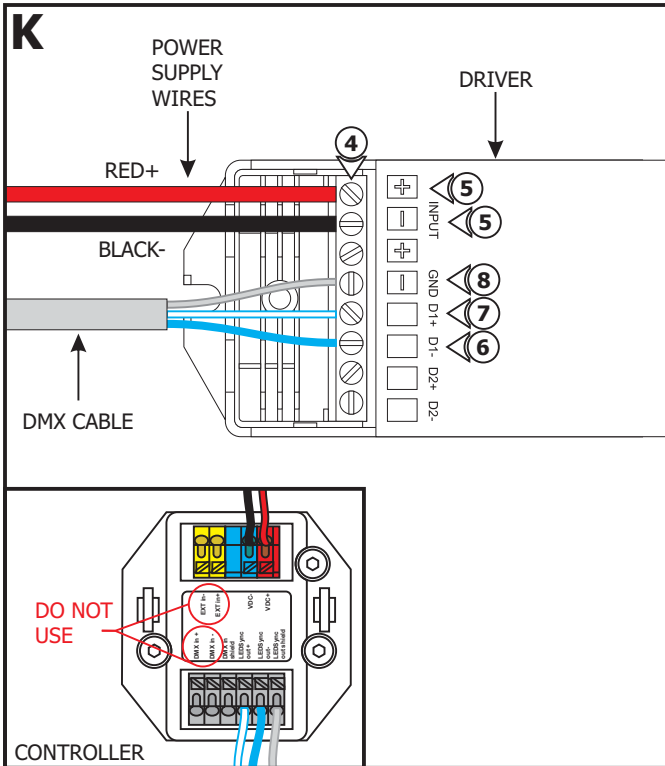
**4:** Loosen the screws on the "+ INPUT," "-INPUT," "GND," "D1+" and "D1-" terminals of the DMX driver with a flat head screw driver.

**5:** Insert the red wire from the power supply into the "+ INPUT" DMX terminal and tighten the screw. Insert the black wire from the power supply to the "- INPUT" DMX terminal and tighten the screws. Repeat for each power supply and driver.

**6:** Connect one end of a data wire (blue with white stripes wire) to the "LEDSYNC OUT–" controller terminal. Insert the other end into the "D1-" DMX terminal and tighten the screw.

**7:** Connect one end of a data wire (white with blue stripes wire) to the "LEDSYNC OUT+" controller terminal. Insert the other end into the "D1+" DMX terminal and tighten the screw.

**8:** Connect one end of a data wire (bare shield wire) to the "LEDSYNC SHIELD" controller terminal. Insert the other end into the "GND" DMX terminal and tighten the screw.

**NOTE:** "DMX in+", "DMX in-", "EXT in+" & "EXT in-", controller terminals are not used on controller.

---

**L**

DMX CABLE (BELDEN #9841)

**MASTER LED DRIVER**

**COMPANION LED DRIVER**
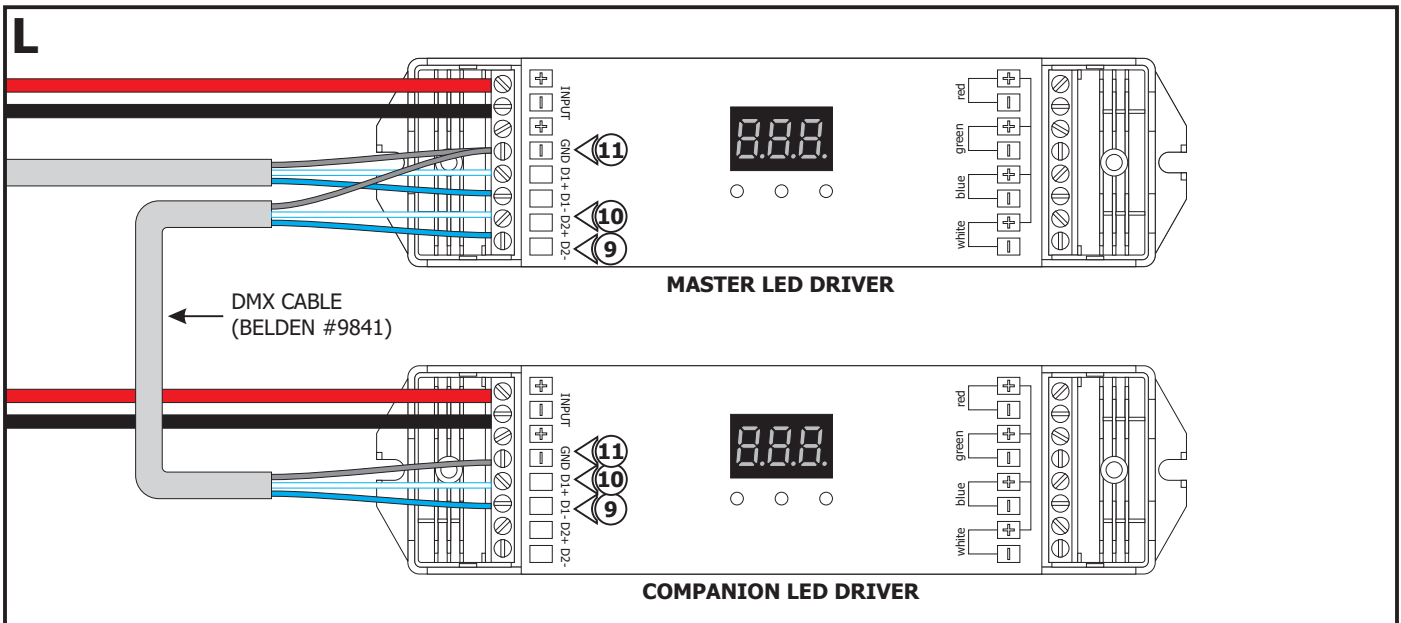
**NOTE:** Follow the steps below to wire the master LED driver to additional companion LED drivers.

**9:** Insert one end of a data wire (blue with white stripes wire) into the "D2-" terminal of the master LED driver. Insert the other end into the "D1-" terminal of the companion LED driver and tighten the screws.

**10:** Insert one end of a second data wire (white with blue stripes wire) into the "D2+" terminal of the master LED driver. Insert the other end into the "D1+" terminal of the companion LED driver and tighten the screws.

**11:** Insert one end of a data wire (bare shield wire) into the "GND" terminal of the master LED driver. Insert the other end into the "GND" terminal of the companion LED driver and tighten the screws.

**12:** Repeat steps 9 through 11 for additional drivers.

**NOTE:** Refer to wiring diagrams on pages 13 and 14 to connect wires properly.

**M**



POWER SUPPLY
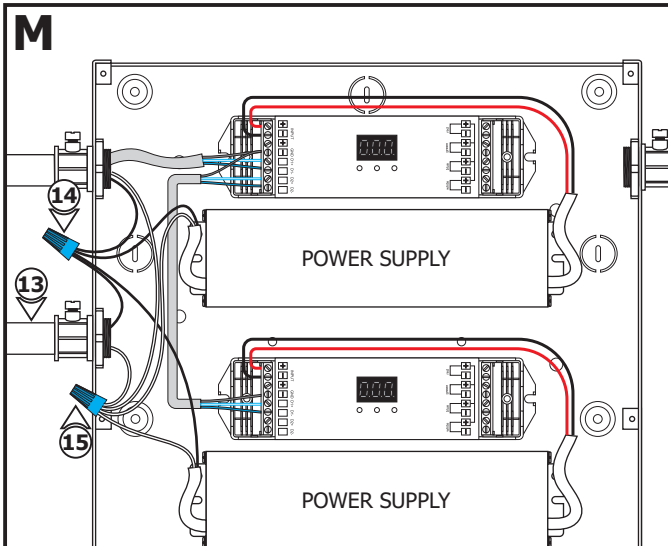
POWER SUPPLY

**13:** Run the line voltage power wires into the power supply.

**14:** Connect the hot power wire to the black wires of each power supply and the black controller power supply wire using a wire nut.

**15:** Connect the neutral power wire to the white wires of each power supply and the white controller power supply wire using a wire nut.

**16:** Make sure the power supply is grounded in accordance with local electrical codes.

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**NOTE:** Do not exceed the maximum wattage of the power supply.

**17:** Use the "Low Voltage Wire Size Chart" on page 1 to determine proper wire size connecting to the DMX terminals.

**18:** Run the proper size black, red, green, blue, and white wires from the LED strip/fixture to the power supply enclosure.

**19:** Connect the black wire of the LED strip/fixture to the red "+" DMX terminal and tighten the screw.

**20:** Connect the red wire of the LED strip/fixture to the red "-" DMX terminal and tighten the screw.

**21:** Connect the green wire of the LED strip/fixture to the green "-" DMX terminal and tighten the screw.

**22:** Connect the blue wire of the LED strip/fixture to the blue "-" DMX terminal and tighten the screw.

**23: Optional:** For RGB+W, connect the white wire of the LED strip/fixture to the white "-" DMX terminal and tighten the screw.

**24:** Repeat steps 18 through 23 for additional drivers and LED strips/fixtures.
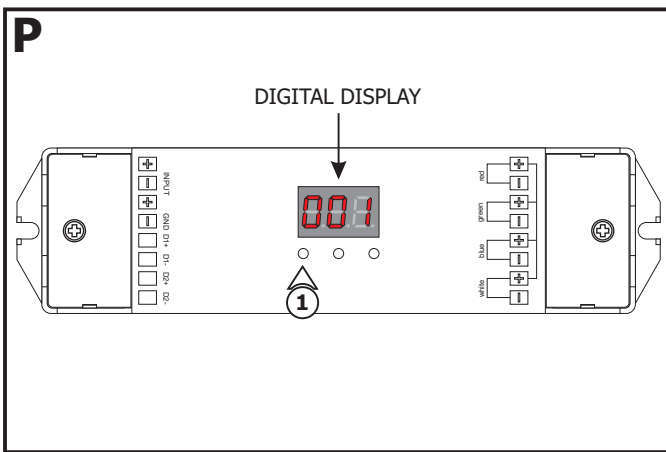
**N**

RGB



RGB+W

**O**
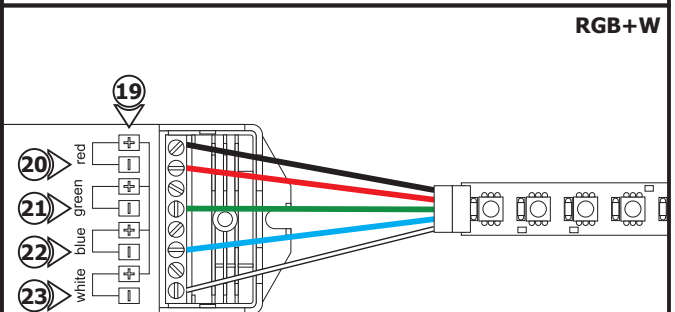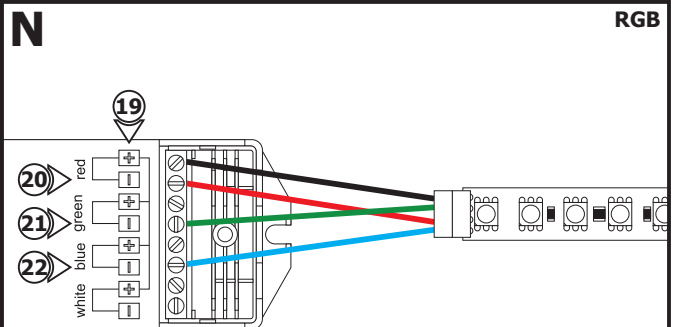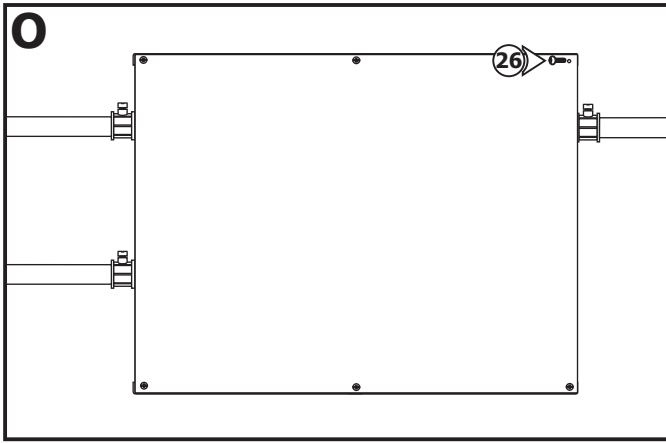


**25:** Replace the driver covers.

**26:** Replace the power supply cover and secure it by tightening the six Phillips screws.
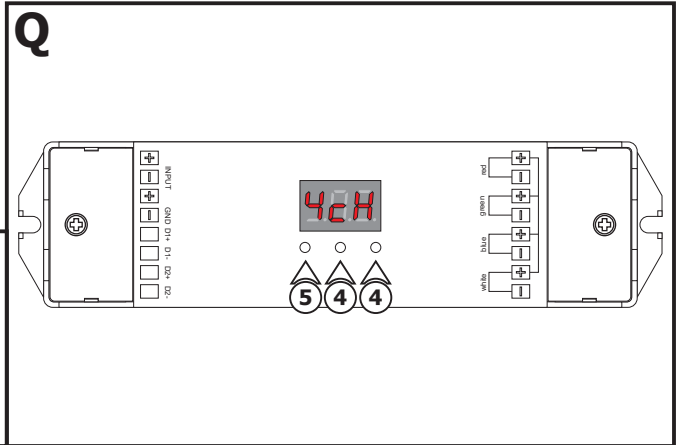
## Programming Guide

**P**

DIGITAL DISPLAY



**1:** Press and hold the first button for two seconds until the digital display flashes to choose a DMX address.
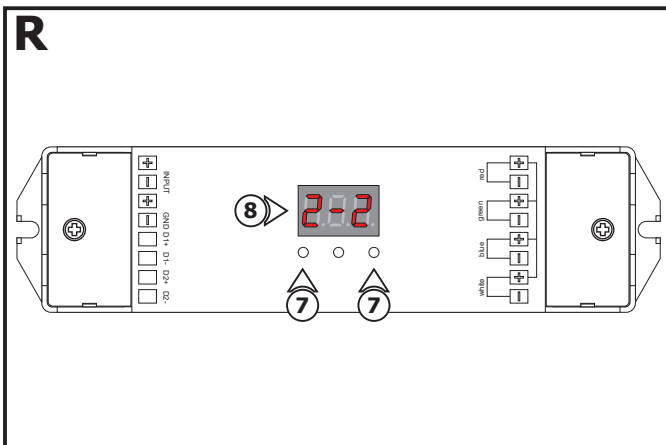
**2:** Use the three buttons to set the DMX address.

**3:** Press and hold any button for two seconds to confirm.

**Q**



**4:** Press and hold the second and third buttons at the same time for two seconds until the digital display flashes to choose a channel.

**5:** Press the first button to toggle the channel to 4.

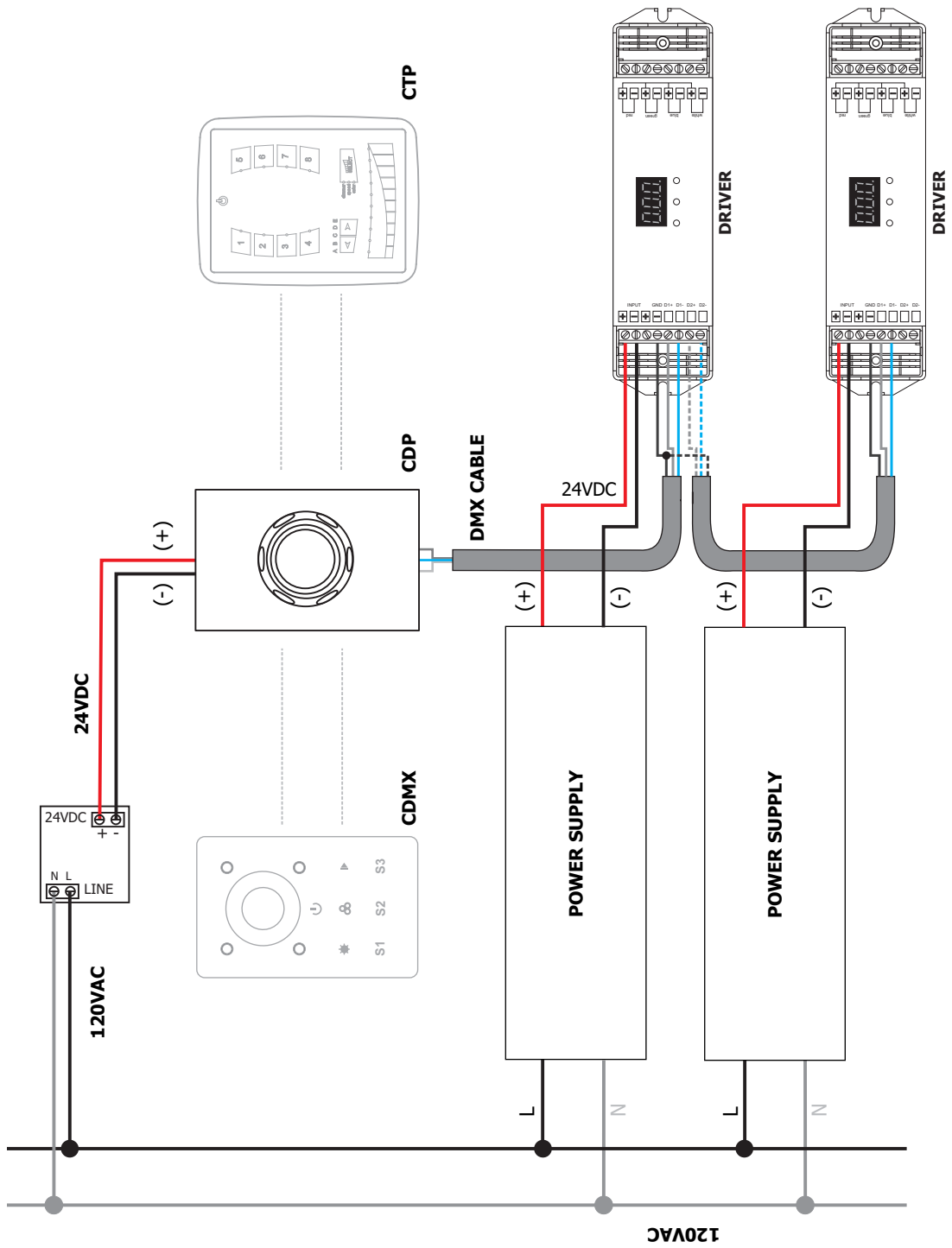**6:** Press and hold any button for two seconds to confirm.

**R**



**7:** Press and hold the first and third buttons at the same time for two seconds until the digital display flashes to enter the PWM frequency settings.

**8:** Press the first button and toggle to 2, meaning 200Hz. Press the third button and toggle to 2, meaning linear dimming.

**9:** Press and hold any button for two seconds to confirm.

# Input Wiring Diagram for 2x100W (Shown)

# Output Wiring Diagram for 2x100W (Shown)

## RGB

24VDC

**DRIVER**

**RGB LED SOFT STRIP**

24VDC

**DRIVER**

**RGB LED SOFT STRIP**

## RGB+W

24VDC

**DRIVER**

**RGB+W LED SOFT STRIP**

24VDC

**DRIVER**

**RGB+W LED SOFT STRIP**