EDGE LIGHTING

1718 W. Fullerton Ave
Chicago, IL 60614
Tel: 773-770-1195
Fax: 773-935-5613
www.edgelighting.com
info@edgelighting.com

TW2-S1-1RE-_ _-2K4K-_ _-
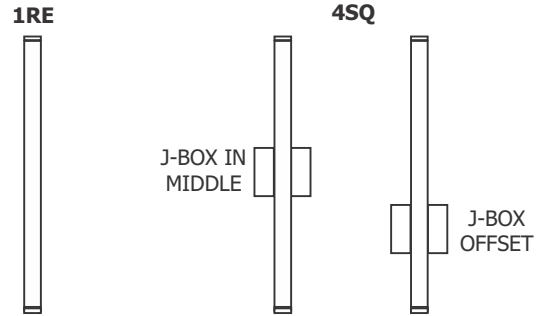
TW2-S1-4SQ-_ _-2K4K-_ _-

Installation Instructions for **Twiggy Square Lens 24VDC, Tunable White 2000K-4000K**
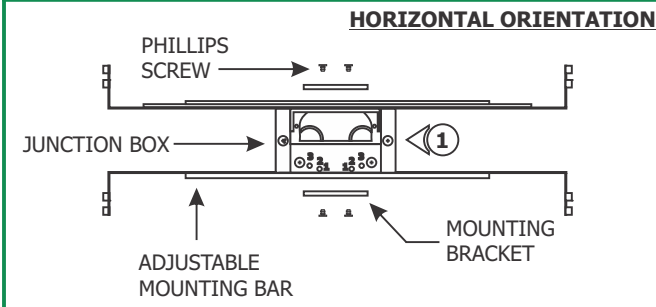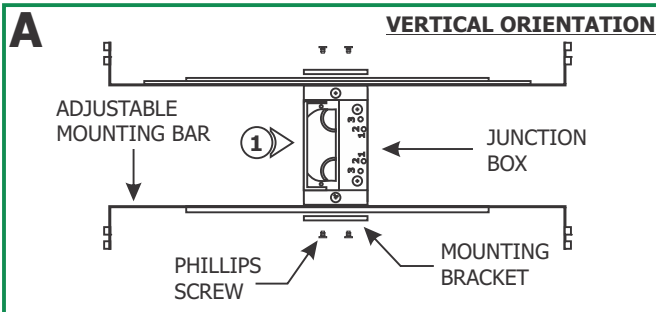
IMPORTANT INFORMATION
- This instruction shows a typical installation.
- This product is wall mount only.
- This product is dimmable with a low-voltage electronic dimmer.
- This product must be installed by a qualified electrician.
- The 1RE version mounts to the provided CV2_1RE_JBOX. The 4SQ version mounts to standard electrical box with plaster ring or octagon box.
- This product requires remote 24VDC ELV power supplies (sold separately) or a 24VDC RGB power supply (sold separately). (See pages 4-7 for installation steps.)

SAVE THESE INSTRUCTIONS!

1RE

4SQ

J-BOX IN MIDDLE

J-BOX OFFSET

Section One: TW2-1RE Version

A

VERTICAL ORIENTATION

ADJUSTABLE MOUNTING BAR

JUNCTION BOX

PHILLIPS SCREW

MOUNTING BRACKET

HORIZONTAL ORIENTATION

PHILLIPS SCREW

JUNCTION BOX

MOUNTING BRACKET
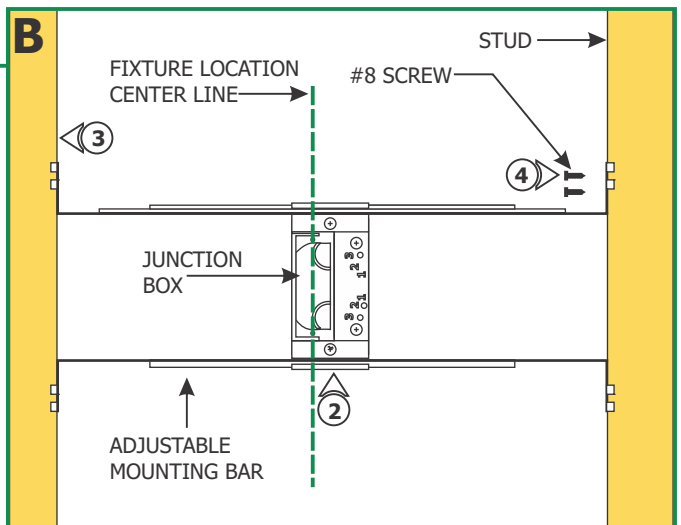
ADJUSTABLE MOUNTING BAR

NOTE: Before beginning any electrical work, ensure that the power to the electrical box is off.
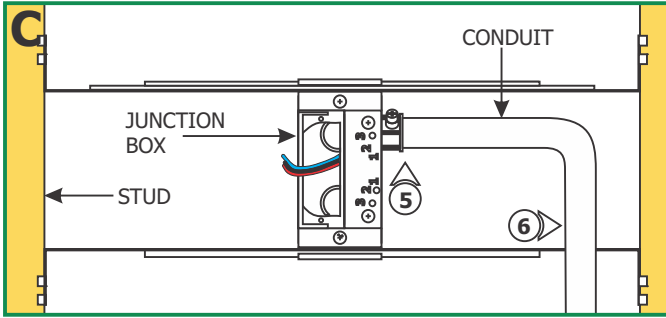
1: Determine channel orientation. Mount each adjustable mounting bar to one side of the junction box and secure them with the provided mounting brackets and two Phillips screws.

NOTE: The adjustable mounting bars mount to studs that are spaced 13" to 24" apart.
NOTE: Ensure the opening of the junction box is aligned with the center of the desired fixture location. If necessary, adjust the junction box location by loosening the screws and sliding the junction box to the proper location. Tighten the Phillips screws after adjusting.

2: Select the location between the two studs for the junction box to be mounted.

3: Place the adjustable mounting bars between the studs.

4: Make sure the lips on the adjustable mounting bars are against the studs. Secure the adjustable bars to the studs with the eight #8 screws.

B

FIXTURE LOCATION CENTER LINE

STUD

#8 SCREW

JUNCTION BOX

ADJUSTABLE MOUNTING BAR
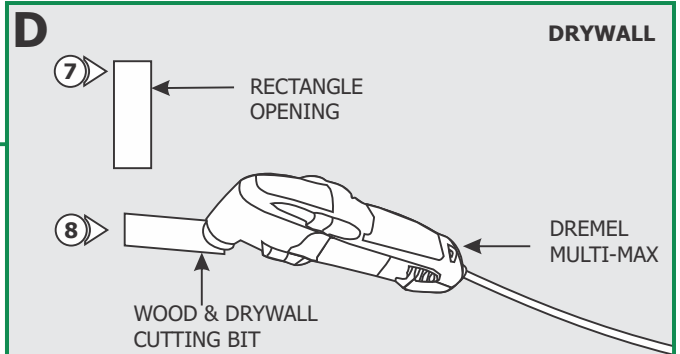
C

JUNCTION BOX

STUD

CONDUIT

5: Remove a knockout to install the power line conduit.

6: Install the conduit and run the wire connections from the required DMX controller or the alternate two ELV dimmers (see wiring diagrams on pages 7 and 8.) Refer to Section Four for installation and setup.

7: Mark the rectangular junction box opening shape on drywall where the junction box will be located.

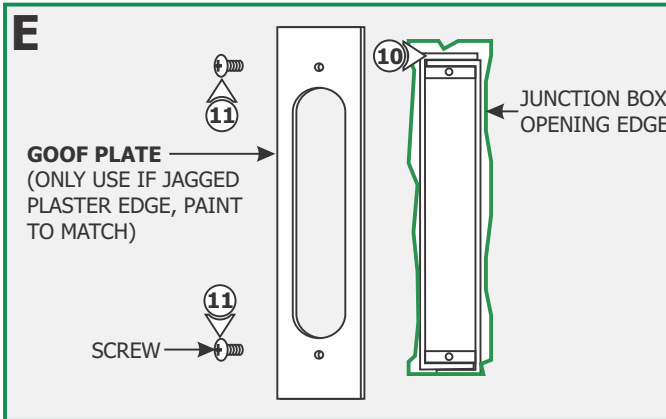**8:** Cut out the marked rectangle opening, using a "Dremel Multi-Max" with the "wood & drywall" cutting bit.

9: Install & finish drywall.

D

DRYWALL

RECTANGLE OPENING

DREMEL MULTI-MAX

WOOD & DRYWALL CUTTING BIT

E

GOOF PLATE (ONLY USE IF JAGGED PLASTER EDGE, PAINT TO MATCH)
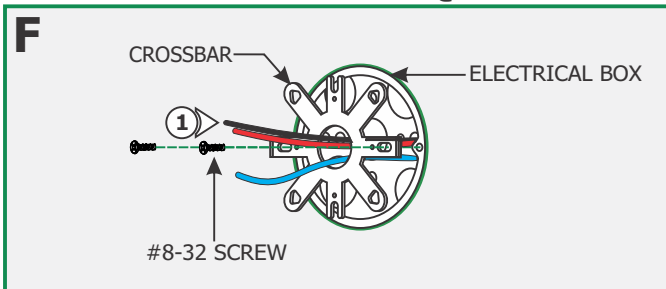
JUNCTION BOX OPENING EDGE

SCREW

10: Install the drywall and plaster around the junction box opening. Sand and then paint.

11: If necessary: Use the Goof Plate if the junction box opening has a lot of imperfection/jagged edges. Install the provided goof plate (paint to match prior) with the two screws.

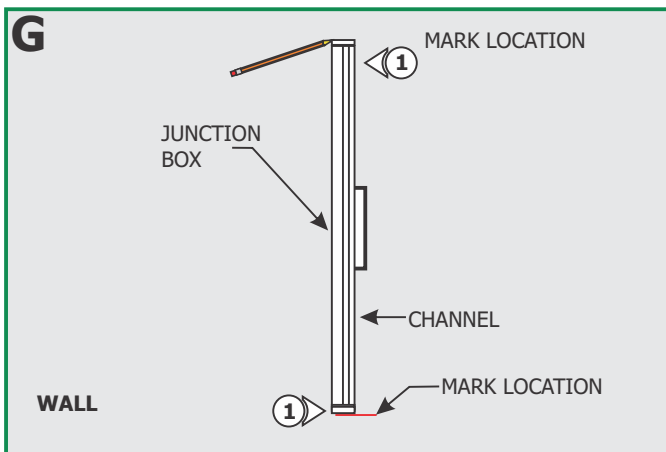**12:** Complete installation by following steps in Section Three.

Section Two: TW2-4SQ Version

F

CROSSBAR

ELECTRICAL BOX

#8-32 SCREW

1: Feed the wires coming from the DVR (DMX controller) through the crossbar center hole and mount the crossbar to the electrical box holes with the two #8-32 screws provided. For alternate wiring with two ELV dimmers, see the wiring diagram on page 8.

2: Complete installation by following steps in Section Three.

Section Three: Install Fixture For Both Versions

G

MARK LOCATION

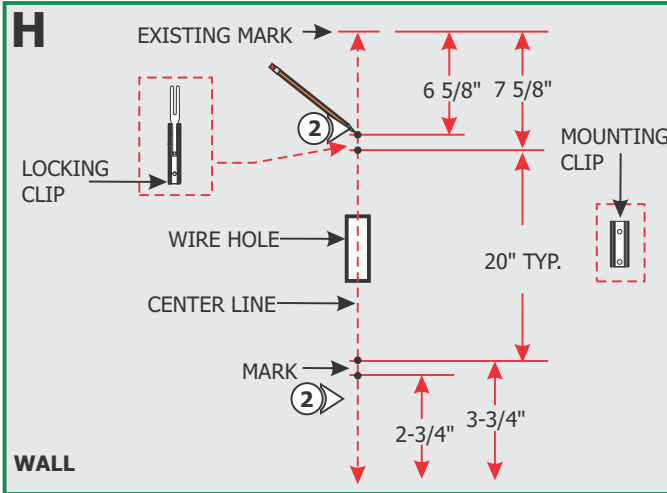JUNCTION BOX

CHANNEL

MARK LOCATION

WALL

NOTE: It is recommended more than one person to assist in this installation.
NOTE: Fixture can be mounted in a horizontal or vertical position.
NOTE: The junction box does not need to be in middle of the channel (could be at either end) but needs to be aligned in the center of the channel.

1: Mark the wall at each end of the channel and a center line from end to end. **Note which side the wires are located to later install the locking clip to the opposing side.**

2

H

EXISTING MARK →

LOCKING CLIP

6 5/8" 7 5/8"

MOUNTING CLIP

WIRE HOLE →

20" TYP.

CENTER LINE →

MARK →

②▷

2-3/4" 3-3/4"

WALL

NOTE: TW2-S1-1RE shown for demonstration purposes.
NOTE: Locking clip must be installed in the opposite direction of the fixture wire. Fixtures greater than 36" are provided with two locking clips.
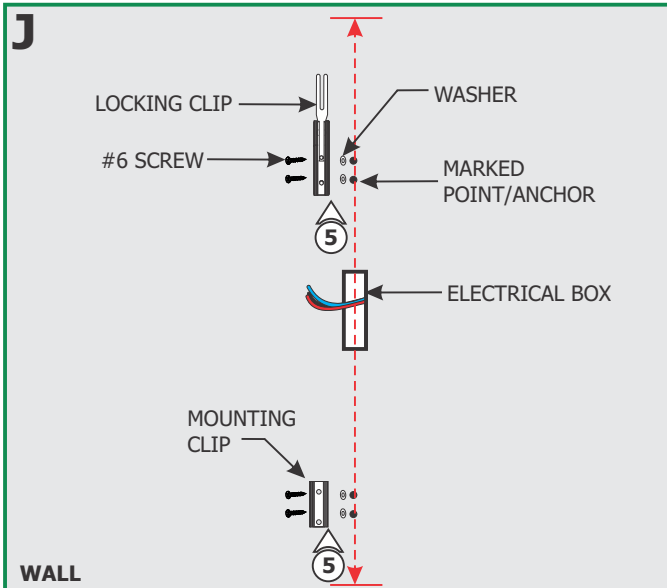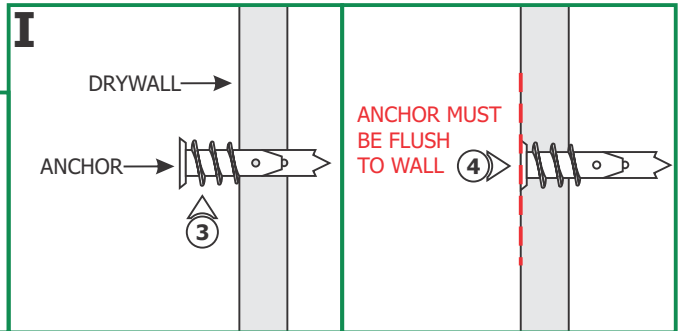**NOTE:** The junction box could be offset, but needs to be aligned to the center of the channel.

2: From the two existing marks, make additional marks by following drawing H (a typical suggested location with measurements for the locking clip - longer runs contain two locking clips) to install the locking & mounting clips properly. Mounting clips must be installed every 20" from each other.

NOTE: Steps 3 and 4 are for drywall mounting. Omit these steps if mounting the clips to a wood surface directly.

3: Tap the anchors onto the marked points up to the threaded portion with a hammer.

4: Screw in the threaded portion of the anchors with a Phillips screwdriver.

I

DRYWALL →

ANCHOR →

③

ANCHOR MUST BE FLUSH TO WALL ④▷

J

LOCKING CLIP →

#6 SCREW →

WASHER

MARKED POINT/ANCHOR
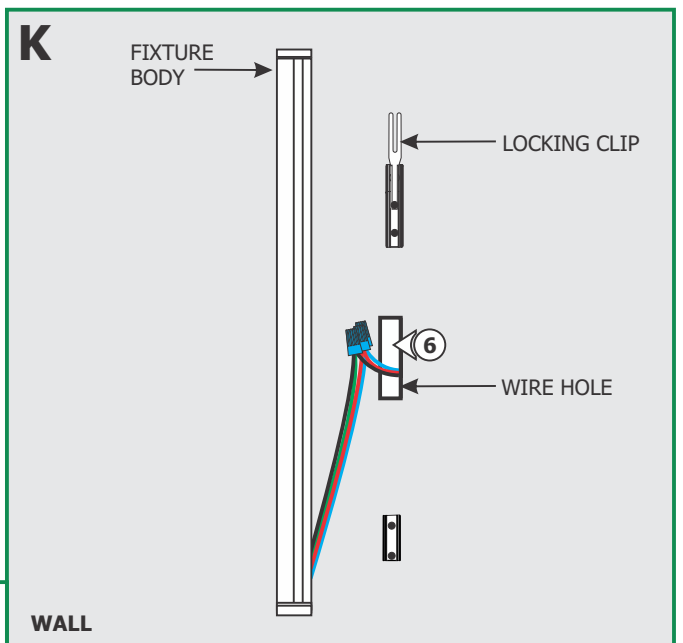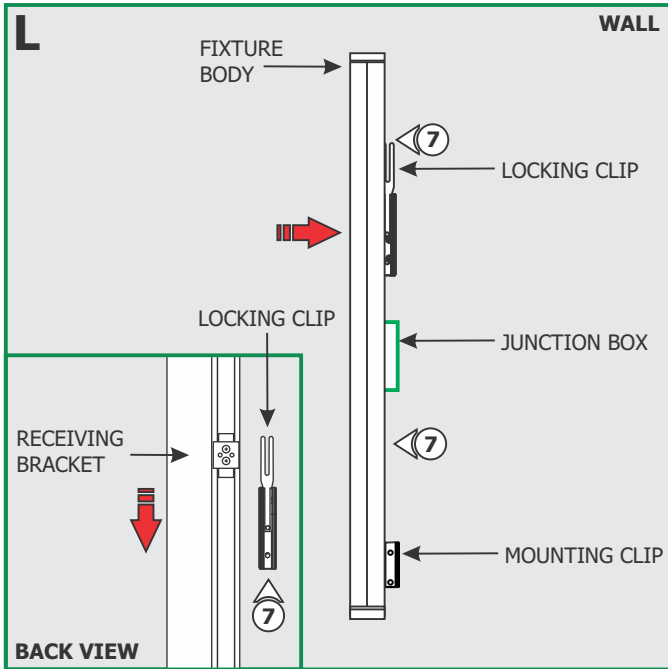
⑤

ELECTRICAL BOX

MOUNTING CLIP →

⑤

WALL

5: Secure the locking clip(s) & mounting clip(s) to the marked surface or anchors by passing the screws through the clip holes followed by the washers into the marked points or anchors. Locking clips mount onto mounting clips.

NOTE: Make sure the power supply wires are present in the junction box.

NOTE: Tighten the screws on the clips until the clips bend inside. This ensures the clips fit properly into the channel.

K

FIXTURE BODY →

LOCKING CLIP

⑥

WIRE HOLE

WALL

6: Refer to wiring diagram on pages 7 and 8 to connect the wires properly.

L

FIXTURE BODY

WALL

LOCKING CLIP

JUNCTION BOX

LOCKING CLIP

RECEIVING BRACKET
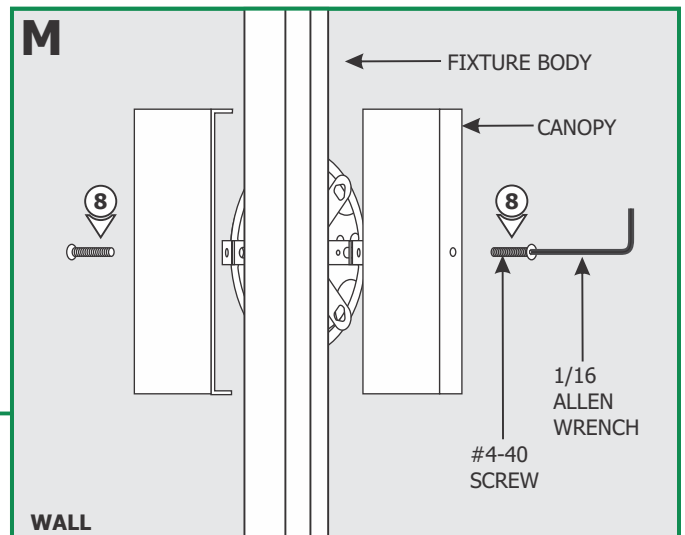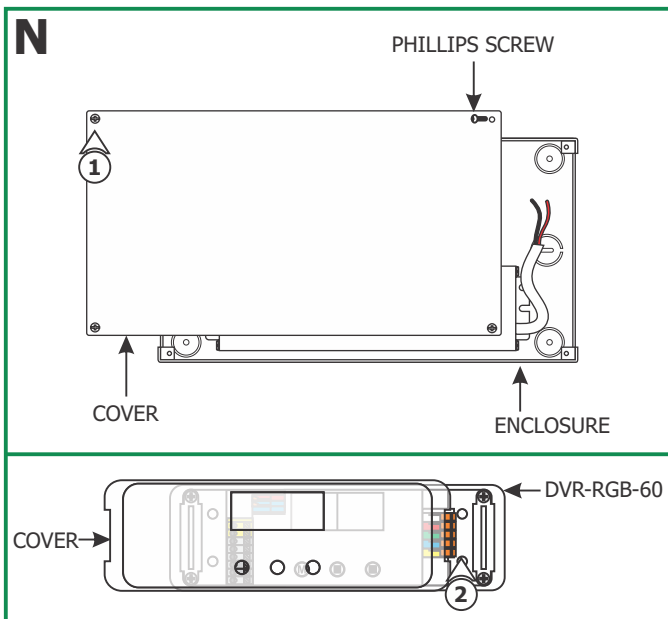
MOUNTING CLIP

BACK VIEW

7: Carefully snap fixture body onto the locking & mounting clip(s) then slide into receiving bracket to lock in place. Make sure not to nick the wires.

NOTE: If the receiving bracket interferes with the electrical box, then relocate the bracket by loosening the set screws and make the necessary adjustments.

M

FIXTURE BODY

CANOPY

1/16 ALLEN WRENCH

#4-40 SCREW

WALL

8 (OPTIONAL): For 4" Square Canopy installations, place each canopy piece against the crossbar and secure it to the electrical box holes with the provided #4-40 screws using the 1/16 Allen wrench.

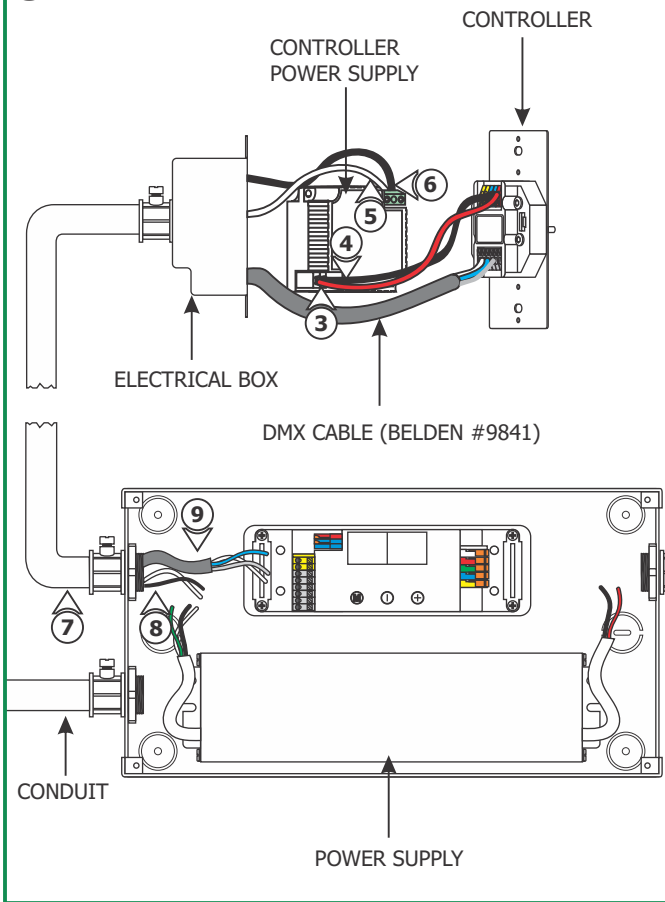## Section Four: Optional Steps For RGB DMX Power Supply

N

PHILLIPS SCREW

COVER

ENCLOSURE

COVER

DVR-RGB-60

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

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

O

CONTROLLER
CONTROLLER
POWER SUPPLY

ELECTRICAL BOX

DMX CABLE (BELDEN #9841)

CONDUIT

POWER SUPPLY

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 page 9 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 "N" terminal of the controller power supply.

6: Connect the black wire to "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 enclosure.
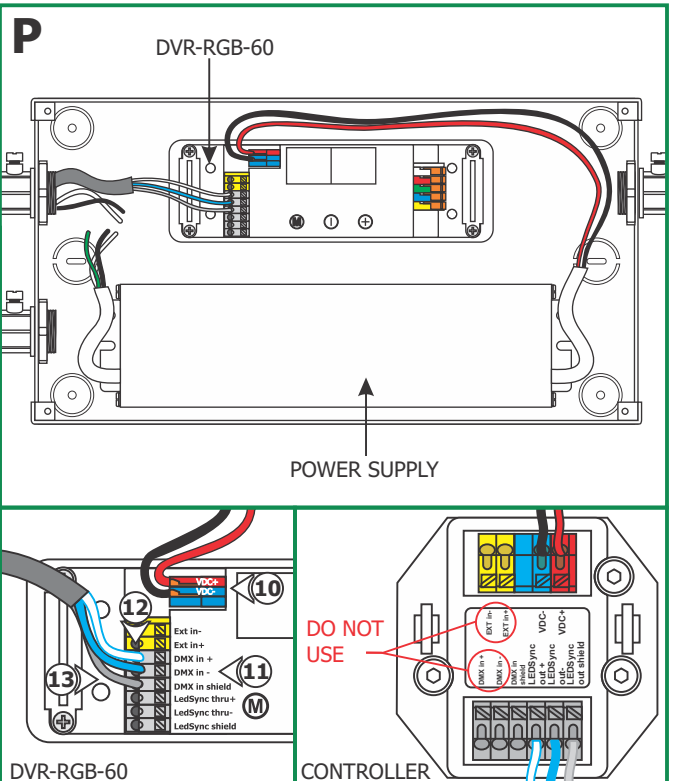
P

DVR-RGB-60

POWER SUPPLY

10: Connect the red wire from the power supply to the "VDC+" DVR-RGB-60 red terminal. Connect the black wire from the power supply to the "VDC-" DVR-RGB-60 blue terminal.
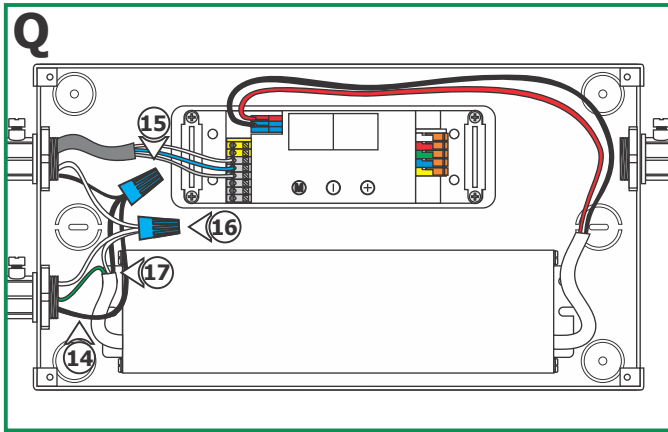
11: Connect one end of a data wire (blue with white stripes wire) to the "LEDSYNC OUT–" controller terminal. Connect the other end into the "DMX in –" DVR-RGB-60 terminal.

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

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

NOTE: "DMX in+", "DMX in-", "EXT in+" & "EXT in-", controller terminals are not used on controller.
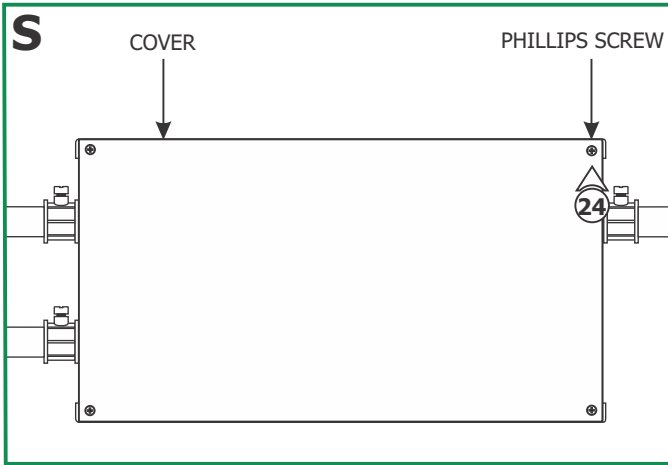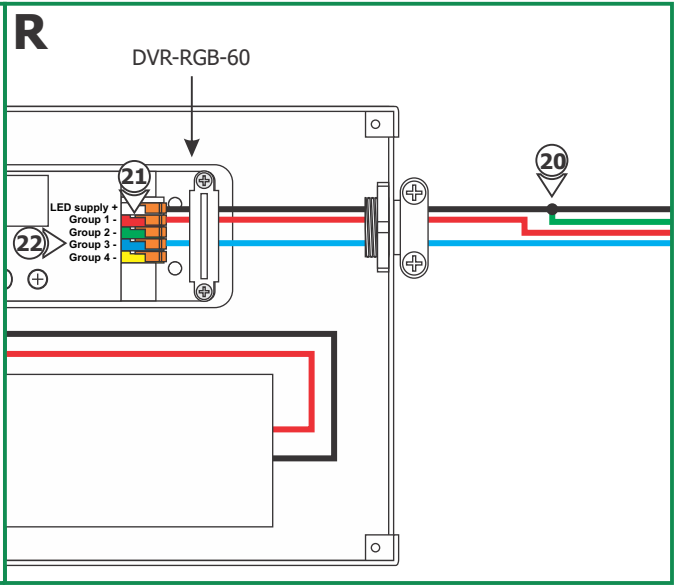
VDC+
VDC-
Ext in-
Ext in+
DMX in +
DMX in -
DMX in shield
LedSync thru+
LedSync thru-
LedSync shield

DO NOT USE

EXT in+
EXT in-
VDC-
VDC+
DMX in
shield
LEDSync
out-
LEDSync
out shield

DVR-RGB-60

CONTROLLER

Q

14: Run the line voltage power wires to the power supply enclosure.

15: Connect the hot power wire to the black power supply wire and black controller power supply wire with a wire nut.

16: Connect the neutral power wire to the white power supply wire and white controller power supply wire with a wire nut.

17: Make sure the green power supply wire is grounded in accordance with local electrical codes.

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" below.

18: Use the "Low Voltage Wire Size Chart" below to determine proper wire size connecting to the DVR-RGB-60 terminals.

19: Run the proper size red, blue, green and black wires from the Twiggy fixture to the power supply case.

20: Connect the black and green fixture wires to the DVR-RGB-60 "LED SUPPLY+" white terminal.

21: Connect the red fixture wire to the DVR-RBG-60 red terminal.

22: Connect the blue fixture wire to the DVR-RBG-60 blue terminal.

R

DVR-RGB-60

LED supply +
Group 1 -
Group 2 -
Group 3 -
Group 4 -

S

COVER   PHILLIPS SCREW

23: Replace the DVR-RGB-60 cover.

24: Replace the power supply cover and secure it by tightening the four Phillips screws.

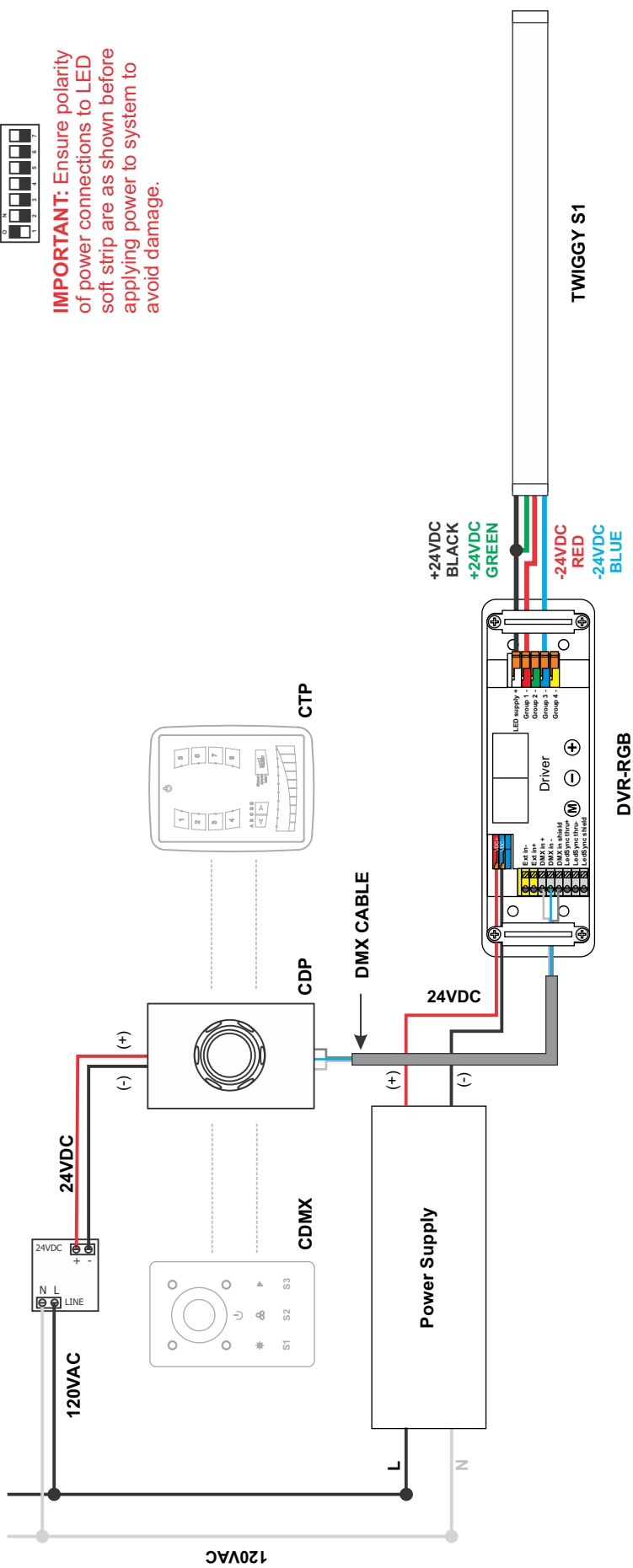| 100W, 24VAC LOW VOLTAGE WIRE SIZE CHART					
3% VOLTAGE DROP	**WIRE LENGTH IN FT**	**UP TO 31FT**	**32FT-49FT**	**50FT-81FT**	**82FT-124FT**
	WIRE SIZE	14 AWG	12 AWG	10 AWG	8 AWG
	VOLTAGE AT END OF THE WIRE	23.28 VAC	23.29 VAC	23.28 VAC	23.28 VAC

Configuration 1: RGB Power Supply with DMX Controller

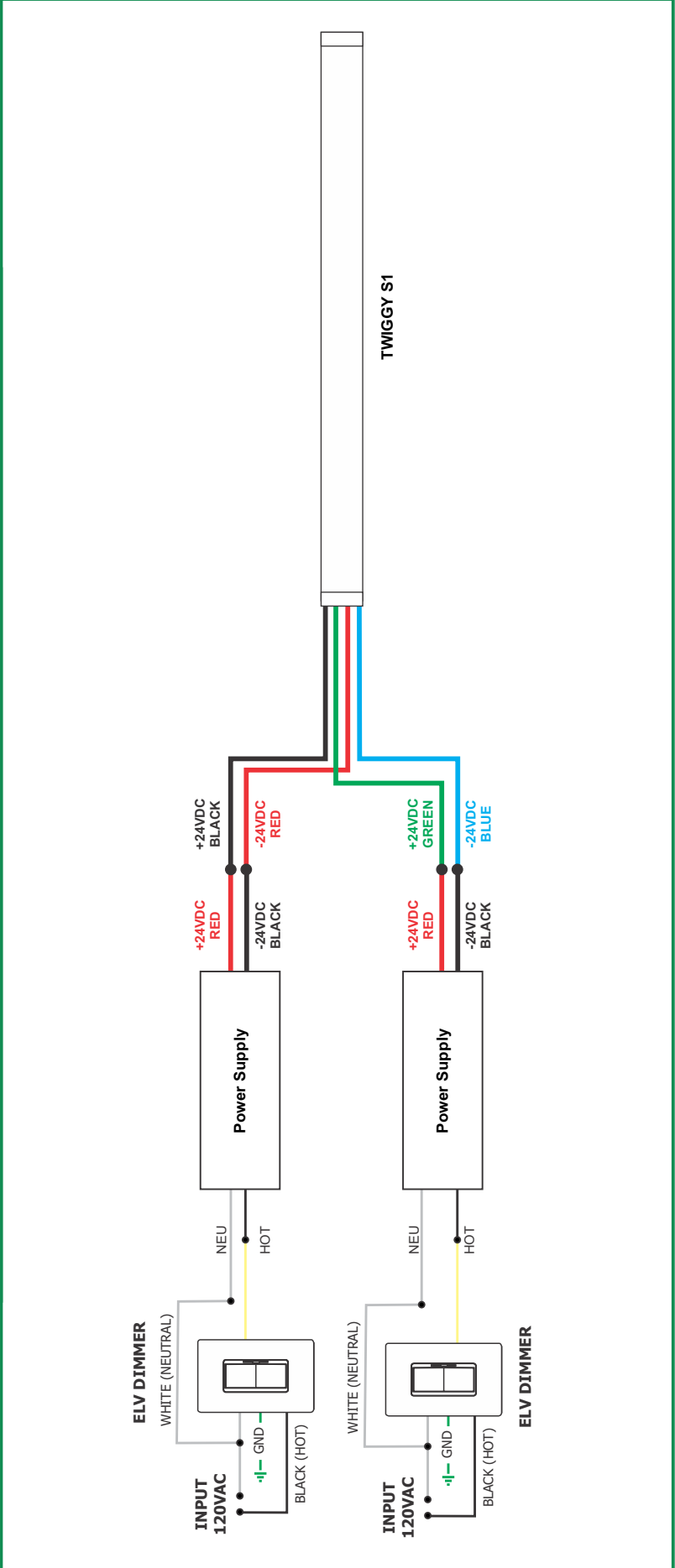**If using a CDP Color Dial, configure your CDP to Warm White mode using DIP switches:**

IMPORTANT: Ensure polarity of power connections to LED soft strip are as shown before applying power to system to avoid damage.

TWIGGY S1

+24VDC BLACK
+24VDC GREEN
-24VDC RED
-24VDC BLUE

CTP

Driver

DVR-RGB

LED supply +
Group 1
Group 2
Group 3
Group 4

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

CDP

DMX CABLE

24VDC

24VDC

(+)
(−)

120VAC

24VDC
+ −

N L   LINE

CDMX

S3
S2
S1

Power Supply

(+)
(−)

L

N

120VAC

Refer to installation instructions included with the DMX controller to set the controller to "CCWW" mode.
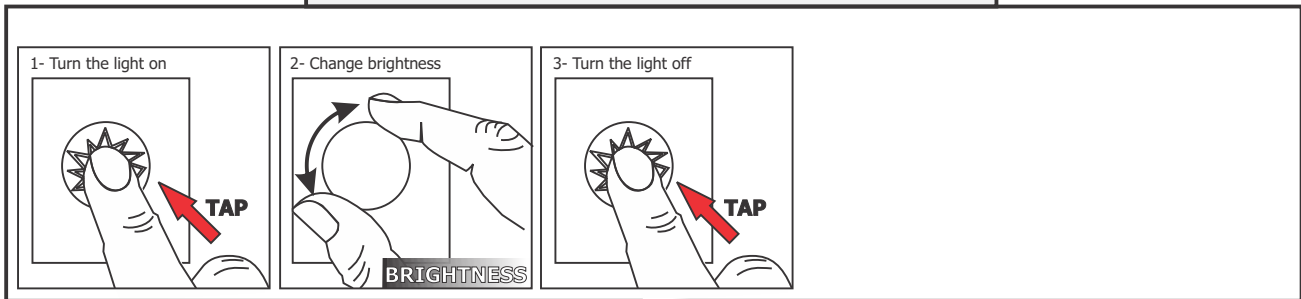
Configuration 2: Alternate with Two ELV Dimmers

TWIGGY S1

+24VDC BLACK
-24VDC RED
+24VDC GREEN
-24VDC BLUE

+24VDC RED
-24VDC BLACK
+24VDC RED
-24VDC BLACK

Power Supply
Power Supply

NEU
HOT
NEU
HOT

ELV DIMMER
WHITE (NEUTRAL)
WHITE (NEUTRAL)
ELV DIMMER

INPUT 120VAC
INPUT 120VAC

GND
GND

BLACK (HOT)
BLACK (HOT)

Configuring and Operating Dim Wheel

Selecting Modes

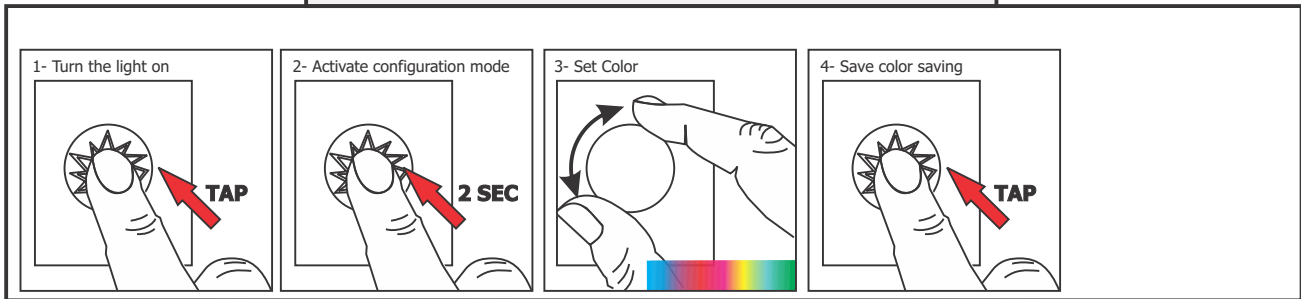**Configure your CDP by setting the DIP switches on the front:**

COLOR MODE

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.
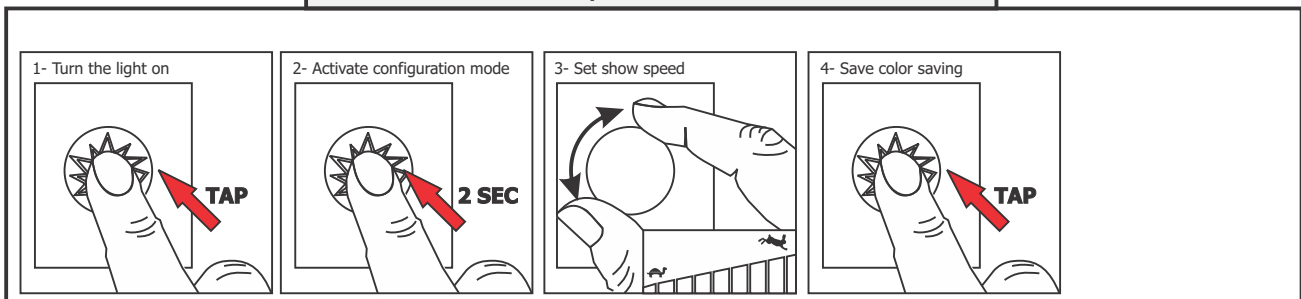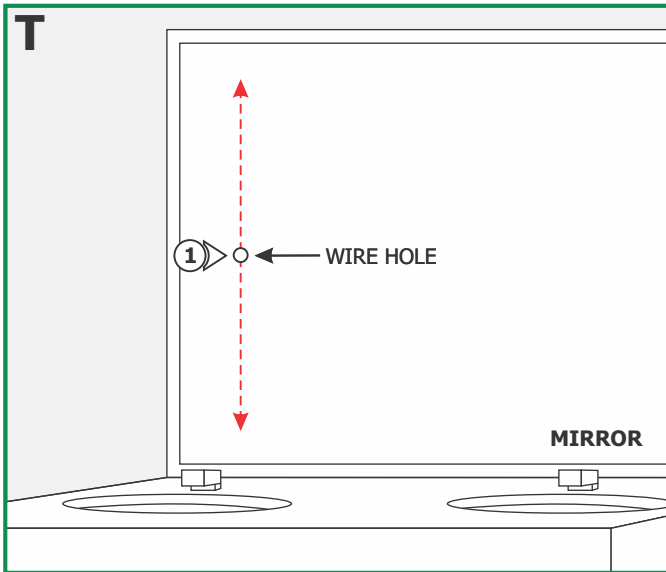
Operating CDP

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

TAP

2- Activate configuration mode

2 SEC

3- Set show speed

4- Save color saving

TAP

Section Five: Installing Twiggy Fixture on Mirror

T

WIRE HOLE

MIRROR

NOTE: It is recommended more than one person assist in this installation.
NOTE: To avoid damage to mirrors, ensure installation is completed by an experienced installer.
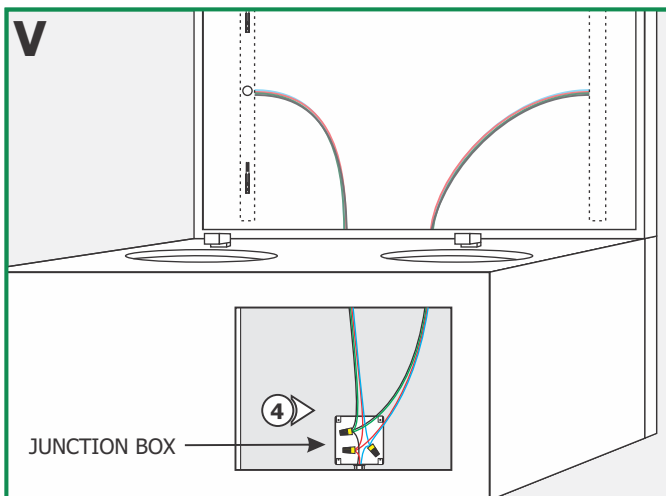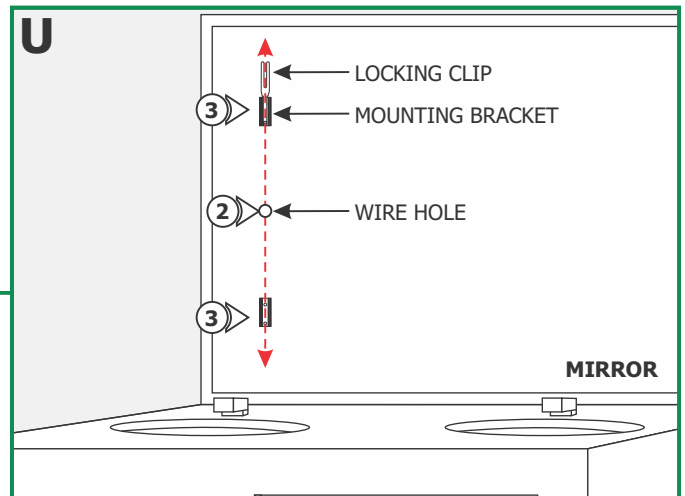**NOTE:** Fixture can be mounted in a horizontal or vertical position.
NOTE: The junction box can be located anywhere along the length of the fixture but be aligned with the centerline of the channel.

1: Carefully drill a small hole in the mirror to pass low voltage wires through.

U

LOCKING CLIP
MOUNTING BRACKET
WIRE HOLE
MIRROR

NOTE: Locking clip must be installed in the opposite direction of the fixture wire. Fixtures greater than 36" are provided with multiple locking clips.

2: Align and space mounting clips on mirror surface

3: Affix mounting clips to mirror using appropriate adhesive.

V

JUNCTION BOX

NOTE: (Optional) Junction box can be omitted for special installations or where permitted by local electrical code.

4: Run wires from the DVR to a remote junction box and connect the fixture wires inside the remote junction box.

W

DIMMER
FIXTURE

NOTE: Refer to installation instruction included with dimmer and power supply.

5: Carefully snap fixture body onto mounting clip(s). Slide receiving bracket to lock in place. Ensure low-voltage wires are not damaged during installation.