DMX SYSTEM INSTALLATION GUIDE

NOTES
1. All installations shall be executed in accordance with local building codes.
2. The installing contractor assumes all liability for the safety and code compliance of the installation.
3. Optic Arts is not liable for any damages caused by improper wiring, circuit overloading, power surges, system design or layout, negligence, or other conditions.

DMX SYSTEM STANDALONE MODE

DMX Cabling such as Belden 9841 (or similar):
- Blue > DMX+
- White > DMX-
- Shield > Common

UL LISTED ENCLOSURE
(BY OTHERS)
DMX System Installation Guide

Diagram #1
DMX System
With DMX Controller

- CTRLDMX.4CH.3S.W (OR BY OTHERS)

- DMX Cabling such as Belden 9841 (or similar)*:
Blue > DMX+
White > DMX−
Shield > Common

- GG100E-24-UNV

- OUT TO NEXT MODULE

Diagram #2
DMX System
with DMX Controller
and Power Supply

- CTRLDMX.4CH.3S.W (OR BY OTHERS)

- DMX Cabling such as Belden 9841 (or similar)*:
Blue > DMX+
White > DMX−
Shield > Common

- LV10-24N-120-A (Mounted in junction box)
120VAC

- GG100E-24-UNV

- OUT TO NEXT MODULE

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1. Identify mounting location for driver & eldoLED® LinearDrive100D(s). eldoLED® LinearDrive100D(s) must be mounted in a UL listed Junction Box (by others).

2. Remove faceplate cover.

3. Mount eldoLED® LinearDrive100D(s) in a UL listed Junction Box (by others).

4. Remove strain relief pieces.
2.1 Wire 24VDC into eldoLED® LinearDrive100D(s) using the GG100E-24-UNV(s) through UL Listed conduit(s).
3. Connect lead wires from light fixture or tape, as applicable to the product being installed.

3.1 FLEX WIRING:

- FLEX RGB
- FLEX RGBA/W
- FLEX VW
- FLEX Single Color

*Wire is either white or red, depending on specific product.
4. Run visual test by tapping the three control buttons simultaneously.

4.1 Run visual test by tapping the three control buttons simultaneously.

4.2 If LEDs on fixture flash in sequence shown on display, the eldoLED® LinearDrive100D is successfully installed.

If any control channels are not functioning, turn to next page to troubleshoot the malfunctioning FLEX product.
A. If none of the FLEX LEDs are turning on, tap M button to see if display on eldoLED® Linear100D will turn on.
   - If display does not turn on, turn to next page to review TROUBLESHOOTING MALFUNCTIONING eldoLED® Linear100D.
   - If display does turn on, move on to next step.

B. Program eldoLED® Linear100D to relevant Color Group to match LED setup. Hold M to switch to color.

C. Raise the intensity of the first color to ensure that a FLEX color correlates with the channel. Lower the intensity to lowest setting, and repeat with next channel until each color has been verified.
   - If FLEX color does not match its corresponding channel, rewire and retest each channel. Once FLEX color matches corresponding channel, reset DMX module and move on to Step 5 (pg. 9).
   - If any channel is not functioning, check wiring, and retest each channel. If channel error persists, contact Optic Arts at (213) 250-6069.

OPTIC ARTS PRO TIP: If eldoLED® Linear100D continues to malfunction, refer to Reset To Factory Defaults.

TROUBLESHOOTING MALFUNCTIONING eldoLED® Linear100D

Follow step by step until issue is resolved.

A. Hold down all three buttons for 5 seconds to reset eldoLED® Linear100D. If eldoLED® Linear100D display does not turn on, move on to next step.

B. Wire a different eldoLED® Linear100D to same driver. If eldoLED® Linear100D display does not turn on, repeat Step A with multiple eldoLED® Linear100D modules. If multiple eldoLED® Linear100D displays still do not turn on, move on to next step.

C. Wire eldoLED® Linear100D to another driver. Driver must be off first. Do not wire hot. If eldoLED® Linear100D display does not turn on, repeat Step A with multiple eldoLED® Linear100D modules on the most current driver. If multiple eldoLED® Linear100D displays do not turn on, turn to next page to review TROUBLESHOOTING MALFUNCTIONING ELECTRONIC DRIVER.

TROUBLESHOOTING MALFUNCTIONING ELECTRONIC DRIVER

Follow step by step until issue is resolved.

DRIVER MUST BE OFF FIRST - DO NOT WIRE HOT

A. Wire one channel of FLEX product directly into ELECTRONIC DRIVER. If FLEX product does not turn on, move on to next step.

B. Wire the same channel of FLEX product to a different ELECTRONIC DRIVER. If FLEX product still does not turn on, repeat Step A & B with a different FLEX channel or FLEX product. If FLEX product still does not turn on, check input power to driver(s) (120/277 VAC).

  - If issue is found with input power, resolve issue and return to Step 2 (pg. 3).
  - If input power is not the issue, contact Optic Arts at (213) 250-6069 to replace ELECTRONIC DRIVER(s).
5 STANDALONE.

**LED Groups**

- **Single Color**
  - Variable White
  - RGB

- **RGBW**

- **External Input Dimming Curve**
  - Display Off
  - 1-1L
  - 2-2L
  - 3-3L
  - 4-4L
  - 2-4L
  - 1-4L
  - RGB
  - RGBW
  - RGBA
  - RRGG
  - RGGB
  - CWW
  - CWWW

**External Input**

- **Dimming Curve**
  - LOG
  - LIN

**Dimming Curve**

**Display Off**

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5.1 Program eldoLED® Linear100D to relevant color group to match LED strip (See List).

*If eldoLED® Linear100D does not function properly, reset to factory defaults.*

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**OPTIC ARTS PRO TIP:**

If eldoLED® Linear100D continues to malfunction, refer to Reset To Factory Default.

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5.2 Adjust intensity of each channel until the desired color is reached. Use diagrams on the right to program correlating color scheme.

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**C) SINGLE COLOR**

- **Channel 1**
  - Display Off
  - Hold to Change Intensity

**C Cntd.) VARIABLE WHITE**

- **Channel 1 (Cool)**
  - Display Off
  - Hold to Change Intensity

- **Channel 2 (Warm)**
  - Display Off
  - Hold to Change Intensity

**C Cntd.) RGB**

- **Channel 1 (Red)**
  - Display Off
  - Hold to Change Intensity

- **Channel 2 (Green)**
  - Display Off
  - Hold to Change Intensity

- **Channel 3 (Blue)**
  - Display Off
  - Hold to Change Intensity

**C Cntd.) RGBA/W**

- **Channel 1 (Red)**
  - Display Off
  - Hold to Change Intensity

- **Channel 2 (Green)**
  - Display Off
  - Hold to Change Intensity

- **Channel 3 (Blue)**
  - Display Off
  - Hold to Change Intensity

- **Channel 4 (Amber/White)**
  - Display Off
  - Hold to Change Intensity

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**Reset to Factory Defaults**

(Press & hold for 5 sec)

- **RESET PRESS MENU**

- **Display Off**

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5 DMX CONTROLLER.

**DMX Controller Wiring**

5.1 Wire eldoLED® Linear100D to DMX Controller (Either Optic Arts® provided or by others). If multiple eldoLED® Linear100Ds are used, connect in parallel to other eldoLED® Linear100Ds.

DMX Cabling such as Belden 9841 (or similar)*:
- Blue > DMX+
- White > DMX–
- Shield > Common

**DMX Cabling such as Belden 9841 (or similar)*:**
- Blue > DMX+
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**OPTIC ARTS PRO TIP:**
Max of 10 modules on one DMX line. Consult DMX Controller datasheet for maximum device limitation specific controller.

All DMX cabling shall conform to ANSI E1.27-2-2009 (R2014), recommended practice for permanently installed control cables for use with ANSI E1.11 (DMX512-A) and USITT DMX12/1990 products. The maximum total length of a daisy-chain DMX control run is 300 meters (1,000 feet) using the lowest grade cabling conforming to ANSI E1.27-2-2009 (R2014). Improved wire gauge and shielding can extend this limitation. Some additional devices such as repeaters or splitters may also extend this limitation. Consult manufacturer to validate any limitation extensions. Every DMX control run must be terminated after the last DMX control module in a daisy-chain sequence with a DMX terminator.

**Set Mode to DMX**

5.2 Set mode to DMX.

*If eldoLED® Linear100D does not function properly, reset to factory defaults.

**OPTIC ARTS PRO TIP:**
If eldoLED® Linear100D continues to malfunction, refer to Reset To Factory Default.

**Reset to Factory Defaults**

**SET MODE**

(Click + or - to change)

Display Off

Reset

Press & hold for 5 sec

Display Off

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5.3 Program eldoLED® Linear100D to relevant color group to match LED strip *(See List).*

*If eldoLED® Linear100D does not function properly, reset to factory defaults.
5 DMX CONTROLLER.

5.4 Set DMX Addresses according to the desired zones of control.

*If eldoLED® Linear100D does not function properly, reset to factory defaults.

OPTIC ARTS PRO TIP:
If eldoLED® Linear100D continues to malfunction, refer to Reset To Factory Default.
5.5 Remove faceplate from controller by carefully inserting a flathead screwdriver into slot A and gently pulling up.
5 DMX CONTROLLER.

This step only is applicable if using an Optic Arts® DMX controller (CTRLDMX.4CH.3S.W).

- DMX Cabling such as Belden 9841 (or similar)*:
  - Blue > DMX+
  - White > DMX–
  - Shield > Common

5.6 Wire DMX Controller to eldoLED® LINEARdrive 100D.
5.7 Make power and DMX connections on the controller body terminal blocks (See Figure 1). If DMX Controller Power Supply is used, make connection and place power supply in junction box before proceeding to next step.

5.8 Mount controller body on Junction Box with screws.

5.9 Align faceplate connector with pins on controller body and snap faceplate into place.

5.10 Fit controller onto Junction Box.

Note: Power to come from GG100E-24-UNV Driver used to power fixtures. Controller consumes 5 watts.

Note: Wire color coding depends on wire type used.

Note: Refer to Diagram #2 on Page 2 for wiring instructions.
5 DMX CONTROLLER.

This step only is applicable if using an Optic Arts® DMX controller (CTRLDMX.4CH.3S.W).

WALL MOUNTED DMX CONTROLLER

BUTTON FUNCTIONS

Red Channel
- Tap to turn on/off
- Hold to adjust light intensity

Select color from RGB color wheel

Green Channel
- Tap to turn on/off
- Hold to adjust light intensity

Blue Channel
- Tap to turn on/off
- Hold to adjust light intensity

Warm White, Natural White, Cool White
- Tap to switch between warm, natural & cool white mixed with RGB
- Hold to adjust overall light intensity

Select color from RGB color wheel

White Channel
- Tap to turn on/off
- Hold to adjust light intensity

Master on/off
- Play/Pause programmed effects
- Hold to adjust effect speed
- Hold to save color/effects preset
- Tap to recall preset

S1 S2 S3

5.11 Test each function of DMX Controller to ensure successful installation.
TROUBLESHOOTING DMX CONTROLLER

Follow step by step until issue is resolved.

A. If controller is unresponsive, push 🖨 to turn off controller (red LED will light on Controller), then push 🖨 to turn on (blue LED will light on controller) & retest controller functionality. If light fixture does not turn on, move on to next step.

B. Turn on controller and hold down ☀️ to test and see if light fixture ramps up or down. Repeat, hold down button 2-3 times. If FLEX LED does not turn on, move on to next step.

C. Turn on controller and tap each of the following color buttons 🌅 or 🌅 or 🌅 or 🌅, If FLEX LED does not turn on, then hold down color wheel buttons to test if LED brightens/dims. Repeat 2-3 times for each. If FLEX LED does not turn on, move on to next step.

D. Turn on controller and scroll through center color wheel. If FLEX LED does not turn on, move on to next step.

E. Set groups on LinearDrive100D (See Step 4.2, page 4) to COLOR, then SHOW, then back to DMX. Repeat steps from Troubleshooting Step A. If FLEX LED does not turn on, move on to next step.

F. Check wiring (See Step 4, page 4), then check every setting following to match corresponding FLEX LED. Repeat steps from Troubleshoot Step A. If FLEX LED does not turn on, move on to next step.

G. Reset eldoLED® Linear100D to factory settings and start from Step 4 (see page 4). Repeat Troubleshooting DMX Controller.
6. Reinstall strain relief pieces.
6.2 Reinstall faceplate cover.
6.3 Cover UL Listed Enclosure (by others).
DMX SYSTEM INSTALLATION GUIDE

**START HERE**

- Tap M button on eldoLED® Linear100D. Does the eldoLED® Linear100D display turn on?
  - Yes: Do all FLEX colors match the corresponding control channel?
    - Yes: Program eldoLED® Linear100D to relevant Color Group to ensure FLEX color coordinates with control channel to match LED setup. (Reference TROUBLESHOOTING MALFUNCTIONING FLEX PRODUCT STEP B & C for further instruction). Do all FLEX channels turn on?
    - No: Check wiring and retest each channel. Does error persist?
  - No: Wire another eldoLED® Linear 100D to same driver. If eldoLED® Linear 100D does not turn on, retest with all other eldoLED® Linear 100D. Are all eldoLED® Linear 100D(s) functioning?

- Do all FLEX colors match the corresponding control channel?
  - Yes: Contact Optic Arts at 213.250.6069
  - No: Check wiring and retest each channel. Does error persist?

- Check wiring and retest each channel. Does error persist?
  - Yes: Wire another FLEX lunimnaire to the same driver. If FLEX does not turn on, re-test with all other FLEX. Are all FLEX not turning on?
  - No: Check input power line. Are all drivers working?

- Check input power line. Are all drivers working?
  - Yes: Do all eldoLED® Linear 100D(s) fail to turn on?
  - No: Contact Optic Arts at 213.250.6069

- Do all eldoLED® Linear 100D(s) fail to turn on?
  - Yes: Wire same product to another driver. If product does not work, retest with all other drivers. Are all drivers not turning on product?
  - No: Wire each channel of FLEX product directly into ELECTRONIC DRIVER. Do all FLEX channels turn on?