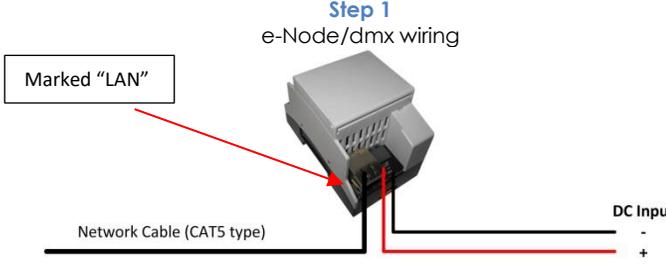


e-Node/dmx™ Quick Reference Installation Guide

The Converging Systems e-Node™/dmx is a network color computer enabling up to 32 DMX fixtures to be controlled from third-party automation and lighting systems. The built-in web Pilot application is used to set various setup and addressing parameters to map Converging Systems' Zone/Group/Node (Z/G/N) addresses to a specific DMX fixture types and fixture address (1-512) within a single DMX universe. For each set of 1-32 DMX Fixtures added to the system (up to 128 DMX addresses), just one e-Node/dmx is required. More fixtures or more DMX address require additional e-Node/dmx devices. For more information refer to full installation Manual for the e-Node/dmx refer to http://www.convergingsystems.com/lighting_install_library.php.

HARDWARE SETUP of e-Node/dmx Controller and 3rd party DMX Fixtures

Step 1
e-Node/dmx wiring



e-Node/dmx to Network connections. Interconnect the **LAN (silver)** port on your e-Node/dmx next to the 2-pin power connector to your network switch using standard CAT5 or better cabling. The maximum distance from the switch to the e-Node is 100m (328ft). The e-Node requires external power. A POE option is available optionally.

Note: The RJ-45 marked Port 1 or Port 2 is **not** the LAN port and should not be used here.

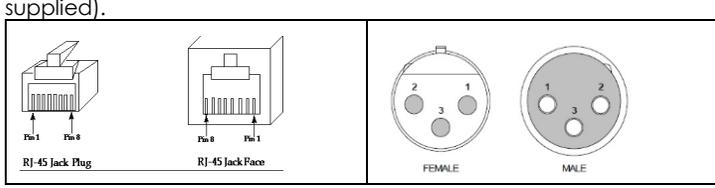
Optional Wi-Fi Adapter. See separate Quick Start Guide for information on this adapter.

e-Node/dmx power connection. Connect the e-Node/dmx to an available DC power source (12v-24vdc 90 ma) using two-conductor cabling (22 awg or larger). Pay attention to the polarity markings on the e-Node. If you have obtained the optional e-Node DC power supply, simply plug in the supplied two-pin connector into the e-Node. With the optional POE daughtercard, no external power adapter is required.

Step 2
e-Node/dmx – DMX Fixture Connectivity



DMX Fixture wiring. Port 1 or 2 on the e-Node/dmx is used for data connection to the first DMX fixtures. Additional fixtures should be daisy-chained to the first fixture (max 32 fixtures on chain). Consult the table below for creating your own RJ-45 to DMX Fixture cable (cable not supplied).



E-Node RJ-45	XLR connector	Std RJ-45 DMX*	Philips RJ-45
Pin 1 (485+)	Pin 3	RJ-45 Pin 1	RJ-45 Pin 2
Pin 2 (485-)	Pin 2	RJ-45 Pin 2	RJ-45 Pin 1
Pin 7 (Gnd)	Pin 1	RJ-45 Pin 7	RJ-45 Pin 7
(all other pins)	N/C	*Std wiring	N/C

*Use standard (straight) CAT 5 cable.

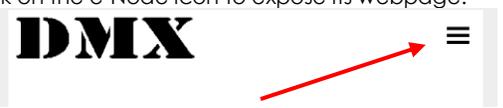
SOFTWARE SETUP-Commissioning Requires the e-Node/dmx embedded Web Pilot application (not traditional PC standalone application).

Step 3
New uPnP Discovery Mechanism

Use a Windows computer and open File Explorer and search for the **Network** tab to expand to see available uPnP* devices. Any connected e-Nodes should appear



Double click on the e-Node icon to expose its webpage.

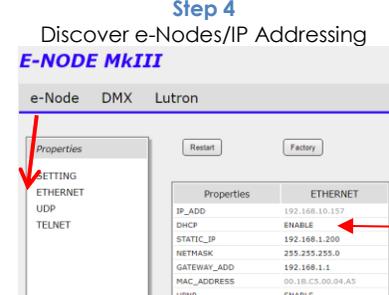


Click on the triple dash menu icon and you **may** be asked for a **Password**. Unless the Password has been changed or blanked out, enter **Admin** and select **Logon**



***Note on uPnP.** You may have to turn on Discovery or load the uPnP service within Windows to enable this type of Discovery

Step 4
Discover e-Nodes/IP Addressing
E-NODE MkIII

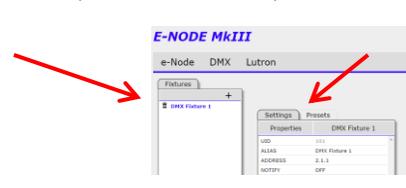


e-Node Network Parameters. By default the e-Node is set to **DHCP ENABLED**. To change to a Static IP address, select the **e-Node** tab to reveal the above setup screen. Select the **ETHERNET** tab and enter a static IP addresses under **STATIC_IP**. Then, enter gateway IP address under **GATEWAY_ADD**. Next, select **DHCP DISABLED** and hit **Restart** to reboot the e-Node to establish the new parameters.

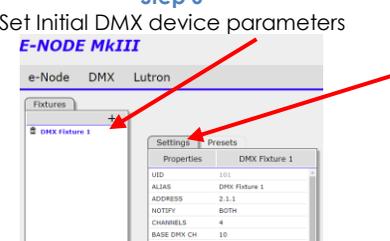
Step 5
Discover DMX device/DMX Setup
E-NODE MkIII



Add (DMX) Devices. Select the DMX tab. Click on the **+** button to add each DMX fixture (up to 32 per e-Node/dmx). Initially, just add all fixtures and later (in Steps 6, 7, and 8) customize those fixtures.



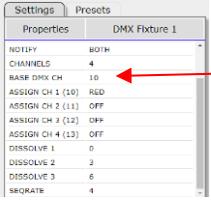
Step 6
Set Initial DMX device parameters
E-NODE MkIII



DMX Basic Device Parameters. Under **Fixtures**, select the DMX device that you wish to program. Under the **Settings**, you will find existing or default information for that device. Under **ALIAS**, enter a new name if desired. Enter an **ADDRESS** in (Z/G/N) format (see Step 8) with periods. Under **NOTIFY** set to Both (see Step 9). Under **BASE DMX CH**, select the starting DMX address (from 1-512) that will be associated with this DMX device (note-if the device is a 3-channel device with addresses 4-6, just enter "4"). Next, under **CHANNELS** change the entry to match the type of DMX fixture you will be controlling (i.e. 1 for monochrome, 3 for RGB, 4 for RGB, and other number <=15 for other devices).

Step 7

Assign Channels to Variable and Binary operations

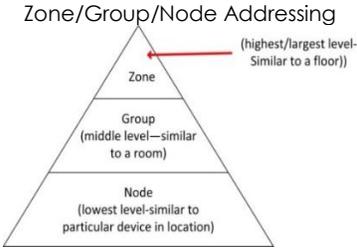


DMX Function Mapping Entries. For each Channel assigned, an **ASSIGN CH n** entry will appear. Right click under each entry and select an applicable Variable (V) or Binary (B) Operation.

RED(V)	Std for 3 or 4-color devices which provide Red as control name
GREEN(V)	Std for 3 or 4-color devices which provide Green as control name
BLUE(V)	Std for 3- & 4 color devices which provide Blue as control name
WHITE(V)	Std for 4- color devices which provide White as control name
MONO(V)	Std for Monochrome (1-channel) devices (don't use White here)
FULL(B)	Use this to set channel to full ON (if device has dimming channel)
OFF(B)	Use this to set channel to full OFF (use for channels bypassed)

Step 8

Zone/Group/Node Addressing



Assign Z/G/N Address. Enter a discrete **Zone/Group/Node** address for each DMX Controller identified within the [Step 5](#). For more information on addressing, review the *Instruction Manual* above or applicable *Integration Note*.

The factory default for the first DMX Controller is **2.1.1**. The second DMX controller is set to **2.2.1**. You may change these as appropriate. Standard feedback (if **NOTIFY** is Enabled—see [Step 8](#)) will occur from any unit whose address exactly matches the output command (i.e. 2.1.1 will respond to a command given to 2.1.1).

Wildcard Addresses. Within your control system, if you select an address with a "0" in one of the **Z/G/N** fields, all fixtures with the other two **Z/G/N** fields identical will operate as a group. When a wildcard "0" is issued in a command (i.e. 2.1.0), feedback will occur but only from a unit present with a "1" in the wildcard field (i.e. 2)

Step 9

Bi-Directional Communication & Test

Enable Bi-directional Communication. In order to invoke bi-directional communication so that a control system with feedback can display current status (i.e. On/Off, color or fade level), a mandatory change has to be made. After **Devices** in [Step 5](#) have been discovered and for each DMX Fixture where backchannel feedback is desired, under the **DMX/Settings** tab set the **NOTIFY** Flag to either **COLOR** (for the HSV or Hue, Saturation, Value color space) or **VALUE** (for the old-school Red, Green, Blue color space—*old school because there is no dimmer in this color space*). If you want to have both sets of sliders (not really recommended in larger systems where bus traffic may become excessive), set the flag to **BOTH**.

Test. Launch the **Troubleshooting virtual keypad** within the Web Pilot application by selecting **Logoff** and select **Troubleshoot** and then select the appropriate DMX **channel number** and adjust slider(s). Connected DMX devices should react as adjustments are made.

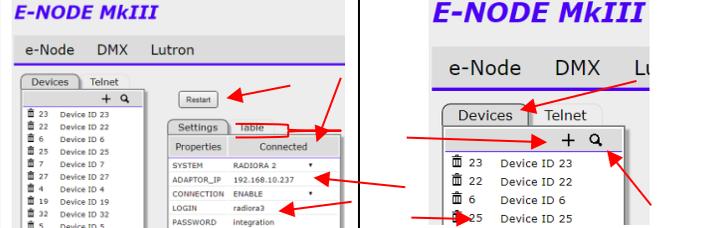
Note: These sliders are bi-directional (if **NOTIFY** is enabled) and can be used to monitor and test your system very efficiently.



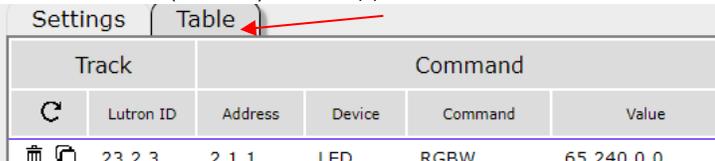
Step 10

New "SLIM" Lutron Programming

Under the **Lutron/Settings** tab below, enter (i) the (Lutron) **Adaptor IP**, (ii) an available Telnet **Login** and **Password** available from Lutron, then hit **Connection: ENABLE** and then **Restart**. The **Disconnected** message should shortly switch to **Connected**.



Under **Lutron/Devices** above, either (i) add an activated Lutron Device ID (DID) by selecting the **+** mark and manually typing in a valid Lutron DID number, or (ii) depress an operational button on an assigned Lutron device an auto-discover that DID by selecting the **Q** --if seen the DID (number) should appear in the Device window.



Finally, under **Lutron/Table** above, for each desired mapping of a Lutron button push to a resulting DMX action, enter all fields (a) **Lutron ID*** (DID, button #, and type) (b) **ZGN Address** for DMX, (c) **Device*** (type), (d) **Command***, and (e) **Value** (if required for Recalls, Stores, etc.) line by line.

*For these fields, right click and select from available/valid choices.

For more information consult the "[e-Node Interfacing with Lutron](#)" guide.

Important Safety Information

The e-Node/dmx Controller utilizes UL Listed components. The Unit also has been tested under FCC for Home or Office use.



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GENERAL PRODUCT WARRANTY
Each CSI product, except as otherwise provided herein, will be free from defects in materials and workmanship for a period of one (1) year from the date of delivery to the end-user.

ILLUMINAIRE WARRANTY
Each CSI FLLA luminaire product will be free from defects in materials and workmanship for a period of three (3) years from the date of delivery to the end-user including coverage of the following performance criteria:

- LED Light Output will be maintained above 50% of initial output
- Tri-colored (RGB) output will consist of all three color components (red, green, and blue)
- Quad-channel (RGBW) output will consist of three color components (red, green, and blue) and white.
- Monochrome output will consist of a single color output (white)

Additional Terms and Conditions are available on the Converging Systems website

Note: e-Node/dmx are equipped with dual functionality—standard DMX compatibility as well as CS-Bus compatibility (for ILC-x00 and FLLA LED applications). To reboot into CS-BUS mode, depress Discovery button behind removable plastic shroud next to 2-pin power connector and hold until on-board LED on e-Node flashes the **second** time and release. To reconfigure into DMX mode, hold down Discovery button for **three** flashes and then release. (Programming within each mode will be lost when transitioning to the alternative mode.)