Using a Light-O-Rama controller in a DMX universe

Now, most Light-O-Rama (LOR) products will operate in a DMX universe as well as a LOR network! LOR's dimmer packs provide a great cost per channel and the ShowTime Units are UL 508 certified for outdoor use!

LOR Units (dimmer packs) automatically detect the network type (LOR or DMX) on which they are currently installed. No special settings or changes are required to convert a Unit from one network type to another. This ability to switch from one network to another is very important. In "DMX mode" the Unit is a "dumb" dimmer pack and only reacts to DMX intensities. When a Unit is connected to a LOR network, you can use the LOR, PC based Hardware Utility to upgrade firmware and configure options such as Low Burn and High Burn intensities.

With the proper firmware, the following LOR Units support DMX. (Note: Firmware is field upgradeable and existing units can be upgraded to support DMX).

Controller	Required Firmware		Controller	Required Firmware
LOR1600W	4.20 or higher		LOR800W	4.20 or higher
LOR1602W	4.20 or higher		CMB16D (DC card)	1.20 or higher
LOR1602MP3	4.20 or higher		CTB08D	4.20 or higher
CTB16D	4.20 or higher		CTB16PC	4.20 or higher
CTB16K (all formats)	4.20 or higher		CTB16PC kits	4.20 or higher

Setting the DMX address

The addressing used in a LOR network is a little different than the addressing scheme used in DMX however they are close enough that the LOR paradigm can be extended to DMX addressing. In a LOR network, regardless of the number of outputs (channels) a Unit has, it is assigned a single *Unit ID* (address). (Refer a device's manual for instructions to set the Unit ID).

When used in a DMX network, the Unit's Unit ID is used to map to the starting DMX address for the Unit's Circuits. The addresses for the circuits on a Unit will be assigned sequentially based on the starting address. For example, if a 16 channel Unit has the Unit ID "01" then the DMX addresses for that Unit's channels are 1 thru 16. With Unit ID "02" the DMX address are 17 thru 32. See the Unit ID – Staring DMX address table.

Unit ID to Starting DMX Address Table

LOR Unit ID	DMX Address	LOR Unit ID	DMX Address
"01"	1	"11"	257
"02"	17	"12"	273
"03"	33	"13"	289
"04"	49	"14"	305
"05"	65	"15"	321
"06"	81	"16"	337
"07"	97	"17"	353
"08"	113	"18"	369
"09"	129	"19"	385
"0A"	145	"1A"	401
"0B"	161	"1B"	417
"0C"	177	"1C"	433
"0D"	193	"1D"	449
"0E"	209	"1E"	465
"0F"	225	"1F"	481
"10"	241	"20"	497

Connecting the LOR Unit to the DMX Universe

Light-O-Rama networks are usually wired using standard CAT5 (CAT5e) patch cables. The cables are wired straight through. To connect a LOR Unit to a DMX universe you will need an adapter. Most commonly, DMX hardware uses XLR connectors.
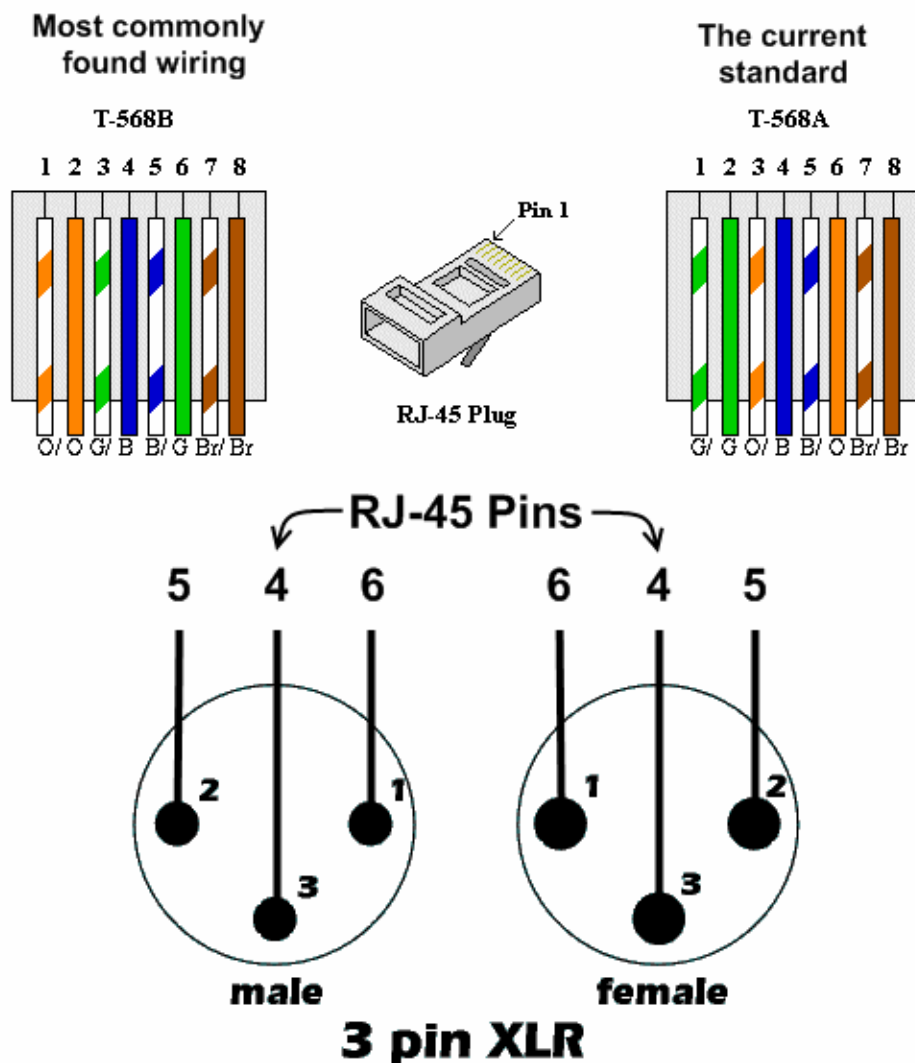
LOR / DMX Adapter Pin Connections

RJ-45 Pin	XLR Pin
4	3
5	2
6	1

A more detailed explanation follows.

Note: RJ-45 / XLR(3 pin) adapters are available in the LOR online store. (Accessories section).

The Light-O-Rama RJ-45 to XLR DMX Pin Map

This is the pin map used to create an RJ-45/XLR adapter to connect a Light-O-Rama, DMX enabled controller to a DMX universe.

Most commonly found wiring

T-568B

1 2 3 4 5 6 7 8

O/ O G/ B B/ G Br/ Br

Pin 1

RJ-45 Plug

The current standard

T-568A

1 2 3 4 5 6 7 8

G/ G O/ B B/ O Br/ Br

RJ-45 Pins

5   4   6   6   4   5

2   1   1   2

3   3

male   female

3 pin XLR

With 5 pin XLR you do not use XLR pins 4 and 5. Pins 1, 2 and 3 are connected as above.