Desire® Series by ETC
D22, D40, D40XT, D60, D60X
User Manual

v1.8.0

Rev B

The Desire series of fixtures are intended for professional use only.
Read entire User Manual before using equipment.

This product is intended for professional use only.
Read this entire document before using this product.

Part Number: **7410M1200-1.8.0**
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Introduction

Congratulations on your purchase of a *Desire Series by ETC* product.

Desire's x7 Color System™ seven-hue technology produces a light and color quality that conventional LED systems cannot duplicate. This unique color system produces bright, broad-spectrum whites and intense colors equally well, rendering pigments, objects, and skin tones in a natural way.

Fire and Ice fixtures use elements of the x7 Color System for superior performance in deep saturated colors.

Studio Daylight and Studio Tungsten fixtures use high-output white LEDs for maximum brightness and efficacy. Studio Tungsten interacts very well with incandescent sources, while Studio Daylight easily replaces a variety of HMI lamps and natural sunlight.

Quick Setups

You can use any one of the Quick Setups and fine-tune settings for either console operation via DMX protocol or standalone operation. For advanced users, an expanded user interface provides easy navigation to all settings and options.

Vivid, Lustr+, Fire and Ice, Studio HD

Some of the options include:

- Multiple DMX profiles ranging from a simple 3-channel RGB profile to 8-channel native color and intensity control.
- Multiple dimming curve options.
- Preset colors and sequences for standalone operation.
- White point selection; white light and color behavior based on a specific color temperature white light such as 3200K or 5600K.
- Loss-of-data behavior options.
- Power regulation modes; three output options that offer a choice between maximum light output for lower duty cycles and maximum thermal stability and output consistency for higher duty cycles.

Studio Daylight and Studio Tungsten

Some of the options include:

- Multiple dimming curve options.
- Presets and sequences for standalone operation.
- Strobe.
- Loss-of-data behavior options.
- Power regulation modes; three output options that offer a choice between maximum light output for lower duty cycles and maximum thermal stability and output consistency for higher duty cycles.

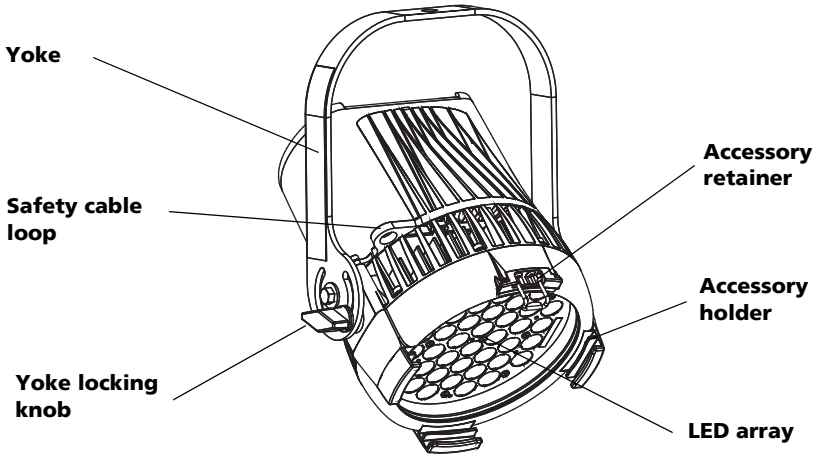

Figure-1.1 Components of a D40 Fixture.

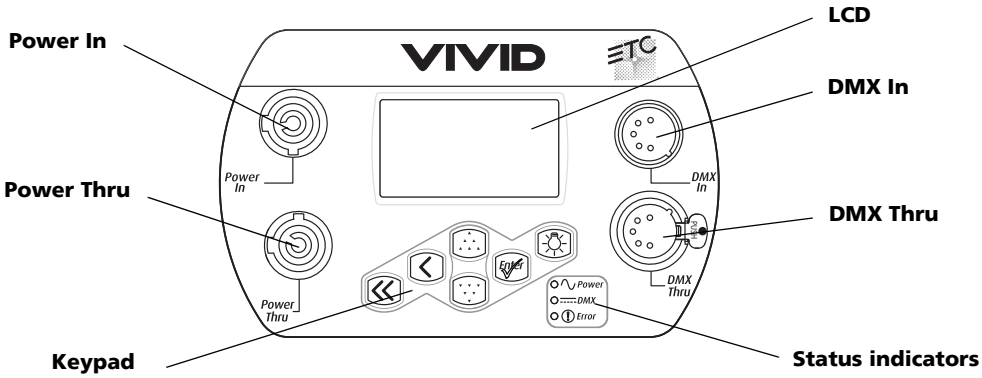

Figure-1.2 Components of the Rear Panel. D40 and D60 shown.

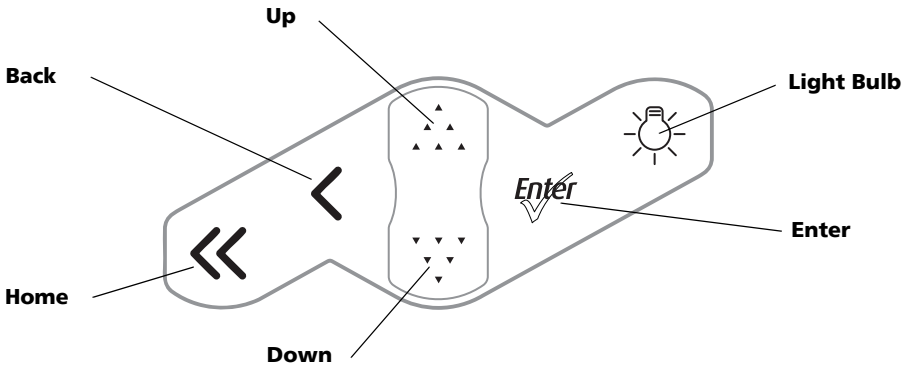

Figure-1.3 Keypad Button Functions.

For more information about the user interface, see *User Interface Overview* on *page 46*.

Models

Each member of the Desire Series product line is unique and optimized for a specific lighting task. All fixtures feature narrow optics for the longest throws.

Vivid (D40, D40XT, D60, D60X)

- Full 7-color x7 LED array
- Optimized for high-output deep pastels and strong saturated colors—an all-around workhorse for vibrant color washes

Lustr+ (D22, D40, D40XT, D60, D60X)

- Specialized x7 LED array with 6 colors plus white
- Broad-spectrum color optimized for the best white and light tints across the entire white and pastel range
- Beautifully illuminates skin tones and other objects—ideal for theatrical lighting

Fire and Ice (D40, D40XT, D60)

- Optimized for saturated colors at the red end (Fire) or blue end (Ice) of the spectrum
- Strongest output for high-intensity washes and theatrical environments

Studio HD (D22, D40, D40XT, D60, D60X)

- Precise mix of warm white and cool white LEDs plus additional strategic colors for fuller spectral power
- Continuously variable color temperature white light
- Extreme CRI and high-definition illumination of skin tones from 2700K to 6500K

Studio Daylight (D22, D40, D40XT, D60, D60X)

- 5,700K nominal correlated color temperature
- 70 CRI typical

Studio Tungsten (D22, D40, D40XT, D60, D60X)

- 3,000K nominal correlated color temperature
- 85 CRI typical

WARNING:

- Do not link more than nine fixtures when using Power Thru (non-dimming, 100 to 240 VAC, 50/60 Hz). Power Thru is not available on all Desire Series fixtures.
- Up to 32 devices can be daisy-chained together per data run.

Applications

- Theaters
- Studios
- Schools
- Houses of worship
- Hotels
- Convention centers
- Theme parks
- Museums
- Temporary events
- Outdoor (D40XT and D60X only)

Document Conventions

Notices

Throughout this manual, the following are used to alert you to notes and safety notices.

Note: *Notes are helpful hints and information that is supplemental to the main text.*

CAUTION: *A Caution statement indicates situations where there may be undefined or unwanted consequences of an action, potential for data loss or an equipment problem.*

WARNING: ***A Warning statement indicates situations where damage may occur, people may be harmed, or there are serious or dangerous consequences of an action.***

WARNING: ***RISK OF ELECTRIC SHOCK! This warning statement indicates situations where there is a risk of electric shock.***

Typography Used in This Guide

Menu items and commands you must perform are indicated in **bold text**. Keypad buttons are indicated in bold **[brackets]**. Menu selections or commands appear in **bold**. For example:

Press **[▼▼▼]** to select **Sequences** and then press **[Enter]**.

Safety

The Desire series fixtures are intended for professional use only. **Read entire User Manual before using equipment.**

WARNING:

- Do not mount the Desire series fixture on or near a flammable surface.
- Use the D22, D40, and D60 fixtures in dry locations only, where humidity does not exceed 90 percent (non-condensing). These fixtures are not intended for outdoor use. (Only the D40XT and D60X are approved for outdoor use.)
- Mount and support the fixture only by the primary suspension holes in the yoke or floor standing yoke.
- Suspend the fixture from a suitable structure using only the hardware rated for the weight of the fixture.
- In addition to primary suspension, attach a safety cable (ETC Model 400SC or other approved safety cable or device) to the fixture housing. Appropriate attachment point (hole) is provided in the protruding tab on the fixture housing.
- Disconnect the unit from power and from DMX before all cleaning and maintenance.
- Maximum recommended ambient operating temperature: Ta=40°C (104°F)
- Maximum anticipated external surface temperature: Tmax=80°C (158°F)
- External temperature after 5 minutes of full-brightness operation and 23°C (74°F) ambient: 38°C (100°F)
- External Temperature (steady state achieved) at 23°C (74°F): 70°C (158°F)

Contacts

If you have questions about your Desire series fixture that are not answered in this manual, please contact the supplier of your ETC equipment or ETC Technical Services. For general information, your most convenient resources are the references provided in this manual. To search more widely try the ETC web site at www.etcconnect.com.

For technical questions about Desire series fixtures, contact ETC Technical Services directly at one of the offices listed below. Emergency service is available from all ETC offices outside of normal business hours.

Americas

Electronic Theatre Controls Inc.
Technical Services Department
3031 Pleasant View Road
Middleton, WI 53562
800-775-4382 (USA, toll-free)
+1-608 831-4116
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26-28 Victoria Industrial Estate
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Please email comments about this manual to: **TechComm@etcconnect.com**

Quick Start

This section details the steps for a quick fixture setup. For more comprehensive information, see *Operation* on *page 51*.

Install

Step 1: Hang or mount the fixture using the provided hardware and approved hardware accessories.

Step 2: Attach an approved safety cable when applicable.

Step 3: Insert secondary lenses with the smooth side out, if desired.

Step 4: Insert additional accessories (top hat, egg crate, etc.) into the holder, if desired.

Connect (D40, D40XT, D60, and D60X)

Step 1: Attach the power cable to the Power In connector.

Step 2: Attach 5-pin XLR cable to the DMX In connector (if using external control).

Step 3: Plug the power cable into AC power (100 to 240VAC, 50/60 Hz) on a non-dimming circuit.

Step 4: Plug the XLR cable (if using) into the DMX source or data daisy-chain.

Step 5: Link additional fixtures via the Power Out and DMX Out connectors using the following guidelines.

- No more than nine total D40, D60X or D40XT fixtures on Power Thru.
- Up to 32 device loads on the DMX daisy-chain.

Connect (D22 Portable)

Step 1: Attach 5-pin XLR cable to the DMX In connector (if using external control).

Step 2: Plug the power cable into AC power (100 to 240VAC, 50/60 Hz) on a non-dimming circuit.

Step 3: Plug the XLR cable (if using) into the DMX source or data daisy-chain.

WARNING:

- *Do not link more than nine fixtures when using Power Thru (non-dimming, 100 to 240 VAC, 50/60 Hz). Power Thru is not available on all Desire Series fixtures.*
- *Up to 32 devices can be daisy-chained together per data run.*

Connect (D22 Canopy and Track)

For installation and connection information, refer to *Desire Series D22 Installation Guide*. ETC manuals are available for download at http://www.etcconnect.com/downloads.aspx

Focus

Step 1: With power supplied, wait for the fixture to boot up. This will take approximately ten seconds.

Step 2: Press **[** ☼ **]** to open the **Presets & Sequences** menu.

Step 3: Select **Focus** and then press **[**Enter**]**. This turns the LED array on to enable focusing.

Step 4: Adjust the fixture's position as needed.

Step 5: When focusing is complete, press **[**Enter**]** to restore the fixture to its original preset.

Step 6: Select **[** ≪ **]** to return to the home screen.

For information about the user interface, see *User Interface Overview* on *page 46*.

Configure

Set DMX Address

Step 1: From the main screen, press **[**Enter**]** to open the Main Menu.

Step 2: On the **Main Menu**, scroll to **DMX Start Address and then** press **[**Enter**]**.

Step 3: Use **[** ▲▲▲ **]** or **[** ▼▼▼ **]** to scroll to the desired **address**.

Step 4: Press **[**Enter**]** to select the **address** number.

Step 5: Press **[** ≪ **]** to return to the home screen.

A DMX address is not required if using standalone or master/slave control.

Quick Color (Vivid, Lustr+, Fire and Ice, Studio HD)

When there is no DMX signal to the fixture:

Quick Color allows you to easily select a color and its intensity from a predefined menu. This feature overrides any presets or sequences previously selected and is only available when there is no external DMX signal to the fixture. For a list of available colors,*See "Presets (Vivid, Lustr+, Fire and Ice, Studio HD)" on page 65.*

Note: *Exiting the Quick Color menu will return the fixture to the state it was in prior to entering the menu.*

To select a Quick Color:

Step 1: Press the **[☼]** to access the **Presets and Sequences** screen.

Step 2: Scroll to **Quick Color** within the **Presets and Sequences** screen.

Step 3: Press **[Enter]**.

Step 4: Scroll to **Color** and press **[Enter]**.

Step 5: Press **[▲▲▲]** or **[▼▼▼]** to select the desired color

Step 6: Press **[Enter]** to commit the selection.

Step 7: Scroll to **Intensity** and press **[Enter]**.

Step 8: Press and hold **[▲▲▲]** or **[▼▼▼]** to adjust the fixture's intensity.

Step 9: Press **[Enter]** to commit the selection.

- To set the Intensity to 0, press the **[☼]**. Pressing **[☼]** a second time will return the fixture to its previously set intensity.
- If power to the fixture is lost while in Quick Color mode, the fixture will return to the Quick Color menu when power is restored.

Quick Setups Menu

Various pre-programmed combinations of operational settings are available to quickly get you started. These settings are specifically created for different situations and are easily accessible on the fixture's user interface. Individual settings within each quick setup can be accessed via the Advanced menu in order to take advantage of all the possible control features.

Quick Setups (Vivid, Lustr+, Fire and Ice, Studio HD)

Step 1: On the **Main Menu**, scroll to **Quick Setups**.

Step 2: Press **[Enter]**.

Step 3: Scroll to the desired setup and then press **[Enter]**.

An asterisk (*****) next to the setup name indicates that setup is active.

Step 4: Press **[Enter]** to return to the home screen.

Quick Setup	Profile	Features	Recommended For:
Studio	Studio	Linear dimming curve, regulated output mode for color consistency	Studio factory default: enables three-parameter control of white light (intensity, white point, and tint) via DMX from a console or console-free fixture display
General	Direct	Standard dimming curve, regulated output for color consistency. 3200K white point setting	Factory default: for general purpose use, including interior architectural applications
High Impact	RGB	Quick dimming curve, boost mode for maximum intensity, 5600K white point setting	Event lighting: enables quick response, simple RGB control and strobe channel for maximum effect usage

Quick Setups (Studio Daylight and Studio Tungsten)

Step 1: On the **Main Menu**, scroll to **Quick Setups**.

Step 2: Press **[**Enter**]**.

Step 3: Scroll to the desired setup and then press **[**Enter**]**.
An asterisk (*****) next to the setup name indicates that setup is active.

Step 4: Press **[**Enter**]** to return to the home screen.
The top line of the home screen displays the name of the active setup.

Quick Setup	Profile	Features	Recommended For:
Studio	Studio	Linear dimming curve, regulated output for intensity stability	Enables control of intensity from luminaire's user interface; no console required
Single Channel	Direct	Standard dimming curve, regulated output for color consistency	For general purpose architectural use
Stage	Direct	Incandescent dimming curve, regulated output	Matches conventional luminaire performance

Studio Quick Setup

From the home screen:

- To adjust the **Intensity**, press **[▲]** or **[▼]**.
  The range is 0 to 100%.
- To adjust the **White Point**, press **[≪]** or **[Enter]**.
  The range is 2700 to 6500K.
- To adjust the **Tint**, press **[☼] & [<]** or **[Enter]**.
  [<] increases magenta and **[Enter]** increases green.
- To return to the Main Menu, press **[≪]**.

Advanced Settings

Step 1: From the **Main Menu** press **[▼]** to scroll to **Advanced Settings**.

Step 2: Press **[Enter]**.

Step 3: Access the individual settings via additional menus.

Step 4: Press **[Enter]** to return to the home screen.

Once you are familiar with your Desire fixture, you may alter any of the numerous individual settings from the Advanced Settings menu. For more information, see *Advanced Menu* on *page 54*.

Chapter 1

Installation and User Interface

This chapter contains the following sections:

Specifications

Physical

- Rugged die-cast aluminum construction
- Easy-access slots for secondary lenses and standard 7.5 inch PAR accessories (D40 and D40XT)
- 5.5 inch accessories (D22)
- 8.875 inch accessories (D60 and D60X)
- Advanced thermal management systems for long LED life
- Ambient operating temperature
- D22: 0 to 40 °C (32 to 104 °F)
- D40XT and D60X: -20 to 40 °C (-4 to 104 °F)
- D40, and D60: 0 to 40 °C (32 to 104 °F)
- Continuous operation at 40 °C (104 °F)
- D40XT and D60X rated IP66 for exterior use
- Hanging yoke standard. Optional yoke and floor stand available
- D22, D40, D40XT, and D60X models feature noise-free, fan-less convection cooling for acoustically sensitive installations.
- Available in black (standard), white (optional), silver, or custom colors (contact factory)
- D60 model features ultra-quiet cooling fan for use in high ambient temperature situations.
- See *Fixture Weight* on *page 26*
- See *Dimensions and Hanging Clearances* on *page 25*

Electrical

- 100V to 240V 50/60 Hz universal power input
- Up to 9 D60, or D60X fixtures (15A max) may be linked on Power Thru
- Up to 10 D40 or D40XT (15A max) may be linked on Power Thru
- D22 has 1.8m flying lead with an Edison connector, no thru
- D40 and D60 models include Neutrik® PowerCon® in and thru connectors
- 5 foot Neutrik PowerCon to bare-end power input lead or parallel blade U-ground (Edison) connector (D40, D60)
- Optional 5 foot PowerCon to 20A two pin and ground (stage pin) or grounded 20A twistlock connector (excluding D40XT and D60X)
- D40XT and D60X model includes a 5 foot power cable with waterproof IP66 connector
- **Note:** D40XT has optional power leads available including Molex to bare end. Please see the D40XT datasheet for more information.
- Requires power from non-dim source

LEDs

- 22 Luxeon® Rebel™ ES LED emitters (D22 Studio Daylight and Studio Tungsten)
- 40 Luxeon Rebel LED emitters (D40 and D40XT Vivid, Lustr+, Fire and Ice, Studio HD)
- 22 Luxeon Rebel LED emitters (D22 Lustr+ and Studio HD)
- 60 Luxeon Rebel LED emitters (D60 Vivid, Lustr+, Fire and Ice, Studio HD, and D60X)
- 40 Luxeon Rebel ES LED emitters (D40 and D40XT Studio Daylight and Studio Tungsten)
- 60 Luxeon Rebel ES LED emitters (D60 and D60X Studio Daylight and Studio Tungsten)
- See *Note About LED Fixtures* on *page 20*
- 50,000 hr. LED life

Optical

- Tight primary field angle of 17° (Vivid, Lustr+, Fire and Ice, Studio HD)
- Tight primary field angle of 24° (Studio Daylight and Studio Tungsten)
- Combine linear lenses for desired beam spread
- Secondary lenses available for multiple beam spread options including round, oblong, and linear patterns
- Slots for secondary lenses

Color

- Specialized capabilities from different LED array options based on x7 color-mixing expertise:
  - Vivid – Optimized for strong, saturated colors at maximum brightness
  - Lustr+ – x7 Color System array with a high-intensity white LED for an ideal theatrical wash light
    Full range color, with an emphasis on lighter colors and white
  - Fire and Ice – Optimized for high-intensity saturated colors in either the warm, red end of the spectrum (Fire) or the cool, blue end of the spectrum (Ice) (not available with D60X fixtures)
  - Studio HD — Optimized for variable color temperature white light
- Interacts seamlessly with conventional sources
- Achieves excellent 3200° or any other Correlated Color Temperature white light from 2000 to 10,000°K (except Fire or Ice) (CCT adjustment not available on Studio Daylight and Studio Tungsten)
- Beautifully illuminates skin tones and other objects
- Deeply saturated colors across an exceptionally wide gamut

Control

- DMX512-A compliant
- DMX in and thru via 5-pin XLR connectors (D40, D40XT, D60, D60X)
- DMX in and thru via 5-pin XLR connectors (Portable) or DMX termination board (Canopy). DMX in via Eutrac MultiAdapter track adapter (Track). (D22)
- Onboard user interface with a high-resolution LCD (not available with D60X)
- Optional DMX-based fan control (D60 only) for predictable noise levels
- Optional strobe channel
- Standalone, studio standalone, and console-free presets and sequences
- Master/slave mode
- Multiple profile options for different levels of control
- 15-bit virtual dimming engine for smooth, high-quality theatrical fades
- See *DMX Profile* on *page 31*

Typical Power Consumption (D22)

Lustr+

	100V	120V	230V
Idle Power / Current	7.8W / 0.111A	7.6W / 0.111A	7.4W / 0.094A
100% Boost Power / Current	56.8W / 0.578A	56.5W / 0.475	55.1 W / 0.288

Studio Daylight

	100V	120V	230V
Idle Power / Current	7.3W / 0.093A	7.2W / 0.091A	7.3W / 0.124A
100% Boost Power / Current	55.2W / 0.556A	55W / 0.462A	53.8W / 0.268A

Studio Tungsten

	100V	120V	230V
Idle Power / Current	7.6W / 0.011A	7.6W / 0.011A	7.2W / 0.094A
100% Boost Power / Current	52.4W / 0.532A	51.8W / 0.445A	50.9W / 0.276A

Studio HD

	100V	120V	230V
Idle Power / Current	6.7W / 0.095A	6.7W / 0.098A	6.7W / 0.118A
100% Boost Power / Current	55W / 0.555A	54.6W / 0.464A	53.3W / 0.271A

Typical Power Consumption (D40 and D40XT)

Vivid

	100V	120V	240V
Idle Power / Current	10.5W / 0.135A	11W / 0.098A	12.7W / 0.078A
100% Boost Power / Current	102W / 1.12A	98W / 0.82A	95.6W / 0.403

Lustr+

	100V	120V	240V
Idle Power / Current	10.3W / 0.125A	10.5W / 0.094A	12.2W / 0.074A
100% Boost Power / Current	104W / 1.16A	102W / 0.861	99.7 W / 0.418

Fire

	100V	120V	240V
Idle Power / Current	10.5W / 0.125A	10.8W / 0.096A	12.5W / 0.076A
100% Boost Power / Current	91.2W / 1.02A	88.2W / 0.74A	87.2W / 0.369A

Ice

	100V	120V	240V
Idle Power / Current	11.0W / 0.123A	11.2W / 0.099A	12.8W / 0.077A
100% Boost Power / Current	104.2W / 1.17A	102.2W / 0.867A	99.5W / 0.42A

Studio HD

	100V	120V	240V
Idle Power / Current	11.1W / 0.134A	11W / 0.097A	12.8W / 0.077A
100% Boost Power / Current	106.2W / 1.19A	103.5W / 0.883A	101.3W / 0.426A

Studio Daylight

	100V	120V	240V
Idle Power / Current	10.6W / 0.123A	10.6W / 0.095A	12.4W / 0.076A
100% Boost Power / Current	105.1W / 1.12A	103.3W / 0.878A	100.8W / 0.424A

Studio Tungsten

	100V	120V	240V
Idle Power / Current	10W / 0.111A	10.1W / 0.093A	11.9W / 0.075A
100% Boost Power / Current	104W / 1.05A	103.1W / 0.872A	100.3W / 0.422A

Typical Power Consumption (D60)

Vivid

	100V	120V	240V
Idle Power / Current	7.6W / 0.083A	7.7W / 0.083A	9.2W / 0.087A
100% Boost Power / Current	139W / 1.41A	136.1W / 1.15A	130.3W / 0.549A

Lustr+

	100V	120V	240V
Idle Power / Current	7.3W / 0.1A	7.4W / 0.77A	9W / 0.086A
100% Boost Power / Current	143W / 1.46A	140.1W / 0.97A	135.1W /

Fire

	100V	120V	240V
Idle Power / Current	7.9W / 0.105A	7.9W / 0.086A	9.4W / 0.089A
100% Boost Power / Current	129W / 1.35A	126.5W / 1.35A	122.7W / 0.52A

Ice

	100V	120V	240V
Idle Power / Current	7.3W / 0.095A	7.4W / 0.081A	9W / 0.085A
100% Boost Power / Current	148.5W / 1.53A	147W / 1.28A	140.2W / 0.592A

Studio HD

	100V	120V	240V
Idle Power / Current	7.2W / 0.086A	7.3W / 0.082A	8.9W / 0.086A
100% Boost Power / Current	146W / 1.5A	143.7W / 1.24A	138.2W / 0.58A

Studio Daylight

	100V	120V	240V
Idle Power (W)	7.5W / 0.09A	7.6W / 0.084A	9.3W / 0.089A
100% Boost Power (W)	145.5W / 1.48A	142.8W / 1.22A	136W / 0.573A

Studio Tungsten

	100V	120V	240V
Idle Power (W)	7.4W / 0.088A	7.5W / 0.083A	9.1W / 0.088A
100% Boost Power (W)	145.8W / 1.49A	143.3W / 1.23A	137.1W / 0.577A

Typical Power Consumption (D60X)

Vivid

	100V	120V	240V
Idle Power / Current	4.2W / 0.08A	4.3W / 0.075A	4.1W / 0.067A
100% Boost Power / Current	117.9W / 1.19A	118W / 1A	115.6W / 0.526

Lustr+

	100V	120V	240V
Idle Power / Current	4.12W / 0.8A	4.32W / 0.074A	3.85W / 0.063A
100% Boost Power / Current	126W / 1.27A	126W / 1.06	123W / 0.55

Studio HD

	100V	120V	240V
Idle Power / Current	4.2W / 0.08A	4.3W / 0.76 A	4.3W / 0.068A
100% Boost Power / Current	125.1W / 1.26A	124.7W / 1.05A	122.5W / 0.552A

Studio Daylight

	100V	120V	240V
Idle Power / Current	4.2W / 0.08A	4.3W / 0.76 A	4.2W / 0.068A
100% Boost Power / Current	125.1W / 1.26A	124.7W / 1.05A	122.5W / 0.552A

Studio Tungsten

	100V	120V	240V
Idle Power / Current	4.3W / 0.08A	4.2W / 0.073A	4.2W / 0.065A
100% Boost Power / Current	124.4W / 1.25A	123.7W / 1.04A	121.2W / 0.545A

Note About LED Fixtures

All LED sources experience some lessening of light output and some color shift over time. Desire Series fixtures have complex thermal management systems to minimize these changes. With typical usage, a Desire fixture will still achieve at least 70% of its initial output after 50,000 hours of use (B50, L70). In individual situations, LEDs will be used for different durations and different levels. This can eventually lead to minor alterations in color performance, necessitating slight adjustment to presets, cues, or programs.

All LEDs may exhibit a slight shift in output as they rise to full operating temperature. Desire Series fixtures allow the selection of different power settings in order to balance the competing requirements of thermal stability and brightness. Depending on the selected setting, changes in output as fixtures warm up may or may not be visible to the eye.

Color Rendering Index and Color Quality Scale Ratings

Desire fixtures are evaluated for Color Rendering Index (CRI) and Color Quality Scale (CQS) performance using measured output spectrum and optimized mix solutions for a best spectral match to black body sources at 3200K and 5600K. Color fidelity was also measured. These numbers may fluctuate slightly from fixture to fixture. This is a normal characteristic of white LEDs, and this kind of variation is highly unlikely to be apparent in most applications. The performance is the same for all fixture versions.

Fixture	CRI	CQS	Color Fidelity	TLCI	Duv
Vivid at 3200K	87	89	89	65	0.000
Vivid at 5600K	90	92	92	74	0.000
Lustr+ at 3200K	86	88	88	66	0.000
Lustr+ at 5600K	93	92	90	86	0.000
Studio HD at 3200K	89	90	91	85	0.000
Studio HD at 5600K	92	94	94	91	0.000
Studio Tungsten at 3000K	86	86	86	56	0.001
Studio Daylight at 5600K	71	70	69	43	0.001

Desire luminaires provide excellent color rendering, particularly the color-mixing versions. A Duv rating of 0.000 indicates that the color mix used was exactly on the black body line, with no green or magenta tint.

Studio Daylight and Studio Tungsten fixtures use only white-type LEDs at a fixed color temperature in order to maximize output and efficacy.

Installation

Mounting Hardware

Four options are available for mounting Desire fixtures.

- Yoke with C-clamp
- Floor stand
- Canopy (D22)
- Track mount (D22)

Installing the Floor Stand

The floor standing yoke assembly replaces the included standard yoke so that the fixture can be placed on a floor and tilted to the desired angle.

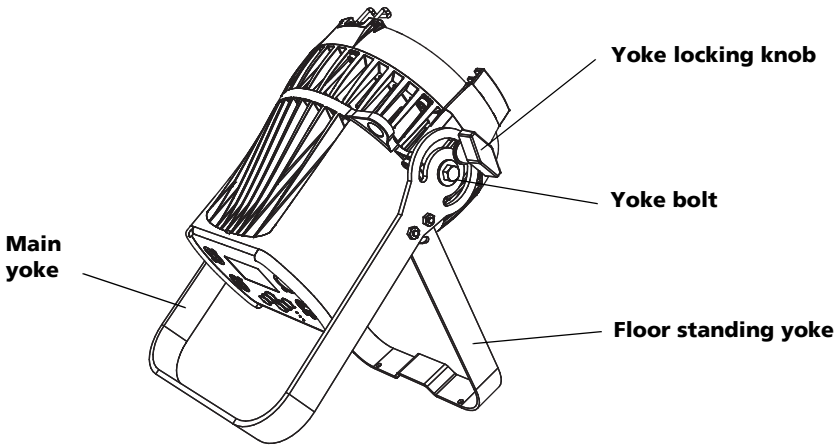


Figure-1.1 Fixture with Floor Stand.

Step 1: Remove the yoke locking knob with the flat washer.

Step 2: Remove the yoke bolts and flat washers that attach the yoke on each side of the fixture.

Step 3: Attach the yoke and floor standing yoke assembly to the fixture with the two yoke bolts and two flat washers.

Step 4: Insert the yoke locking knob and flat washer and tighten.

Installing D22 Canopy and Track

For detailed installation information, reference the *Desire Series D22 Installation Guide.* ETC manuals are available for download at http://www.etcconnect.com/downloads.aspx.

Aim Adjustment

D40, D40XT, D60, D60X, D22 Portable

The fixture can be tilted up and down and rotated (panned) to aim the light where it is needed. The adjustment is the same for the yoke or floor stand. To assist aiming the fixture, you can turn it on without having to be connected to DMX control or enabling a preset. For more information, see *Focus* on *page 64*.

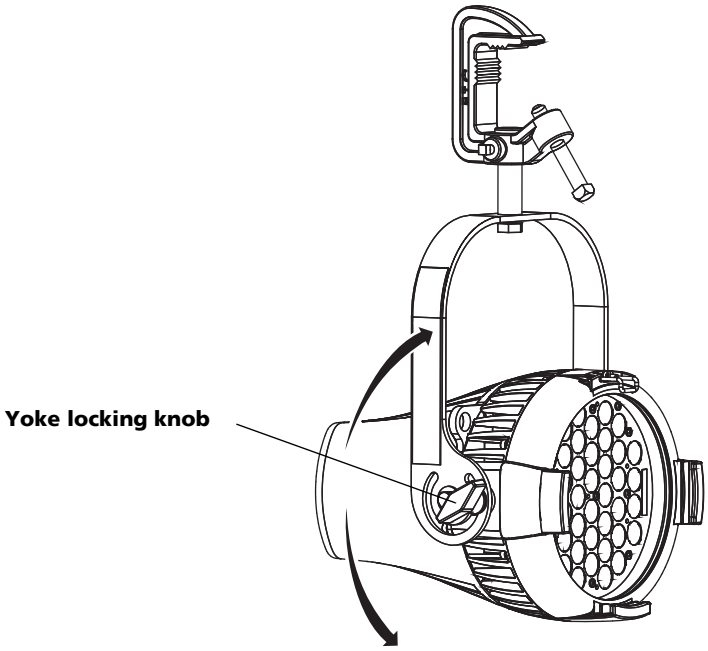


Figure-1.2 Tilting the Fixture on a Yoke.

Turning the Fixture On

Step 1: Apply power to the fixture.

Step 2: On the back of the fixture press **[** ☼ **]**.

Step 3: With **Focus** selected, press **[**Enter**]**.

Adjusting the Tilt

Step 1: Loosen the yoke locking knob. **Do not** remove the knob.

Step 2: Tilt it to the desired angle.

Step 3: Tighten the yoke locking knob.

Adjusting the Pan

The pan is adjusted at the hanging clamp. Please consult the clamp manufacturer's documentation for instructions on loosening and rotating the yoke at the clamp.

WARNING: ***The safety cable (or other approved safety device) must be securely attached to the safety cable loop before loosening the clamp.***

D22 Canopy and Track

The Portable and Track mounted fixtures can tilted up and down and panned to aim the light where it is needed.

Step 1: Pan the fixture to the desired position. The fixture is prevented from rotating completely around to protect the wiring.

Step 1: To adjust the tilt, loosen the yoke locking knob. **Do not** remove the knob. Refer to Figure-1.2.

Step 2: Tilt it to the desired angle.

Step 3: Tighten the yoke locking knob.

Installation Clearances

Cooling and Duty Cycle

Desire D22, D40, and D60X Series fixtures are convection cooled and can operate all channels at full power continuously in ambient temperatures up to 40°C (104°F). The Desire D60 is equipped with a cooling fan, which is automatically controlled.

If ambient conditions exceed 40°C (104°F) or fail to allow sufficient airflow, over a long period of time, the fixtures may shut down and remain off until they return to a safe operating temperature. The fixtures provide two methods to indicate over temperature that can be set up on the Local Settings menu. The over temperature indicators are:

Visible

The LED array glows in a dull, low intensity with only some emitters illuminated, the LCD backlight is turned on, the LCD displays Overtemp Activated, and the Error Indicator light turns on.

Dark

The LED array turns off and the LCD displays Overtemp Activated. The LCD backlight is not turned on.

CAUTION: ***Duty Cycle***

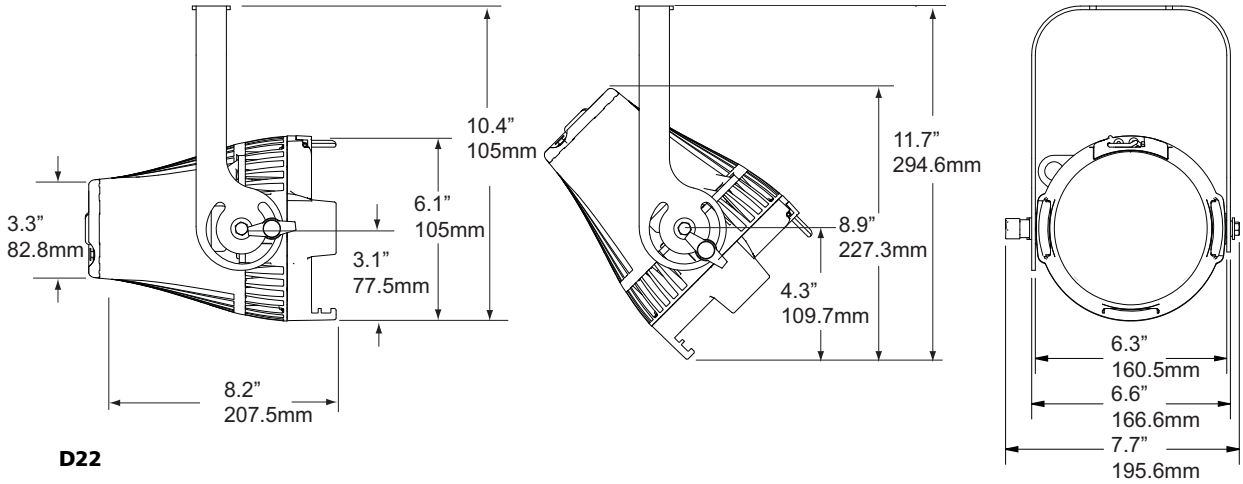
Operating the fixtures in higher ambient temperatures or low-airflow situations may cause the power supply to shut down. Following a cool-down period, the power supply will automatically reset and the fixture will return to operation.

It is good practice to power down any device with on-board electronics to limit unnecessary wear on the devices and eliminate residual use of electricity. When not in use, Desire fixtures should be powered down by disconnecting from power either at the breaker or by unplugging.

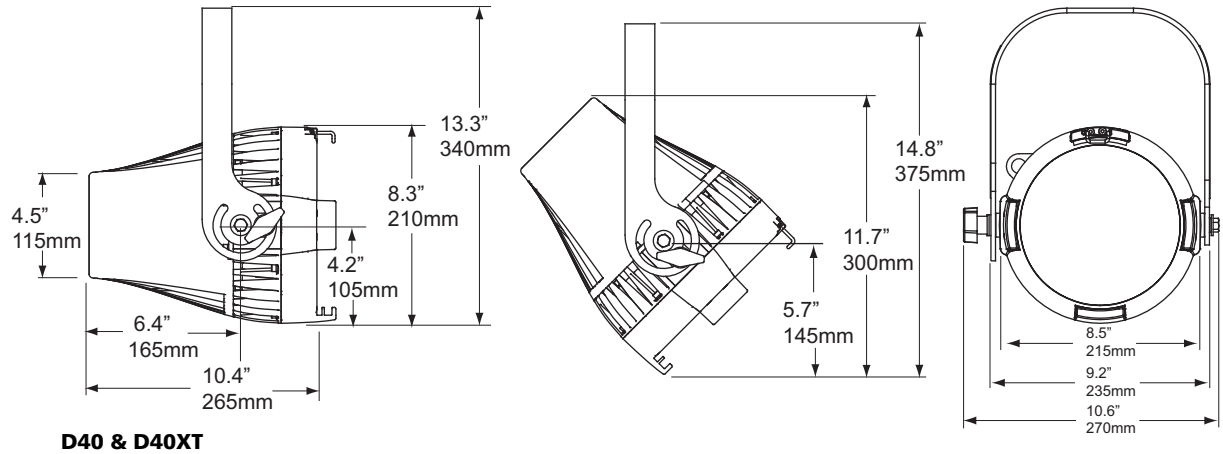
LED life is adversely affected by high-temperature operation. When operating under elevated ambient temperatures, avoid turning all channels to 100% for extended periods, such as channel checks or focusing.

Dimensions and Hanging Clearances

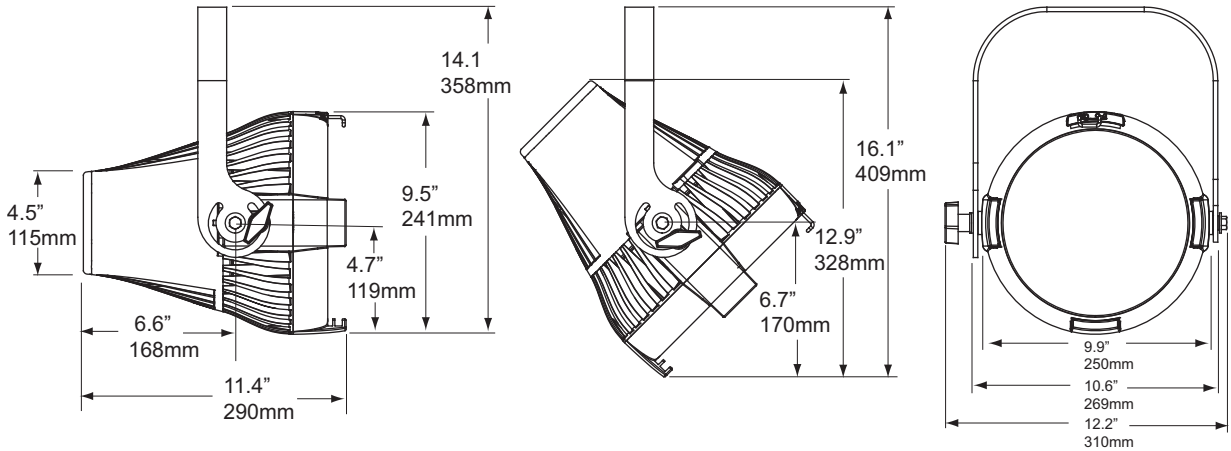
Use the following dimensions to allow proper clearances around the fixture. Allow additional space for cables.



D22



D40 & D40XT



D60, D60X

Figure-1.3 Dimensions.

Safety Cable

The safety cable (or other approved safety device) should be attached to the fixture housing and wrapped around the hanging structure (pipe). An appropriate attachment loop is provided on the protruding tab of the fixture housing. Take care to leave as little slack as possible in the safety cable to avoid the cable catching the yoke of the fixture.

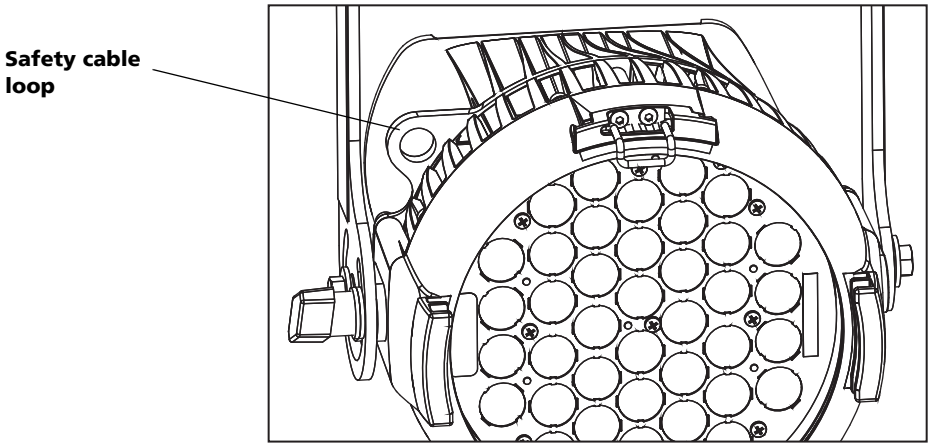


Figure-1.4 Safety Cable Loop on Fixture Housing.

Fixture Weight

Total weight depends on how the individual fixture is configured.

Model	Weight[a]		Shipping Weight	
	Lbs.	Kg.	Lbs.	Kg.
D22 Portable	6.9	3.2	8.5	3.9
D22 Canopy	6.8	3.1	8.4	3.8
D22 Track	6.4	2.9	8.0	3.6
D40	14.4	6.5	19.3	8.8
D40XT	16.5	7.5	21.4	9.7
D60	20.2	9.2	25	11.3
D60X	21.5	9.7	24.7	11.2

a) Does not include mounting hardware.

Power and Data Cabling Requirements

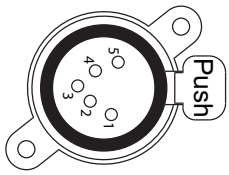
Power

The Desire series fixture operates on AC power, 100 to 240VAC/50-60Hz. The fixture must be connected to a non-dimmable power source in order to avoid damage to its internal power supply and other electrical components.

Mains	Europe	North America
Line	Brown	Black
Neutral	Blue	White
Ground (Earth)	Green/Yellow	Green

Data (D40, D40XT, D60, D60X)

The Desire series fixtures operate on a DMX control signal or as standalone fixtures. The fixture is supplied with a 5-pin XLR DMX input connector and a 5-pin DMX Thru connector. DMX cables should be acceptable for DMX data transmission (not microphone cable) and should follow the standard pinout. The optional secondary data pair is not used by the Desire series fixtures. The maximum DMX data run from any DMX source to the last fixture in a chain is 1000 feet (300m). Termination is required for the D40XT and D60X in the data thru port of the last fixture in each data chain. The D40 and D60 are self-terminated.

DMX512 pinout for five-pin XLR female		
	1	Common (Shield)
	2	Data –
	3	Data +
	4	not connected
	5	not connected

See *DMX Profile* on *page 31* for additional information on DMX addressing of Desire Series fixtures.

Data (D22)

Portable Model

The Portable D22 is provided with 5-pin XLR connectors on the back for data in and thru connection to a DMX/RDM control network.

Canopy Mount

The D22 Canopy Mount fixture is provided with an attached power and Cat5 data cable.

A termination board is incorporated into the mounting plate for installation onto a voltage separated junction box (provided by others) and provides termination for control wiring.

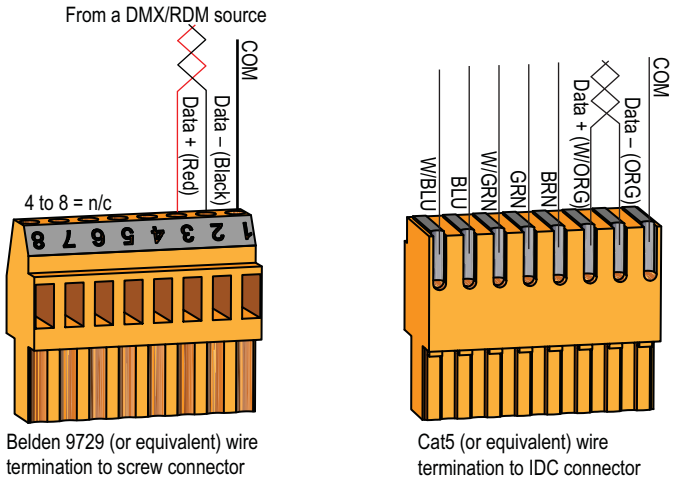


Figure-1.5 Termination Connectors.

- Connection of the D22 data cable to a provided screw-down connector, which is pre-wired at the factory. The connector is plugged into the termination board. The braided shield is connected inside the fixture and should not be connected in the canopy.
- Connection of DMX/RDM input from the control source. This connection can be cable type Belden 9729 (or equivalent) to the provided screw terminal. When using Cat5 (or equivalent) cable type for DMX/RDM input, order a Cat5 termination kit from ETC (part number 4100A1013). Cat5 termination instructions and an IDC connector are provided with the termination kit.
- Connection of DMX/RDM thru to the next DMX device. This connection may also be either Belden 9729 or Cat5. Order the appropriate DMX termination kit for the cable type used from ETC (Belden 9729 use 4100A1012 or Cat5 use 4100A1013). Termination instructions and the appropriate connector is provided with the termination kit. Up to 32 DMX/RDM devices can be daisy-chained together per data run.

Track Mount

The Track Mount fixture power and data connections are made through the track mounting adapter. No further wiring to the fixture is required. Refer to the Track installation instructions for more information. ETC manuals are available for download at http://www.etcconnect.com/downloads.aspx.

Connections

All connections and user controls are located on the back of the fixture, depending on the model. This section does not apply to the D60X fixture as there is no rear display.

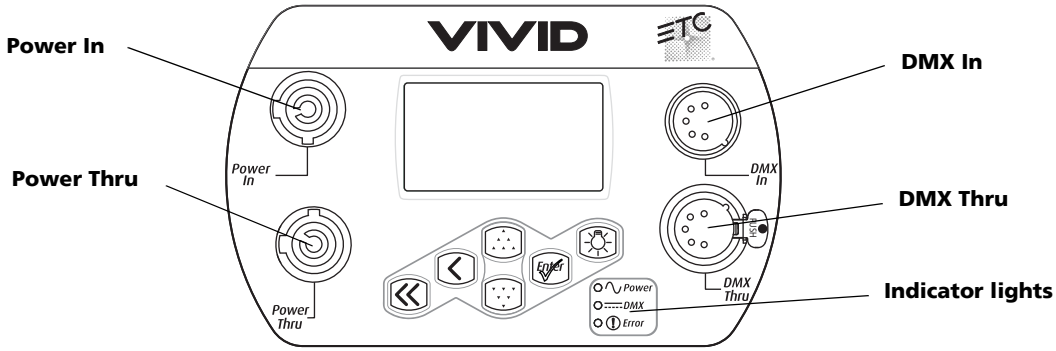


Figure-1.6 Power and DMX connections on the back of the D40 or D60 Fixture.

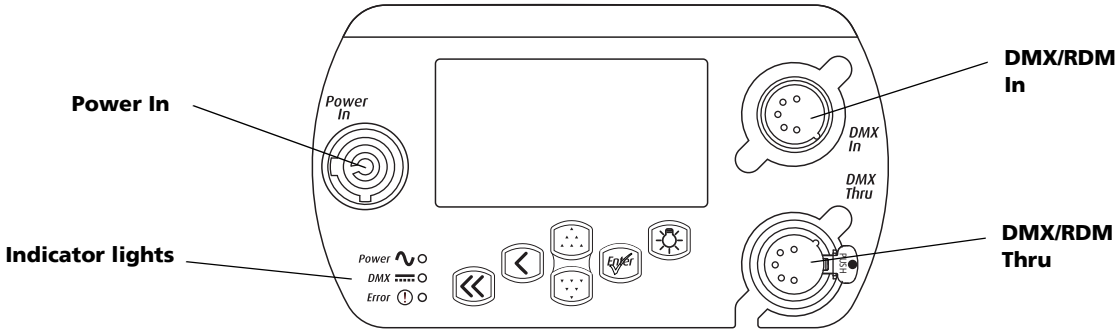


Figure-1.7 Power and DMX/RDM connections on the back of the D22 Portable Fixture.

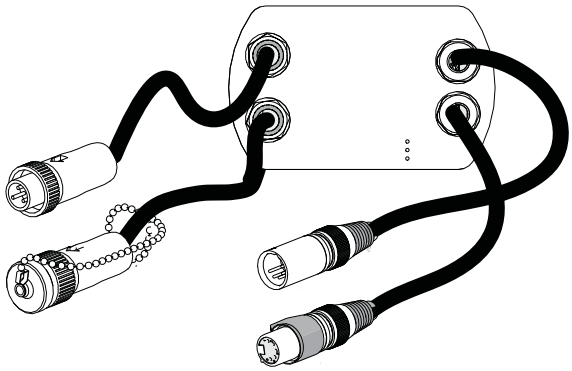


Figure-1.8 Power and DMX Connections on the back of the D60X fixture

Depending on the fixture model, connect AC input power and DMX data cables to the appropriate ports. Connect the incoming DMX data cable to the DMX Input connector. If you are daisy-chaining the data to other fixtures or DMX-controlled devices, connect the next DMX cable to the DMX Thru connector. Up to 32 fixtures can be connected together into a data daisy-chain.

For information about the user interface, refer to *User Interface Overview* on *page 46*.

D40, D60 Connections

Connect the AC cable:

Align and insert the power connector. Twist the connector clockwise until it locks into place.

Disconnect the AC cable:

Slide back the locking tab to unlock, twist the connector counterclockwise, and then pull and disconnect the power connector.

Connect the DMX cable:

Align and insert the DMX connector.

Disconnect the DMX cable:

Press the release button on the connector or on the fixture and pull the connector out.

D40XT, D60X Connections

Connect the AC cable:

Align and insert the connector on the fixture's power cord to the mating connector on the extension cord or adjacent fixture. Twist the enclosure rings together to form a tight seal.

Disconnect the AC cable:

Loosen the enclosure rings around the connectors until fully separated, and then pull apart the two connectors.

Connect the DMX cable:

Align and connect the DMX connectors, pushing firmly until the locking tabs are fully activated.

Disconnect the DMX cable:

Press the release button on the connectors and pull the connectors apart.

D22 Portable DMX/RDM Connections

Connect the DMX cable:

Align and connect the DMX connectors, pushing firmly until the locking tabs are fully activated.

Disconnect the DMX cable:

Press the release button on the connectors and pull the connectors apart.

Termination

D40XT and D60X – The last fixture on a DMX line must be terminated with a 120 ohm resistor between pins 2 and 3.

D22 – The last fixture on a DMX/RDM line must be terminated with a 120 ohm resistor, which is accomplished by one of the following.

- Portable – The fixture is self terminated, therefore does not require other termination.
- Canopy – Terminate with the S1 switch on the Termination Board. Set the switch to the ON position to terminate the last fixture. All others on the DMX/RDM line must be set to OFF.
- Track Mount – Terminate with a DataTrack DMX Term Block, ETC Part # 7066A1030 installed at end of the track.

D40 and D60 model fixtures are self-terminating.

Indicator Lights

The indicator lights show the status of power input (blue), DMX input (green) and fixture errors (red). When the DMX signal is lost, the green indicator flashes.

If the fixture status indicator is configured to Off, the indicator lights will not illuminate. For more information, see *Local Settings* on *page 80*.

DMX Profile

Addressing

Addresses must be set between 1 and 510.

Each Desire fixture must be considered a separate DMX device for the purpose of DMX line-loading calculations.

DMX line-loading practice dictates that no more than 32 devices can be daisy-chained together. Consequently, no combination of Desire fixtures totaling more than 32 DMX devices should be configured in one DMX line. For runs of fixtures totaling more than 32 DMX devices, split the DMX runs by using a DMX splitter.

Note: *Depending on the selected fixture profile and activated features, a fixture with a starting address higher than 499 may not have control of all parameters, even though the highest address shown on the user interface is 512.*

Addressing is not required for standalone operation.

Note: *When using RDM with **D22 track fixtures**, ETC recommends connecting no more than 20 fixtures on a single run.*

Profiles

Desire D22, D40, D40XT fixtures occupy 1 to 14 DMX channels depending on the profile and which features are turned on. Desire D60 and D60X can occupy up to 15 DMX channels depending on the profile and which features are turned on. The tables below describe the order and function of each channel.

Vivid, Lustr+, Fire and Ice, and Studio HD Profiles

Direct Control

Direct Control uses one DMX channel per individual color within the LED array for a total of seven color channels, arranged according to the *Color Mixes* table. Each controls the intensity of the color from 0 to 100%. An additional, 8th DMX channel is used as a master intensity fader for controlling the brightness of the overall fixture. Channel 9 is for strobe when enabled.

Data Channel		Control	Value	Function
1	Fixture address	Color 1[a]	0 to 255	Color intensity 0 to100%
2	Fixture address + 1	Color 2[a]		
3	Fixture address + 2	Color 3[a]		
4	Fixture address + 3	Color 4[a]		
5	Fixture address + 4	Color 5[a]		
6	Fixture address + 5	Color 6[a]		
7	Fixture address + 6	Color 7[a]		
8	Fixture address + 7	Intensity		Overall intensity 0 to 100%
9	Fixture address + 8	Strobe		Variable strobe control

a) See *Color Mixes* on *page 33*.

Color Mixes

The following table shows the color mixes for each fixture type.

Color	Fire	Ice	Lustr+	Vivid	Studio HD
1	Red	Red	Red	Red	Red
2	Red-orange	—	White	Red-orange	Amber
3	Amber	—	Amber	Amber	Green-cyan
4	Green	Green	Green	Green	Blue
5	—	Cyan	Cyan	Cyan	Warm white
6	—	Blue	Blue	Blue	Cool white
7	Indigo	Indigo	Indigo	Indigo	—

HSI (Hue Saturation Intensity) and HSIC (Hue, Saturation, Intensity, Color Temperature (White Point))

The HSI profile uses 4 channels of DMX input, corresponding to 16-bit hue (two channels: coarse and fine), saturation, and intensity. The HSI profile makes Desire fixtures compatible with conventional HSI console profiles while capitalizing on fixtures' expanded color capabilities. Channel 5 is for Strobe, when enabled. Also see *Color Matching* on *page 35*.

HSIC is similar to HSI, except that it uses an additional 6th channel to control the color temperature of the white point. White point is the color temperature of the white-light output when saturation is at zero. The Red Shift function is automatically disabled in the HSIC profile. The white point address of the D60 occupies a different address. For information about the D60 DMX footprint, refer to *D60 (Vivid, Lustr+, Fire, Ice, Studio HD) D60X (Vivid, Lustr+, Studio HD)* on *page 38*.

Data Channel		Control	Value	Function
1	Fixture address	Hue coarse	0 to 65535	Hue 0
2	Fixture address + 1	Hue fine		
3	Fixture address + 2	Saturation	0 to 255	Saturation 0 to 100%
4	Fixture address + 3	Intensity		Intensity 0 to 100%
5	Fixture address + 4	Strobe		Variable strobe control
6	Fixture address + 5	White point		Color temperature 2000-8375K

Note:

The HSI profile is optimized for maximum brightness at all settings.

At some settings, small changes in hue and saturation may produce unexpected jumps in brightness.

Shifts in brightness may be perceived during fades across hue, saturation, or both in cues and presets.

RGB

Effectively addresses all 7 colors via three channels of control. The RGB profile produces medium-quality color crossfades. It makes the Desire fixtures compatible with conventional RGB console profiles while maintaining enhanced color production from the fixture. Also see *Color Matching* on *page 35*.

Data Channel		Control	Value	Function
1	Fixture address	Red	0 to 255	Intensity 0 to 100%
2	Fixture address + 1	Green		
3	Fixture address + 2	Blue		
4	Fixture address + 3	—	—	—
5	Fixture address + 4	Strobe	0 to 255	Variable strobe control

Note: *The RGB profile is optimized for maximum brightness at all settings. Sometimes small changes in RGB values may produce unexpected jumps in brightness.*

Shifts in brightness may be perceived during color crossfades in cues and presets.

Studio

The fixture produces only white-type light, which is adjustable from 2700 to 6500K. The Studio profile uses 3 DMX channels to control Intensity, white point, and tint, (the green/magenta balance). Tint is adjustable without affecting the white point. All three control parameters are adjustable via DMX as well as onboard with instant access via UI buttons (no menus to scroll).

Studio is the default mode for Studio HD fixtures. The Studio profile is also available on all other Desire Series fixtures. For more information, see *Studio Settings* on *page 84*. Also see *Color Matching* on *page 35*.

Data Channel		Control	Value	Function
1	Fixture address	Intensity	0 to 255	Intensity 0 to 100%
2	Fixture address + 1	White point: 2700 to 6500K		0 = 3200K 1 to 254 = 2700K to 6500K 255 = 5600K
3	Fixture address + 2	Tint		0 = neutral white 1 to 127 = full plus-green to neutral white 128 = neutral white 129 to 255 = neutral white to full minus-green (full magenta)
4	Fixture address + 3	—	—	—
5	Fixture address + 4	Strobe	0 to 255	Variable strobe control

Strobe

In most profiles (Vivid, Lustr+, Fire and Ice, Studio HD), strobe is assigned to channel 5. It adds another channel to any of the DMX profiles. Under the Advanced Settings menu, the strobe function may be disabled and the additional channel for strobe will not be used by the fixture. With strobe at either DMX value 0 or 255, the fixture output is constantly on. At DMX 1, the fixture strobes slowly and increases in speed toward DMX 254.

Plus 7

Plus 7 adds precision color-control channels to the HSI, HSIC, RGB, and Studio profiles. For example, HSI with Plus 7 enabled becomes a 14-channel profile. Placing channel 7 at a value over 51% activates the 14-channel profile within the fixture. The desired color and intensity is achieved by using the HSI or RGB channels as a starting point. Channels 8 to 14 represent the native LED colors of the fixture and allow you to adjust each color up or down in order to fine-tune the overall color output.

The D60 Plus 7 addresses occupy different addresses. For information about the D60 DMX footprint, refer to *D60 (Vivid, Lustr+, Fire, Ice, Studio HD) D60X (Vivid, Lustr+, Studio HD)* on *page 38*.

Note: *When Plus 7 is enabled and the individual control channels have been adjusted, those adjustments continue to apply after choosing a new color mix. For best results, reset each of the individual control channels to 128 (50%) before choosing a new initial color mix.*

Note: *Depending on the initial color mix, some LED colors may begin at full intensity. Moving the individual control channels for these colors from 128 to 255 (50-100%) will produce no effective change from the initial color mix. Conversely, some LED colors may begin at zero intensity, and moving individual control channels from 128 to 0 (50-0%) will produce no change.*

Data Channel		Control	Value	Function
7	Fixture address + 6	Plus 7 control	0 to 129 = Plus 7 disabled 130 to 255 = Plus 7 enabled	Disable or enable Plus 7 control
8	Fixture address + 7	Color 1[a]	128 = No change from initial color mix 129-255 = Increase from starting value to full intensity 127-0 = Decrease from starting value to zero intensity	Alter the individual LED colors within the array to a maximum of full intensity or a minimum of zero intensity.
9	Fixture address + 8	Color 2[a]		
10	Fixture address + 9	Color 3[a]		
11	Fixture address + 10	Color 4[a]		
12	Fixture address + 11	Color 5[a]		
13	Fixture address + 12	Color 6[a]		
14	Fixture address + 13	Color 7[a]		

a) See *Color Mixes* on *page 33*.

Color Matching

The color output of all Desire fixtures is calibrated at the factory. When operating in the RGB, HSI, HSIC, or Studio profile, each fixture makes accommodations for the specific LEDs in its array and produces output that is consistent with other fixtures, whether or not they utilize LEDs from the same production batch. Operating in the Direct Control profile or with Plus 7 settings adjustments bypasses this calibration and multiple fixtures may produce slightly different outputs when controlled as a group.

Studio Daylight and Studio Tungsten Profiles

Direct Control

The first DMX channel always controls Intensity from 0 to 100%.

Data Channel		Control	Value	Function
1	Fixture address	Intensity	0 to 255	Intensity 0 to 100%
2	Fixture address + 1	Strobe	0 to 255	Variable strobe control

Fan Control (D60)

Only the D60 fixtures have a fan. Thus, options for Fan Control are available only on D60 fixtures. The Fan setting allows four options: DMX, Slow, Fast, and Automatic.

Note: *The D60X does not have a fan, but a fan channel does appear in its profile.*

With Fan set to DMX, an additional channel of DMX control is added to the fixture profile, immediately following the channel for Strobe. Control is as follows:

- **DMX 0** — Fan turns on and off automatically, as needed for cooling. Fan remains off when not required by the fixture.
- **DMX 1 to 254** — Fan is forced on at a continuously variable speed from low to high. Occasionally, the fan speed may be increased automatically by the fixture for additional cooling power when required.
- **DMX 255** — Fan is forced on at its highest, loudest speed for maximum consistency of noise produced by the fixture.

With Fan set to Slow, Fast, or Automatic, there is no channel for fan control within the DMX profile. At Slow and Fast settings, the fan operates whenever the fixture is powered on, independent of other fixture settings or control.

- **Slow** — Fan runs continuously at a low-noise speed. When necessary, the fan speed may be increased automatically by the fixture for additional cooling power.
- **Fast** — Fan runs continuously at its highest, loudest speed, which never increases automatically.
- **Automatic** — Fan operation is intermittent and based entirely on the fixture's internally calculated cooling requirements.

DMX Footprints and Channel Mapping

D22, D40, D40XT, D60 and D60X (Studio Tungsten and Daylight)

Channel	Control
1	Intensity
2	Strobe*
3	Fan control*

D22 (Lustr+ and Studio HD)

Channel	HSI	HSIC	RGB	Studio	Direct
1	Hue	Hue	Red	Intensity	Color 1
2	Hue fine	Hue fine	Green	Color temp	Color 2
3	Saturation	Saturation	Blue	Tint	Color 3
4	Intensity	Intensity	N/A	N/A	Color 4
5	Strobe*	Strobe*	Strobe*	Strobe*	Color 5
6	N/A	Color temp	N/A	N/A	Color 6
7	Plus7 on/off*	Plus7 on/off*	Plus7 on/off*	Plus7 on/off*	Color 7
8	Plus7 - (1)*	Plus7 - (1)*	Plus7 - (1)*	Plus7 - (1)*	Intensity
9	Plus7 - (2)*	Plus7 - (2)*	Plus7 - (2)*	Plus7 - (2)*	Strobe[a]
10	Plus7 - (3)*	Plus7 - (3)*	Plus7 - (3)*	Plus7 - (3)*	N/A
11	Plus7 - (4)*	Plus7 - (4)*	Plus7 - (4)*	Plus7 - (4)*	N/A
12	Plus7 - (5)*	Plus7 - (5)*	Plus7 - (5)*	Plus7 - (5)*	N/A
13	Plus7 - (6)*	Plus7 - (6)*	Plus7 - (6)*	Plus7 - (6)*	N/A
14	Plus7 - (7)*	Plus7 - (7)*	Plus7 - (7)*	Plus7 - (7)*	N/A

D40 (Vivid, Lustr+, Fire, Ice, Studio HD)

Channel	HSI	HSIC	RGB	Studio	Direct
1	Hue	Hue	Red	Intensity	Color 1
2	Hue fine	Hue fine	Green	Color temp	Color 2
3	Saturation	Saturation	Blue	Tint	Color 3
4	Intensity	Intensity	N/A	N/A	Color 4
5	Strobe*	Strobe*	Strobe*	Strobe*	Color 5
6	N/A	Color temp	N/A	N/A	Color 6
7	Plus7 on/off*	Plus7 on/off*	Plus7 on/off*	Plus7 on/off*	Color 7
8	Plus7 - (1)*	Plus7 - (1)*	Plus7 - (1)*	Plus7 - (1)*	Intensity
9	Plus7 - (2)*	Plus7 - (2)*	Plus7 - (2)*	Plus7 - (2)*	Strobe[a]
10	Plus7 - (3)*	Plus7 - (3)*	Plus7 - (3)*	Plus7 - (3)*	N/A
11	Plus7 - (4)*	Plus7 - (4)*	Plus7 - (4)*	Plus7 - (4)*	N/A

Channel	HSI	HSIC	RGB	Studio	Direct
12	Plus7 - (5)*	Plus7 - (5)*	Plus7 - (5)*	Plus7 - (5)*	N/A
13	Plus7 - (6)*	Plus7 - (6)*	Plus7 - (6)*	Plus7 - (6)*	N/A
14	Plus7 - (7)*	Plus7 - (7)*	Plus7 - (7)*	Plus7 - (7)*	N/A

D60 (Vivid, Lustr+, Fire, Ice, Studio HD)
D60X (Vivid, Lustr+, Studio HD)

Channel	HSI	HSIC	RGB	Studio	Direct
1	Hue	Hue	Red	Intensity	Color 1
2	Hue fine	Hue fine	Green	Color temp	Color 2
3	Saturation	Saturation	Blue	Tint	Color 3
4	Intensity	Intensity	N/A	N/A	Color 4
5	Strobe*	Strobe*	Strobe*	Strobe*	Color 5
6	Fan control*	Fan control*	Fan control*	Fan control*	Color 6
7	N/A	Color temp	N/A	N/A	Color 7
8	Plus7 on/off*	Plus7 on/off*	Plus7 on/off*	Plus7 on/off*	Intensity
9	Plus7 - (1)*	Plus7 - (1)*	Plus7 - (1)*	Plus7 - (1)*	Strobe*
10	Plus7 - (2)*	Plus7 - (2)*	Plus7 - (2)*	Plus7 - (2)*	Fan control*
11	Plus7 - (3)*	Plus7 - (3)*	Plus7 - (3)*	Plus7 - (3)*	N/A
12	Plus7 - (4)*	Plus7 - (4)*	Plus7 - (4)*	Plus7 - (4)*	N/A
13	Plus7 - (5)*	Plus7 - (5)*	Plus7 - (5)*	Plus7 - (5)*	N/A
14	Plus7 - (6)*	Plus7 - (6)*	Plus7 - (6)*	Plus7 - (6)*	N/A
15	Plus7 - (7)*	Plus7 - (7)*	Plus7 - (7)*	Plus7 - (7)*	N/A

* When this feature is enabled.

Quick Color (Vivid, Lustr+, Fire and Ice, Studio HD)

Quick Color allows you to easily select a color and its intensity from a predefined menu. This feature overrides any presets or sequences previously selected and is only available when there is no external DMX signal to the fixture. For a list of available colors, see the table on *page 65*. For additional information on Quick Color setup, *See "Quick Color (Vivid, Lustr+, Fire and Ice, Studio HD)" on page 75.*

DMX Profile Tables

D40, D40XT – Vivid, Lustr+, Fire, Ice, Studio HD; D22 – Lustr+, Studio HD

DMX Profile	DMX Channels	Channel Assignments		Notes
		Vivid, Lustr+	Studio HD	
Direct	9	1 - Red	1 - Red	Direct control of each individual color with a separate master intensity channel. Color calibration of LEDs is not active in this mode. The nine-channel profile will produce the highest quality color cross fades.
		2 - Orange (White if Lustr+)	2 - Orange	
		3 - Amber	3 - Amber	
		4 - Green	4 - Green	
		5 - Cyan	5 - 3200K White	
		6 - Blue	6 -5000K White	
		7 - Indigo	7 - Indigo	
		8 - Intensity	8 - Intensity	
		9- Strobe	9- Strobe	
RGB	5 (Ch. 4 not used)	1-Red		Effectively addresses all seven colors via three channels of control. RGB profile will produce medium quality color cross-fades
		2-Green		
		3-Blue		
		4 - n/a		
		5 - Strobe		
HSI	5	1 – Hue (coarse)		High resolution hue (two channels), saturation, and intensity control. HSI mode will produce color cross-fades around the color space.
		2 – Hue (fine)		
		3 - Saturation		
		4 - Intensity		
		5- Strobe		
HSIC	6	1 – Hue (coarse)		High-resolution hue, saturation, and intensity control as above, with the addition of a color point channel to adjust the color temperature of the fixture in both white light and color. Color cross-fade performance is the same as HSI.
		2 – Hue (fine)		
		3 - Saturation		
		4 - Intensity		
		5 - Strobe		
		6 - Color Point (CCT)		
Studio	3	1 – Intensity		Controls fixture as a white light unit. If no DMX is present, (i.e. console input), a fixture can be adjusted for these three parameters on the U/I at the back of the unit.
		2 – Color Point (CCT)		
		3 - Tint		
Additional profile options				

Plus 7	1 – Hue (coarse) 2 - Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe 6 – n/a 7– Plus 7 Control on/ off 8– Red 9– Orange (white if Lustr+) 10 – Amber 11 - Green 12 - Cyan 13 - Blue 14- Indigo	Adds seven additional color control channels to RGB, HSI, HSIC, and Studio input profile settings. For example HSI with 'Plus 7' enabled becomes an 15-channel profile The desired color and intensity are achieved by using the HSI or RGB channels Placing channel seven at a value over 51% gives the fixture a 14 channel profile. Channels 8-14 represent the native colors of the fixture and allow the operator to adjust individual color channels to fine tune the color output.
Strobe	Variable strobe control: 0% is no strobe. The fixture output will strobe more rapidly as the strobe-channel value approaches 100%.	

D60 -Vivid, Lustr+, Fire, Ice, Studio HD and D60X -Vivid, Lustr+ and Studio HD

DMX Profile	DMX Channels	Channel Assignments	Notes
Direct	10	1 - Red	Direct control of each individual color with a separate master intensity channel. Color calibration of LEDs is not active in this mode. The ten-channel profile will produce the highest quality color cross fades.
		2 - Orange (White if Lustr+)	
		3 - Amber	
		4 - Green	
		5 - Cyan (3000K white if Studio HD)	
		6 - Blue (5000K White if Studio HD)	
		7 - Indigo	
		8 - Intensity	
		9- Strobe	
		10- Fan Control	
RGB	6 (Ch. 4 not used)	1-Red	Effectively addresses all seven colors via three channels of control. RGB profile will produce medium quality color cross-fades
		2-Green	
		3-Blue	
		4 - n/a	
		5 - Strobe	
		6 - Fan Control	
HSI	6	1 – Hue (coarse)	High resolution hue (two channels), saturation, and intensity control. HSI mode will produce color cross-fades around the color space.
		2 – Hue (fine)	
		3 - Saturation	
		4 - Intensity	
		5 - Strobe	
		6 - Fan Control	
HSIC	7	1 – Hue (coarse)	High-resolution hue, saturation, and intensity control as above, with the addition of a color point channel to adjust the color temperature of the fixture in both white light and color. Color cross-fade performance is the same as HSI.
		2 – Hue (fine)	
		3 - Saturation	
		4 - Intensity	
		5 - Color Point (CCT)	
		6 - Fan Control	
		7 - Color Point (CCT)	
Studio	6 (Ch. 4 not used)	1 – Intensity	Controls fixture as a white light unit. If no DMX, i.e. console input, is present, fixture can be adjusted for these three parameters on the U/I at the back of the unit.
		2 – Color Point (CCT)	
		3 - Tint	
		4 - n/a	
		5 - Strobe	
		6 - Fan Control	
Additional profile options on following page			

Plus 7	Adds seven additional color control channels to RGB, HSI, and HSIC input profile settings. For example HSI with 'Plus 7' enabled becomes an 15-channel profile:	
	1 – Hue (coarse) 2 - Hue (fine) 3 – Saturation 4 – Intensity 5 – Strobe 6 – Fan Control 7 – n/a 8 – Plus 7 Control on/off 9 – Red 10 – Orange (white if Lustr+) 11 – Amber 12 - Green 13 - Cyan 14 - Blue 15 -Indigo	The desired color and intensity are achieved by using the HSI or RGB channels Placing channel eight at a value over 51% gives the fixture a 15 channel profile. Channels 9-15 represent the native colors of the fixture and allow the operator to adjust individual color channels to fine tune the color output.
Strobe	Variable strobe control: 0% is no strobe. The fixture output will strobe more rapidly as the strobe-channel value approaches 100%.	

D40XT, D40, D60 and D60X– Studio Tungsten, and Studio Daylight
D22 - Studio Tungsten and Studio Daylight

DMX Profile	DMX Channels	Channel Assignments	Notes
Studio	3	1 - Intensity	Direct control of each individual color with a separate master intensity channel. Color calibration of LEDs is not active in this mode. The ten-channel profile will produce the highest quality color cross fades.
		2 - Strobe	
		3 - Fan Control (D60 only)	
Direct	3	1-Intensity	
		2-Strobe	
		3-Fan Control (D60 and D60X)	

Installing Accessories

The accessory holder is equipped with a spring-loaded retaining clip that prevents secondary lenses and accessories from falling out.

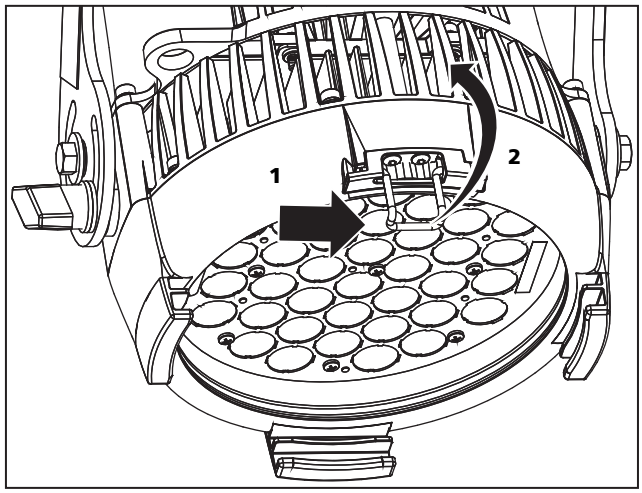


Figure-1.9 Retaining Clip in the Locked Position.

WARNING: ***Make sure all accessories are locked into position with the retaining clip before hanging the fixture.***

Step 1: Release the retaining clip by pushing it sideways while gently pushing it towards the back of the fixture.

Step 2: Insert the accessory or secondary lens in either of the two slots.

Step 3: Lock the retaining clip by pushing forward and sliding left as viewing the fixture shown in Figure-1.9.

Note: *For D40 and D40XT, use only secondary lenses or accessories with a 7.5 inch mounting flange.*

To order glass lenses from ETC, contact your local dealer.

D40 glass lens: ETC part #7410M4001

D60 glass lens: ETC part #7410A4003

Chapter 2
Basic Menu Navigation

This chapter contains the following sections:

User Interface Overview

The Desire Series user interface (UI) consists of an LCD and keypad. All of the basic information is displayed on the LCD and the keypad is used to navigate through the menus. Use the LCD and keypad to program the fixture for your specific application.

Note: *This section does not apply to D60X fixtures as the D60X does not have a user interface.*

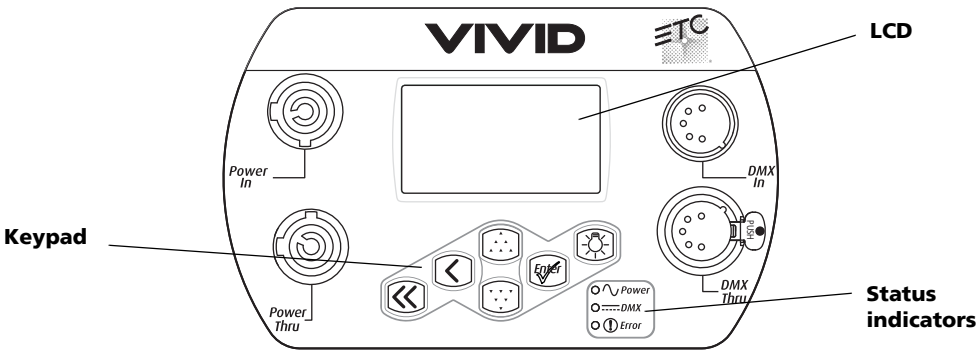


Figure-2.1 User Interface on Back of D40 or D60 Fixture.

LCD

The Desire features a backlit LCD capable of displaying 8 rows of text with 21 characters per line. The first row is reserved for the menu title.

To adjust the contrast of the LCD, press and hold **[<]** and then press **[▲▲]** or **[▼▼]**.

Keypad

Use the keypad buttons to access and navigate the menus on the LCD.

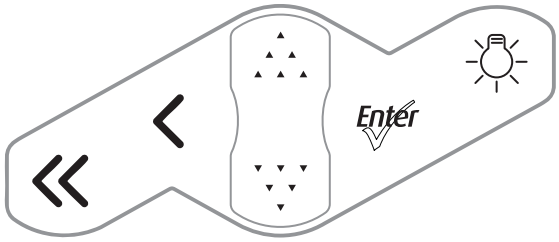


Figure-2.2 Keypad Buttons.

Home
Opens the home screen.

Back
Cancels the current operation and returns to the previous screen. Multiple presses of the back button will eventually take you to the status display.

Up
Increases a value or menu choice by one. Pressing and holding the push button increases the rate of change.

Down
Decreases a value or menu choice by one. Pressing and holding the push button increases the rate of change.

Light Bulb
Opens the Presets and Sequences menu.

Enter

- Activates a menu selection or stores a value. For most settings, push **[Enter]** repeatedly to scroll through available options while the setting is highlighted, and then push **[▲▲▲]** or **[▼▼▼]** to commit the change and move to a different setting.
- Certain settings require the selection of a numeric value. Press Enter once to highlight the number, push **[▲▲▲]** or **[▼▼▼]** to reach the desired value, and then press **[Enter]** to commit the change.

Note: *When the fixture is in the stand-alone mode of the Studio profile, the functionality of the buttons changes. For more information, see Operation From Home Status Screen (Studio Standalone) on page 84.*

Keypad Lockout

The keypad may be locked to prevent unauthorized access to fixture settings. Press **[▲▲▲]** and **[▼▼▼]** simultaneously for approximately 3 seconds. A small padlock icon appears in the corner of the UI screen to indicate that the keypad is locked. To unlock, again press **[▲▲▲]** and **[▼▼▼]** simultaneously for approximately 3 seconds. The padlock icon disappears. The locked or unlocked status of the keypad persists through on/off power cycles. Keypad lockout does not affect access to fixture settings via RDM.

Status Indicators

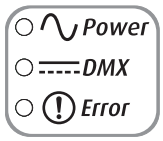


Figure-2.3 Status Indicators on the Back of the Fixture.

The status indicators are three, small, colored LEDs on the User Interface that indicate the status of:

- **Power** — Illuminated blue when AC power is supplied to the fixture.
- **DMX** — Illuminates green when an active DMX signal is being received by the fixture.
- **Error** — Illuminates red only when the fixture is experiencing a data error, high internal temperature, or other abnormal condition.

Status indicators are on by default. You can turn them off through the Local Settings menu. For more information, see *Local Settings* on *page 80*.

Screen Navigation

When the Desire fixture is powered up, a splash screen briefly displays, followed by a status screen.

The menu system and LCD backlight are set, by default, to "sleep" after one minute of inactivity. Any button press wakes the LCD backlight. You can set the inactivity time on the Local Settings menu. To "wake up" the display and go to the button's respective function, press any keypad button. For example, if you press **[Enter]**, the LCD backlight comes on and the Main Menu displays. For more information, see *Local Settings* on *page 80*.

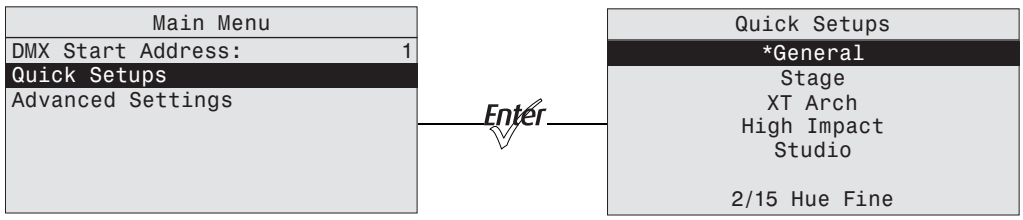


Figure-2.4 Main Menu with Quick Setups Selected and the Result of Pressing Enter.
Vivid, Lustr+, Fire and Ice, Studio HD screen shown.

Press **[▲▲]** or **[▼▼]** to highlight a menu item. Press **[Enter]** to select the item. The asterisk (*) indicates that the item is currently active.

Status (Home) Screens

The status (home) screens display when you press **[≪]** or when there is no activity for a specific time. The home screens display the status of multiple fixture settings. These may or may not include:

- Quick Setup
- Input settings
- DMX address
- LED settings
- Preset or Sequence that may be active
- Master or Slave status, when applicable
- Diagnostic messages
- DMX signal status
- Software version

Most of the settings can be adjusted either on the home screen or within a short series of menus. When a quick setup is selected, the settings of the setup are displayed on the home screen.

For more information about status screens, see *Home Screen Displays* on *page 52*.

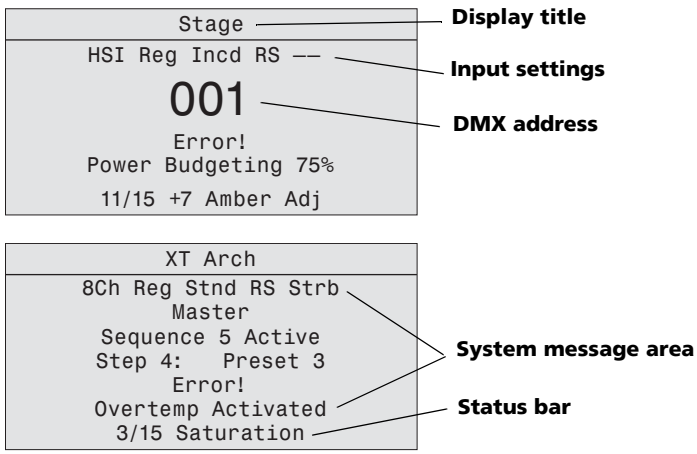


Figure-2.5 Examples of Status Screens.

Display Title

A menu's title appears in the first row of every display for easy navigation.

Input Settings

Displays the parameters for the Quick Setup that is active. For more information, see *Home Screen Displays* on *page 52*.

DMX Address

Indicates the DMX address when the fixture is receiving DMX. For more information, see *DMX Start Address* on *page 53*.

System Message Area

Displays status messages, which vary depending on the function that is currently active.

Master or Slave

Indicates if the fixture is the master or slave when the a string of fixtures is running together in standalone operation. For more information, see *Master/Slave Operation* on *page 76*.

Sequence

Indicates whether or not a sequence is active and if so, which sequence is active. For more information, see *Presets & Sequences* on *page 64*.

Step

Indicates whether or not a preset is active and if so, which step and preset is active. For more information, see *Presets & Sequences* on *page 64*.

Preset

Indicates which preset is currently active. For more information, see *Presets & Sequences* on *page 64*.

Error

Displays error messages. Refer to ***Error Messages*** on ***page 90*** for a complete listing of possible errors and the actions required to clear them.

Status Bar

Indicates the DMX channels, type, and effect the setup uses.

Menu Navigation

The Desire menu is designed with consistent navigation from the user interface (UI) using the keypad.

The Main Menu is the root for all menu navigation. When an item is selected from the Main Menu, a secondary menu displays, which includes multiple functions for selection. Some secondary menus lead to additional menus. Select a menu item to edit its settings or to proceed to a deeper menu. Items that may be edited are indicated with descriptive text followed by a colon (:) and a value.

The keypad is used to edit specific objects on the operation menu, such as DMX address, Preset and Sequence numbers, fade and delay times, etc. Once an edit has been made, press **[Enter]** to accept the selection.

Use **[Enter]** to navigate to the next object for action or edit. To return to the previous operation, press **[<]**. Continue pressing **[<]** to return to the menu list and then the Main Menu.

[<] may also be used with any Yes or No dialog box. Pressing **[<]** is the same as selecting No.

Chapter 3
Operation

This chapter contains the following sections:

Home Screen Displays

Note: *This section does not apply to the D60X fixture as there is no user interface screen. Go to Configure D60X using RDM on page 87 for programming information.*

Depending on the fixture settings, the following are displayed in the system message area on the respective home (status) screens.

Vivid, Lustr+, Fire and Ice, Studio HD

Parameter	Stage	High Impact	Studio	General
Profile	HSI	RGB	Studio	Direct Control (Dir)
Output Setting	Regulated (Reg)	Boost (Bst)	Regulated (Reg)	Regulated (Reg)
Dimming Curve	Incandescent (Incd)	Quick (Qik)	Linear (Lin)	Standard (Std)
Red Shift (RS)	Disabled	Disabled	Disabled	Disabled
Strobe (Str)	On	On	On	On

Studio Daylight and Studio Tungsten

Parameter	Studio	Stage	Single Channel
Profile	Direct	Direct	Direct
Output Setting	Regulated (Reg)	Regulated (Reg)	Regulated (Reg)
Dimming Curve	Linear (Lin)	Incandescent (Incd)	Standard (Std)
Strobe (Str)	On	On	Off
Fan Control (D60 only)	DMX	DMX	Automatic (Auto)

Profile (Vivid, Lustr+, Fire and Ice, Studio HD)

The control profile defines the number and control parameter assignments of input channels for intensity and color-control. For more information, see *Profiles* on *page 32*.

Profile (Studio Daylight and Studio Tungsten)

The control profile for Studio Daylight and Studio Tungsten includes only the Direct option. The first channel of DMX control adjusts fixture Intensity from 0 to 100%. For more information, see *Studio Daylight and Studio Tungsten Profiles* on *page 36*.

Output Setting

Output is the way and amount to which the fixture constrains the overall power going to the LED array, which determines how consistent the fixture's brightness may be. For more information, see *Output* on *page 59*.

Dimming Curve

Dimming curve is the way that the fixture responds to changes in the control signal for overall intensity. For more information, see *Curve* on *page 61*

Red Shift

Red shift replicates the warming of an incandescent filament's color temperature change as it dims. For more information, see *Red Shift* on *page 63*.

Strobe

Strobe flashes the output of the LED array. For more information, see *Strobe* on *page 56*.

Fan Control (D60)

The fan on D60 fixtures can be forced on via DMX control or by adjusting settings under the Advanced Settings menu. For more information, see *Fan Control (D60)* on *page 36*.

Thermal Shutdown Warning

Displayed as OverTemp, it is what the fixture does to visibly warn you that it has become overheated and has gone into a shut-down status, which is maintained until the fixture returns to a safe operating temperature. For more information, see *OverTemp* on *page 82*.

Data Loss Behavior

What happens to the fixture's output when the external control signal is lost. For more information, see *Data Loss* on *page 57*.

Status Indicators

Status Indicators are on by default. For more information, see *Status Indicators* on *page 82*.

Main Menu

The Main Menu can be accessed at any time while viewing other screens by pressing **[≪]**, then **[Enter]**.

DMX Start Address

Use the DMX Start Address to set the DMX address of the fixture. Also see *DMX Settings* on *page 55*.

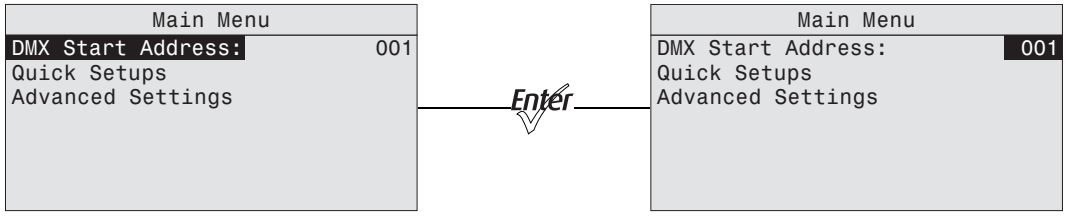


Figure-3.1 Selecting DMX Start Address on the Main Menu.

Step 1: On the **Main Menu**, scroll to **DMX Start Address**.

Step 2: Press **[Enter]** to select the address number.

Step 3: Use **[▲▲▲]** or **[▼▼▼]** to scroll to the desired **address**.

Step 4: Press **[Enter]**.

Step 5: Press **[≪]** to return to the home screen.

Quick Setups

Quick Setups are groupings of predefined fixture performance settings, based on typical applications.

Use the Quick Setups menu to select the desired setup. When a setup is active, the status bar at the bottom of the screen indicates the DMX channels, their functions, and arrangements that the setup uses.

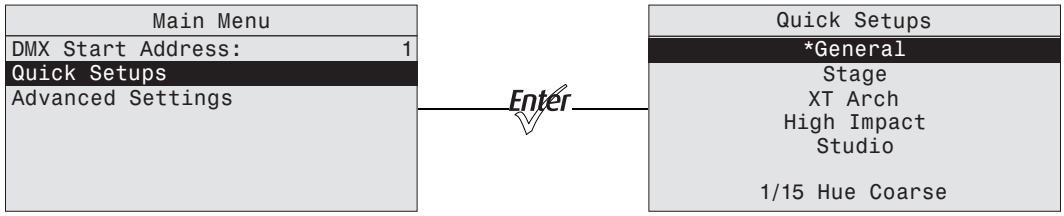


Figure-3.2 Selecting Quick Setup on the Main Menu.

Step 1: On the **Main Menu**, scroll to **Quick Setups**.

Step 2: Press **[Enter]**.

Step 3: Scroll to the desired profile and then press **[Enter]**.
An asterisk (*****) next to the profile name indicates that profile is active.

Step 4: Press **[≪]** to return to the home screen.
The top line of the home screen displays the name of the active profile.

Advanced Settings

The Advanced Settings menu is for experienced users or for applications that entail very carefully defined performance parameters. You can make individual adjustments of all fixture settings for customized control.

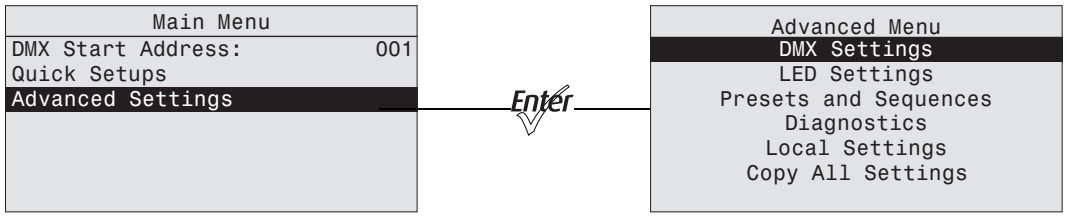


Figure-3.3 Advanced Menu From from the Main Menu.

When opening Advanced Settings, all fixture settings remain at their most recent values until readjusted. The fixture automatically goes into Advanced Settings when any settings are altered from one of the preset Quick Setups.

Advanced Menu

The Advanced Menu provides access to various fixture settings and specific operations. The Advanced Menu is accessed from the **Main Menu** by pressing **[▲▲▲]** or **[▼▼▼]** to select **Advanced Settings** and then pressing **[Enter]**.

DMX Settings

The current DMX settings are shown in the DMX Settings screen. Use the DMX Settings screen to customize the following:

- DMX start address
- DMX profile
- Strobe
- Data loss
- Plus Seven (Vivid, Lustr+, Fire and Ice, Studio HD)

The two lower lines of the DMX Settings screen display the number of DMX channels used by the fixture, according to the options selected, and their arrangement, in order.

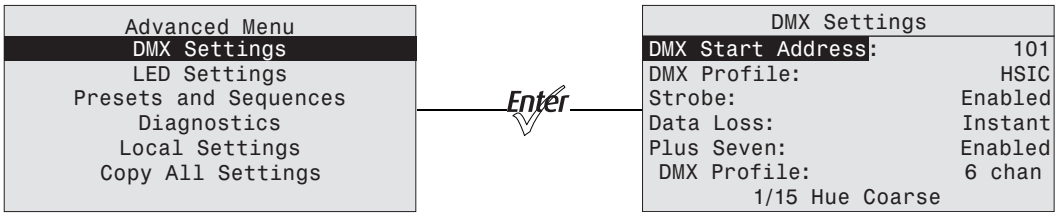


Figure-3.4 Selecting DMX Settings From the Advanced Menu.

DMX Start Address

The DMX start address is selectable from 1 to 512.

Step 1: On the **Advanced Menu**, scroll to **DMX Settings**.

Step 2: Press **[Enter]**.

Step 3: With **DMX Start Address** selected, press **[Enter]** to select the value.

Step 4: Then press **[▲▲▲]** or **[▼▼▼]** to set the desired address.

Step 5: Press **[Enter]**.

Note: *A change to the DMX start address on this screen will override and update the DMX start address selected on the Home screen.*

DMX Profile

The current DMX profile is displayed on the DMX Settings menu. You can customize the setting by selecting a different profile. For detailed information about each profile, see *Profiles* on *page 32*.

Step 1: On the **DMX Settings** menu, scroll to **DMX Profile**.

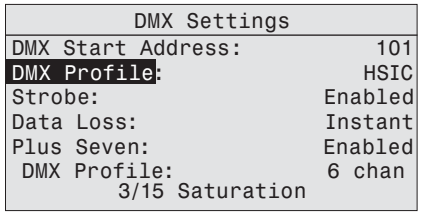


Figure-3.5 Selecting DMX Profile on the DMX Settings Menu.

Step 2: Press **[Enter]** to set the desired profile.

Strobe

Strobe adds another DMX channel of control at channel 5 (or channel 9 when operating in a Direct Control profile). When enabled, the Strobe channel controls the fixture output as follows.

DMX Value	Strobe Effect
0	Full on
1 to 254	Variable rate from slow to fast
255	Full on

Step 1: On the **DMX Settings** menu, scroll to **Strobe**.

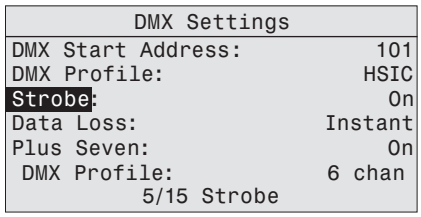


Figure-3.6 Enabling Strobe on the DMX Settings Menu.

Step 2: Press **[Enter]** to toggle between **On** and **Off.**

Step 3: Press **[▲▲]** or **[▼▼]** to commit the option.

Fan Control (D60 only)

Fan Control adds another DMX channel of control when set to DMX. Alternate settings are Slow, Fast, and Automatic. For more information, see *Fan Control (D60)* on *page 36*.

Step 1: On the DMX Settings menu, scroll to **Fan**.

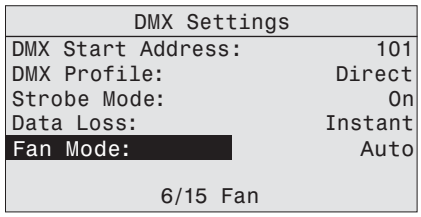


Figure-3.7 Setting the Fan Mode on the DMX Settings Menu.

Step 2: Press **[Enter]** to scroll through the available options.

Step 3: Press **[▲]** or **[▼]** to commit the option.

Data Loss

Data Loss is what happens to the fixture's output when the external control signal (either DMX or data from the Master fixture in a Master/Slave configuration) is lost. The choices are as follows:

Instant

As soon as the control signal is lost, the fixture shuts off output and the LED array goes black.

HLL-2Min

Hold last look for 2 minutes. The fixture retains its last setting for 2 minutes after the control signal is lost, after which it shuts off output.

Cycling power to the fixture before the 2 minutes have passed will clear the last look and the LEDs will remain off until control signal is restored.

HLL-4ever

Hold last look forever. After data is lost, the fixture maintains its last look until power is removed from the fixture or control signal is restored. The last look will not be restored after power has been cycled.

Step 1: On the **DMX Settings** menu, scroll to **Data Loss**.

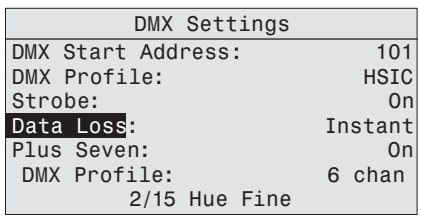


Figure-3.8 Setting the Data Loss Type on the DMX Settings Menu.

Step 2: Press **[Enter]** to toggle through the three options.

Step 3: Press **[▲]** or **[▼]** to commit the option.

Plus 7(Vivid, Lustr+, Fire and Ice, Studio HD)

Plus 7 adds precision color-control override channels to the HSI, HSIC, RGB, and Studio profiles. When in one of the above profiles, enabling Plus 7 adds an additional seven channels to the profile(i.e. a D40 fixture in HSI with Plus 7 becomes a 14-channel profile.) To enable Plus 7, place the Plus 7 Control channel at a value above 51%.

When using Plus 7, the desired color and intensity is selected by using the HSI or RGB channels as a starting point. From there, the additional seven channels represent an individual control channel for each of the native LED colors of the fixture and allow you to adjust each LED color up or down to fine-tune the overall color output.

The D60 fixture variants Plus 7 channels are different from the D22 and D40 variants. For more information please *See "DMX Footprints and Channel Mapping" on page 37.*

The first additional channel is an activation channel for the Plus Seven function. A value of 0 to 50% (DMX 0 to 128) deactivates Plus 7. A value of 51 to 100% (DMX 129 to 255) activates Plus 7. The remaining 7 additional channels correspond to the individual colors within the fixture's LED array.

Step 1: On the **DMX Settings** menu, scroll to **Plus Seven**.

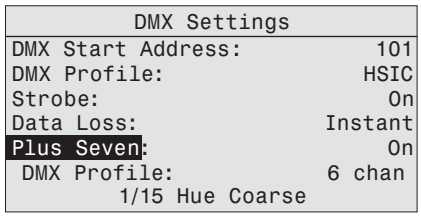


Figure-3.9 Enabling Plus 7 on the DMX Settings Menu.

Step 2: Press **[Enter]** to toggle between **On** and **Off**.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to commit the option.

Using Plus Seven Control

The following procedure is performed on your lighting console.

Step 1: Select a starting color point for the fixture output using the standard control channels for RGB, HSI, etc.

Step 2: Set the first additional channel to a value between 51 and 100% to activate Plus 7.

Step 3: Refine the fixture output by altering one or more of the 7 individual color channels.

- The starting point for each color is defined by the original color selection in step 1.
- The brightness of each color can be increased or decreased from the starting point to any value between zero and full output.
- Colors already at full output will not change when the Plus 7 channels are moved up from the starting point, and colors already at zero output will not change when the Plus 7 channels are moved down from the starting point.
- The starting point on the Plus 7 color channels is 50% control level. If all the Plus Seven color adjust channels are at 50%, the colors are at the original colors.

Note: *Once any one of the seven individual color channels is altered from its neutral starting position, the settings for the original color point may no longer reflect the actual output of the fixture.*

When using RGB, HSI, HSIC, or Studio profile for color selection, each fixture makes accommodations for the specific LEDs in its array and produces output that is consistent with other fixtures, whether or not they use LEDs from the same production batch.

Operating with Plus 7 enabled can override this calibration, and multiple fixtures may produce slightly different outputs when individual color channels are altered from their neutral starting points.

LED Settings

Use the LED Settings menu to adjust fixture performance. From the LED Settings menu, you can set the following.

- Output
- Curve
- Output Frequency
- Red Shift
- White Point

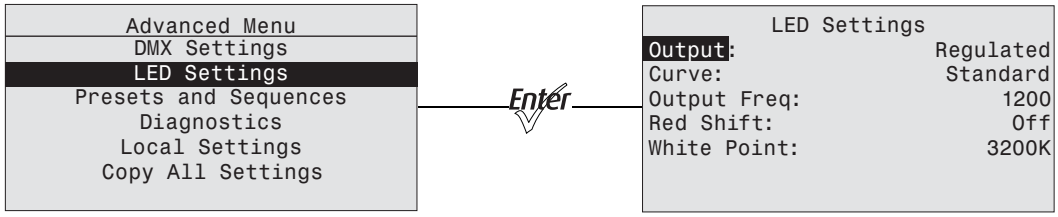


Figure-3.10 Selecting LED Settings on the Advanced Menu.

Output

Use Output to choose the optimal balance between two competing performance parameters, maximum brightness and output consistency, by adjusting:

- How much the fixture limits the overall power to the LED array.
- How the fixture reduces output as internal fixture components heat up during use or in high ambient temperatures.

The output options are as follows:

Regulated

Regulated is a moderately constrained power or brightness with consistent output under typical use. Power to the LEDs is separately regulated in order to maintain consistent brightness during the initial fixture warm-up period. This is recommended for most indoor applications.

Protected

Protected provides the most consistent output possible with the greatest potential for reduced overall brightness. This is best for outdoor use, changing environmental temperatures, and applications with high requirements for consistency in extreme operating conditions.

Boost

Boost provides the brightest possible output, with least guarantee of consistency. This is best for applications with low duty cycles, loose brightness requirements, or where ambient temperature is low.

Step 1: On the **Advanced Menu**, scroll to **LED Settings**.

Step 2: Press **[Enter]**.

Step 3: With **Output** selected, press **[Enter]** to toggle between the options.

Step 4: Press **[▲▲▲]** or **[▼▼▼]** to commit the option.

Note: *In all Output settings, if the fixture gets too warm and internal components approach unsafe operating temperatures, the total power to the LED array is gradually reduced and proportionate brightness levels between the various colors of LEDs are maintained as much as possible in order to preserve the overall color mix; however, some minor shifts in output may occur. Power continues to ramp down as much as necessary until internal fixture components return to a safe temperature. The fixture displays a warning message on the home screen indicating that power budgeting is in place, showing the percent of total power that is currently used.*

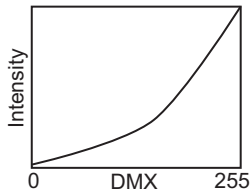
If the fixture exceeds its maximum internal temperature, the fixture enters a cool-down state, stops responding to the control signal, and it shuts down most or all power to the LED array and displays its over-temperature status according to its setting for over-temperature warning.

Curve

The dimming curve, commonly called curve, is the correlation between the change in the value of the dimming control signal and the actual change in the fixture's brightness. Curve is also the extent to which the fixture lags in its response time to the control signal in order to facilitate smoothness in dimming.

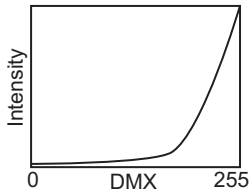
Standard

Standard is a modest curve for intuitive brightness changes at both high and low ends of the dimming range. Moderate lag in response for good smoothness. It allows quick jumps in brightness. Suitable for most applications.



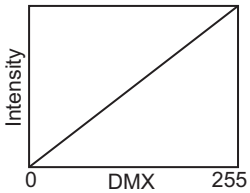
Incandescent

Exaggerated curve mimics the response of tungsten on a conventional dimmer. Lag is quite pronounced and present even in full on or off bumps. Extreme smoothness with no instant changes. Best when fixtures must operate in sync with incandescent sources.



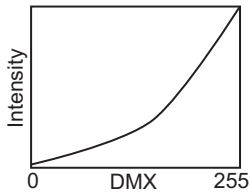
Linear

Linear has no curve. Brightness levels correlate exactly with the value of the dimming control signal. Moderate lag in response for good dimming smoothness. Linear allows quick jumps in brightness. It is best for studio lighting and applications with static scenes or looks.



Quick

Quick uses the standard dimming curve but with no lag or smoothing. All changes are instant and correlated exactly with the control input signal. Quick is best for extreme high impact and video-based control.



Step 1: On the **LED Settings** menu, scroll to **Curve**.

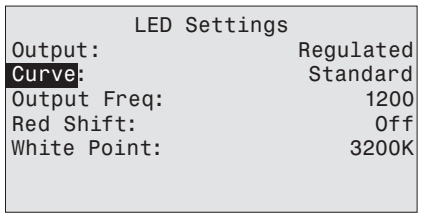


Figure-3.11 Selecting Curve on the LED Settings Menu.

Step 2: With **Curve** selected, press **[Enter]** to toggle between the options.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to commit the option.

Output Freq

Output Frequency is the frequency in Hz at which the LED array pulses, or blinks, as a function of Pulse-Width Modulation (PWM). The frequency is adjustable in order to avoid visible flicker on video and film. When altering the frequency in order to reduce noticeable flicker on camera, often only a small change is required. The range is 920 to 1500 Hz in increments of 10. The default value is 1200 Hz.

For high speed exposure or rolling shutter cameras, use the High 25K mode. This increases the PWM to 25,000 Hz and will result in flicker-free operation in most circumstances. To access the High 25K, press the up arrow after reaching 1500 Hz in the Output Freq: field.

Changing the frequency from the default value can have a slight impact on the smoothness, or color-mix consistency, or both when dimming.

Step 1: On the **LED Settings** menu, scroll to **Output Freq**.

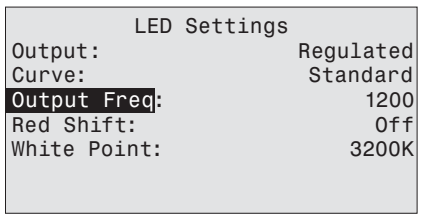


Figure-3.12 Selecting Output Frequency on the LED Settings Menu.

Step 2: Press **[Enter]** to select the value.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to set the desired value.

Step 4: Press **[Enter]**.

Step 5: When asked if you are sure, select **Yes** and press **[Enter]**.

Red Shift

Red shift allows the fixture to match its dimming performance to that of a conventional tungsten lamp. The fixture automatically changes its apparent White Point, or color temperature, as a function of overall intensity. Red shift works with both white-light and colored-light output settings. It is also known as amber drift and tungsten shift. Red shift is available only in the HSI and RGB profiles. It is not available on Studio Daylight and Studio Tungsten fixtures.

Step 1: On the **LED Settings** menu, scroll to **Red Shift**.

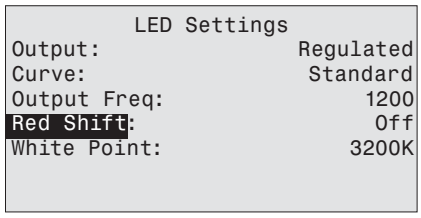


Figure-3.13 Selecting Red Shift on the LED Settings Menu.

Step 2: With **Red Shift** selected, press **[Enter]** to toggle between **On** and **Off**.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to commit the option.

White Point (Vivid, Lustr+, Fire and Ice, Studio HD)

White Point controls the appearance (color temperature) of white-light output when saturation is at or near zero. This option is available when using the HSI and RGB profiles. The choices are 2950K, 3200K, 5600K, and 6500K.

Step 1: On the **LED Settings** menu, scroll to **White Point**.

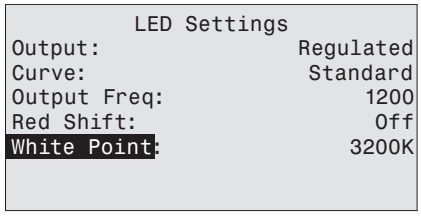


Figure-3.14 Selecting White Point on the LED Settings Menu.

Step 2: With **White Point** selected, press **[Enter]** to toggle between the options.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to commit the option.

Presets & Sequences

The Presets and Sequences screen provides access to the edit screens for Presets and for Sequences, and it indicates which Preset or Sequence is active, if any. You can access the Presets and Sequences menu by doing either of the following.

- On the **Advanced Menu**, scroll to **Presets and Sequences** and press **[Enter]**.
- From any menu, except when operating in Studio profile, press **[☼]**.

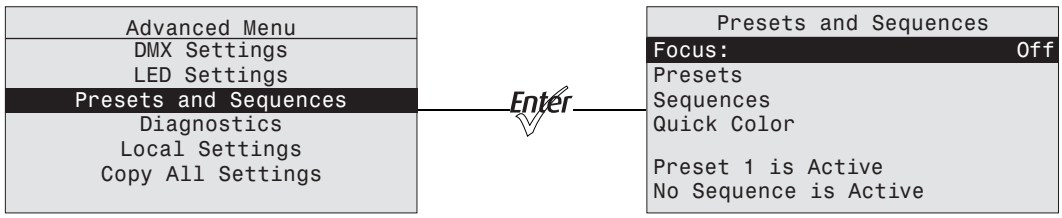


Figure-3.15 Selecting Presets and Sequences on the Advanced Menu.

Focus

Focus is independent of any of the other settings or presets and works whether or not the fixture is receiving DMX data from a console or is in a Preset or stand-alone state. Focus stays on until you disable it or power is disconnected. It turns every LED in the fixture on at 70% so you can:

- Focus (aim) the fixture prior to console set-up or when there is no one at the console to give the fixture intensity.
- Double-check that the fixture is working and that all LEDs are operational.

Step 1: From the **Advanced Menu** select **Presets and Sequences** or press **[☼]**.

Step 2: With **Focus** selected, press **[Enter]** to turn the fixture **On**.

Step 3: When finished, press **[Enter]** to turn the fixture **Off**.

Presets (Vivid, Lustr+, Fire and Ice, Studio HD)

A Preset is a single, static look or color mix. The Desire Series fixtures come with 24 default configurations. Only one Preset can be active at a time. You can activate any of the Preset color mixes and customize each one. The following table lists the default Preset color mixes, most of which are also available as Quick Color options. *See "Quick Color (Vivid, Lustr+, Fire and Ice, Studio HD)" on page 75.*

Preset	Default Color	Available as Quick Color
1	White	Yes
2	Warm	Yes
3	Cool	Yes
4	Minus Green	Yes
5	Lite Pink	Yes
6	Lite Gold	Yes
7	Yellow	Yes
8	Dark Straw	Yes
9	Dark Amber	Yes
10	Orange	Yes
11	Red	--
12	Med Pink	Yes
13	Dark Pink	Yes
14	Magenta	--
15	Purple	Yes
16	Dark Lavender	Yes
17	Deep Purple	Yes
18	Clear Blue	Yes
19	Lite Blue	Yes
20	Med Blue	Yes
21	Primary Blue	Yes
22	Blue-Green	Yes
23	Lite Green	Yes
24	Green	--

Presets (Studio Daylight and Studio Tungsten)

The Desire Studio Daylight and Studio Tungsten fixtures come with 24 available slots for Presets. Only one Preset can be active at a time. You can activate any of the Presets and customize each one. Studio Daylight and Studio Tungsten fixtures have Presets that can define both Intensity and Strobe values. There are no default Presets that come pre-configured from the factory.

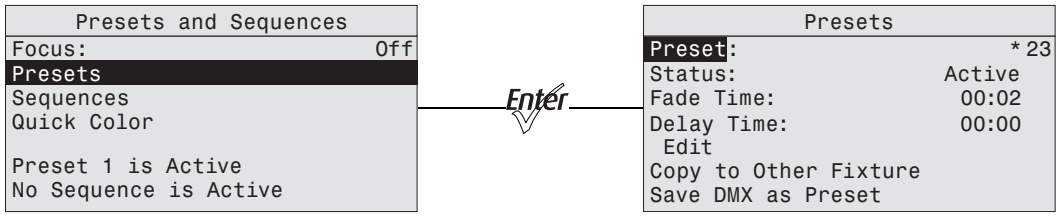


Figure-3.16 Selecting Presets on the Presets and Sequences Menu.

Step 1: On the **Presets and Sequences** menu, scroll to **Presets**.

Step 2: Press **[Enter]**.

Step 3: With **Preset** selected, press **[Enter]**.

Step 4: Press **[▲▲▲]** or **[▼▼▼]** to set the desired preset number.

Step 5: Press **[Enter]**.

Step 6: Press **[▼▼▼]** to select **Status**.

Step 7: Press **[Enter]** to activate the Preset.
The action changes to Active and an asterisk (*) displays in front of the preset number.

Fade Time

Fade time is the length of time the fixture takes to crossfade from the previous setting to the Preset. The format is MM:SS. The default is 2 seconds.

Step 1: On the **Presets** menu, scroll to **Fade Time** and press **[Enter]**.

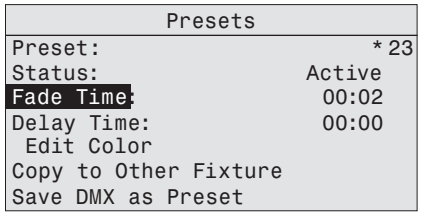


Figure-3.17 Selecting Fade Time on the Presets Menu.

Step 2: Press **[▲▲▲]** or **[▼▼▼]** to set the desired time in minutes.

Step 3: Press **[Enter]**.

Step 4: Press **[▲▲▲]** or **[▼▼▼]** to set the desired time in seconds.

Step 5: Press **[Enter]**.

Delay Time

Delay time is the length of time the fixture waits on the previous setting before initiating the crossfade to the Preset. The default is 0 seconds.

Step 1: On the **Presets** menu, scroll to **Delay Time** and press **[Enter]**.

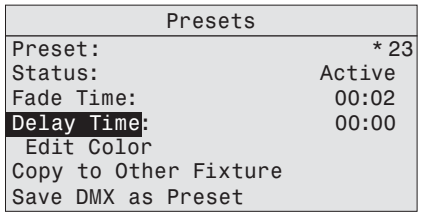


Figure-3.18 Selecting Delay Time on the Presets Menu.

Step 2: Press **[▲▲▲▲]** or **[▼▼▼▼]** to set the desired time in minutes.

Step 3: Press **[Enter]**.

Step 4: Press **[▲▲▲▲]** or **[▼▼▼▼]** to set the desired time in seconds.

Step 5: Press **[Enter]**.

Edit (Vivid, Lustr+, Fire and Ice, Studio HD)

Use Edit to change the overall hue, saturation, intensity, and strobe settings of the Preset. You can change the predefined color mixes for the Preset. Refer to the table in *Presets (Vivid, Lustr+, Fire and Ice, Studio HD)* on *page 65*.

To keep your changes, be sure to select **Save Changes** and then press **[Enter]**. To discard changes press **[<]** at any time.

If the Preset is currently active, the changes made on the Preset Color Edit screen update to the fixture output immediately.

Step 1: On the **Presets** menu, scroll to **Edit Color** and press **[Enter]**.

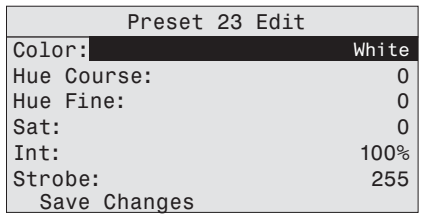


Figure-3.19 Edit Preset Screen (Vivid, Lustr+, Fire and Ice, Studio HD).

Step 2: With **Color** selected, press **[Enter]**.

Step 3: Press **[▲▲▲▲]** or **[▼▼▼▼]** to set the desired predefined color mix.

Step 4: Alternatively, to edit the predefined color mix, scroll to any of the parameters on the screen and press **[Enter]**.

Step 5: Press **[▲▲▲▲]** or **[▼▼▼▼]** to change the values.

Step 6: Press **[Enter]**.

Step 7: Do one of the following:

- Scroll to **Save Changes** and press **[Enter]**.
- Press **[<]** to exit the screen without saving the changes.

Edit (Studio Daylight and Studio Tungsten)

Use Edit to change the brightness and strobe settings of the LED array.

To keep your changes, be sure to select **Save Changes** and then press **[Enter]**. To discard changes press **[<]** at any time.

If the Preset is currently active, the changes made on the Preset Edit screen update to the fixture output immediately.

Step 1: On the **Presets** menu, scroll to **Edit** and press **[Enter]**.

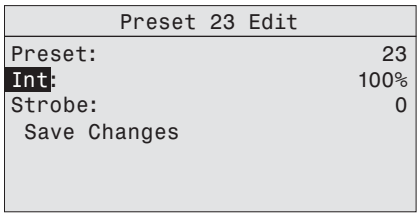


Figure-3.20 Edit Preset Screen (Studio Daylight and Studio Tungsten).

Step 2: Scroll to any of the parameters on the screen and press **[Enter]**.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to change the values.

Step 4: Press **[Enter]**.

Step 5: Do one of the following

- Scroll to **Save Changes** and press **[Enter]**.
- Press **[<]** to exit the screen without saving the changes.

Note: *If a Preset is edited, it must be copied to other fixtures in the data chain and reactivated before the changes will take effect. If the Preset is not copied, the changes will not carry over to other fixtures and the same Preset number will produce different looks across fixtures in the chain.*

Copy to Other Fixtures

If other fixtures are connected to the same data chain, you can copy the Preset values to the other fixtures. The fixture automatically becomes the Master and controls all the other fixtures (Slaves) in the chain until another fixture has its Preset or Sequence settings selected or activated. For more information, see *Master/Slave Operation* on *page 76*.

Step 1: On the **Presets** screen, scroll to **Copy to Other** Fixtures.

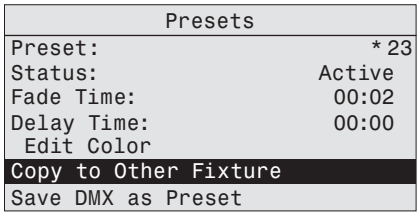


Figure-3.21 Copy the Preset to Other Fixtures.

Step 2: Press **[Enter]**.

Step 3: When asked if you are sure, select **Yes** and press **[Enter]**.

Save DMX as Preset

You can take a snapshot of the incoming DMX signal when the fixture is in HSI mode and save it as a preset value.

Step 1: On the **Presets** screen, scroll to **Preset** and press **[Enter]**.

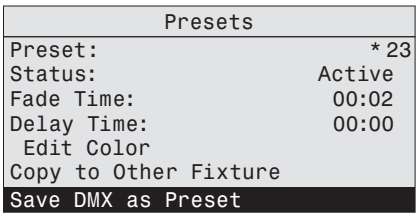


Figure-3.22 Save the DMX as a Preset.

Step 2: With **Preset** selected, press **[Enter]**.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to set the desired preset number.

Step 4: Press **[Enter]**.

Step 5: Scroll to **Save DMX as Preset** and press **[Enter]**.

Sequences

A Sequence is a timed series of presets. Up to 12 different Sequences may be altered for Preset selections, crossfade rate, and link time. Only one Preset can be active at a time. The sequences can be copied to other fixtures in the same data chain.

You can create your own custom sequence that includes two or more Presets. For example, you may want to sequence through Presets 2, 4, 23, and 1, in that order. As you enter these into the sequence, you also can set the rate and link time for each step.

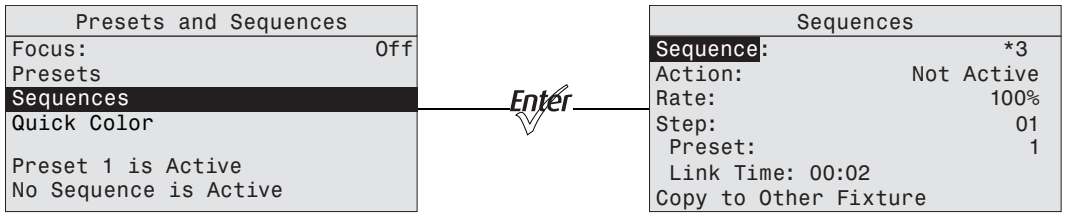


Figure-3.23 Selecting Sequences on the Presets and Sequences Menu.

Step 1: From the **Advanced Menu** select **Presets and Sequences** or press **[ ]**.

Step 2: On the **Presets and Sequences** menu, scroll to **Sequences**.

Step 3: Press **[Enter]**.

Step 4: On the **Sequences** menu, with **Sequence** selected, press **[Enter]**.

Step 5: Press **[ ]** or **[ ]** to set the desired Sequence number.

Step 6: Press **[Enter]**.

Step 7: Scroll to **Status**.

Step 8: Press **[Enter]** to activate the Sequence.
The screen changes to Active and an asterisk (*) displays in front of the preset number.

Step 9: Press **[ ]** to scroll to **Rate**.

Rate

Rate is the execution of the Presets' Fade Times and Delay Times within the Sequence, relative to their settings within the actual Presets. The available Rate range is 2 to 500%. The default is 100%.

A Rate of 100% represents running the Sequence with timing exactly as specified within the Presets. A Rate above 100% represents running the Sequence with faster timing than specified within the Presets. For example, with a Rate of 200%, a Preset with a Fade Time of 6 seconds would actually be run within the Sequence in only 3 seconds.

A Rate below 100% represents running the Sequence with slower timing than specified within the Presets. For example, with a Rate of 50%, a Preset with a Fade Time of 6 seconds would actually be run within the Sequence in 12 seconds.

Any change to the Rate is updated live in the fixture memory. Pressing **[<]** does not undo a change to Rate.

Step 1: On the **Sequences** menu, scroll to **Rate** and press **[Enter]**.

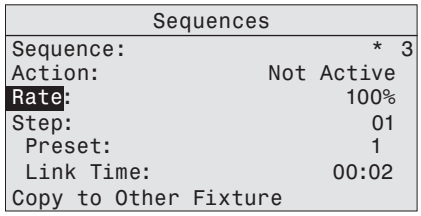


Figure-3.24 Selecting Rate on the Sequences Menu.

Step 2: Press **[▲▲▲]** or **[▼▼▼]** to set the desired percent.

Step 3: Press **[Enter]**.

Step 4: Press **[▼▼▼]** to scroll to **Step**.

Step

Step refers to the number of the current step in the sequence. In our example, you select step 1. After setting the Preset and Link time, return to **Step** and select step 2. Repeat this process until you have entered all the steps in the sequence.

Any change to Step is updated live in the fixture memory. Pressing **[<]** does not undo a change to Step.

Step 1: On the **Sequences** menu, scroll to **Step** and press **[Enter]**.

```
          Sequences
Sequence:                 *3
Action:           Not Active
Rate:                   100%
Step:                     01
 Preset:                   1
 Link Time:             00:02
Copy to Other Fixture
```

Figure-3.25 Selecting Step on the Sequences Menu.

Step 2: Press **[▲▲▲]** or **[▼▼▼]** to set the desired Step number.

Step 3: Press **[Enter]**.

Step 4: Press **[▼▼▼]** to scroll to **Preset**.

Preset

Preset is the number of a Preset, whether it is a predefined or a custom color mix.

Step 1: On the **Sequences** menu, scroll to **Preset** and press **[Enter]**.

```
          Sequences
Sequence:                 *3
Action:           Not Active
Rate:                   100%
Step:                     01
 Preset:                   1
 Link Time:             00:02
Copy to Other Fixture
```

Figure-3.26 Selecting Preset on the Sequences Menu.

Step 2: Press **[▲▲▲]** or **[▼▼▼]** to set the desired Preset number.

Step 3: Press **[Enter]**.

Step 4: Press **[▼▼▼]** to scroll to **Link Time**.

Link Time

Link Time is the length of time the fixture waits before moving from one Preset to the next. The format is MM:SS. The default is 2 seconds.

Step 1: On the **Sequences** menu, scroll to **Link Time** and press **[▼▼▼]**.

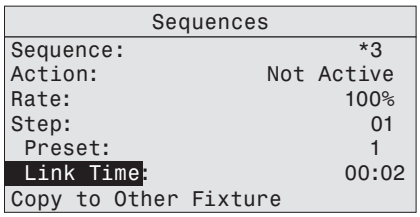


Figure-3.27 Selecting Link Time on the Sequences Menu.

Step 2: Press **[▲▲▲]** or **[▼▼▼]** to set the desired time in minutes.

Step 3: Press **[Enter]**.

Step 4: Press **[▲▲▲]** or **[▼▼▼]** to set the desired time in seconds.

Step 5: Press **[Enter]** to commit the values.

Finishing the Sequence

After each of the steps have been configured, set the End State. End state is what the fixture does once it completes the Sequence. Two end state options are available and both options repeat indefinitely until the Sequence is deactivated. To access the end state options, you must first program an additional and final step within the sequence using Preset 0. Preset 0 marks the end of the Sequence and opens the End State menu line. Preset 0 may only be used once within a Sequence. If you want the Sequence to repeat automatically, you may only define up to 23 steps with Presets 1 through 24, since the final step must be reserved for Preset 0.

Loop

Once the fixture completes the entire sequence, it immediately returns to the beginning and starts the sequence over again, in order.

Bounce

Once the fixture completes the entire sequence, it reverses the order of the presets and steps backward through them until reaching the starting step, at which point it starts the Sequence over again, in the original order.

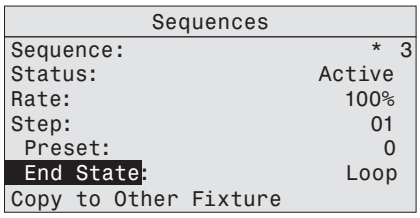


Figure-3.28 Setting Sequence End State.

Step 1: On the **Sequences** menu, scroll to **Preset** and press **[Enter]**.

Step 2: With the Preset number selected Press **[▲▲▲]** or **[▼▼▼]** until you reach **0**.

Step 3: Press **[Enter]**.
Link Time on the screen is replaced with End State.

Step 4: Scroll to **End State** and press **[Enter]** to toggle between the options.

Step 5: If the Sequence is not active, scroll up to **Status** and press **[Enter].**

Copy to Other Fixtures

If other fixtures are connected to the same data chain, you can copy the Sequences settings to the other fixtures. The fixture automatically becomes the Master and controls all the other fixtures (Slaves) in the chain until another fixture has its Preset or Sequence settings selected or activated. For more information, see *Master/Slave Operation* on *page 76*.

Step 1: On the **Sequences** screen, scroll to **Copy to Other** Fixtures.

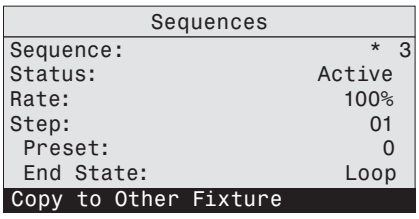


Figure-3.29 Selecting Copy to Other Fixtures.

Step 2: Press **[Enter]**.

Step 3: When asked if you are sure, select **Yes** and press **[Enter]**.

Note: *This option only copies Sequence data; it does not copy changes to the Preset settings or color mixes used within the Sequence.*

Quick Color (Vivid, Lustr+, Fire and Ice, Studio HD)

Quick Color allows you to easily select a color and its intensity from a predefined menu. This feature overrides any presets or sequences previously selected and is only available when there is no external DMX signal to the fixture. For a list of available colors, see the table on *page 65*.

Note: *Exiting the Quick Color menu will return the fixture to the state it was in before entering the menu.*

To select a Quick Color:

Step 1: Press the **[☼]** to quickly access the **Presets and Sequences** screen.

Step 2: Within the **Presets and Sequences** screen, scroll to **Quick Color**.

Step 3: Press **[Enter]**.

Figure-3.30 Selecting Quick Color on the Presets and Sequences Menu.

Step 4: Scroll to **Color** and press **[Enter]**.

Step 5: Press **[▲]** or **[▼]** to select the desired color

Step 6: Press **[Enter]** to commit the selection.

Step 7: Scroll to **Intensity** and press **[Enter]**.

Step 8: Press and hold **[▲]** or **[▼]** to adjust the fixture's intensity.

Step 9: Press **[Enter]** to commit the selection.

- To set the Intensity to 0, press the **[☼]**. Pressing **[☼]** a second time will return the fixture to its previously set Intensity.
- If power to the fixture is lost while in Quick Color mode, the fixture will return to the Quick Color menu once power is restored.

Master/Slave Operation

When similar fixtures' DMX or data connections are linked together and there is no external DMX signal going to them, one fixture automatically controls all other fixtures in the chain when a Preset, Sequence, or Quick Color is initiated.

Master

Master is the one fixture that controls all fixtures in the daisy chain. By default, it is whichever fixture had its Preset, Sequence, or Quick Color selected or adjusted most recently. The Master fixture can only control Slave fixtures to produce identical output at the same time as itself. The Master fixture cannot control Slave fixtures to operate individually or to run chase-type or time-offset sequences.

Changes and edits to Presets or Sequences that are made to the Master fixture may be copied to the internal memory of all Slave fixtures for later use when these fixtures are disconnected from the data daisy chain.

When operating as the Master fixture, the fixture displays Master on its home screen.

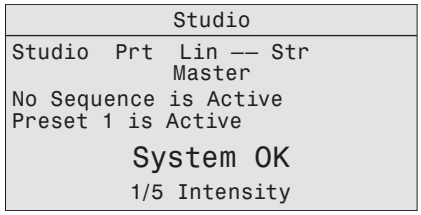


Figure-3.31 XYZ Status Screen Showing Master.

Slave

Any fixture in the data chain that is being controlled by the master fixture. By default, all fixtures are slaves, except the one that had its Preset, Sequence, or Quick Color altered most recently. A Slave fixture can only directly imitate the performance of the Master fixture.

When operating as a Slave fixture, the fixture displays Slave on its home screen.

Diagnostics

The Diagnostics menu provides access to detailed information about various aspects of the fixture's performance. Diagnostics also provides access to test functions and fixture recalibration. Much of the Diagnostics menu is used by service technicians to troubleshoot problems.

Step 1: From the home screen, press **[Enter]** to open the **Main Menu**.

Step 2: Scroll to **Advanced Settings**.

Step 3: Press **[Enter]**.

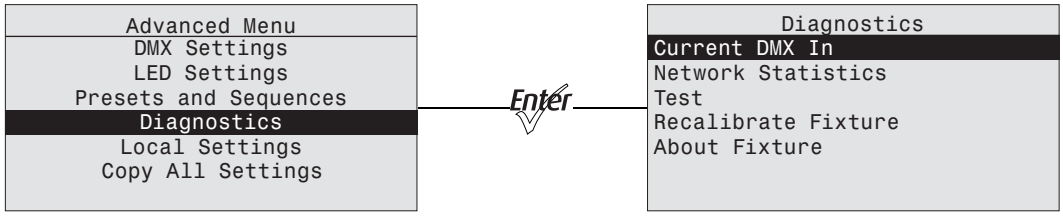


Figure-3.32 Selecting Diagnostics on the Advanced Menu.

Current DMX In

The Current DMX In screen displays the values of the current DMX input by channels. The values dynamically change as the DMX input changes. This screen is a read-only screen, which displays the following.

- The Control Input setting.
- The DMX channel assignment, in order.
- The current DMX value (0-255) of each control channel in use by the fixture.
- The current brightness (0 to full or 00 to FL) of each series of LEDs in the fixture's LED array.

Step 1: On the **Diagnostics** screen, scroll to **Current DMX In**.

Step 2: Press **[Enter]**.

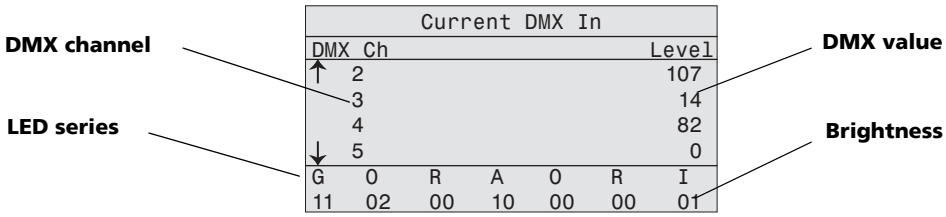


Figure-3.33 Current DMX In Screen with Dynamic Values.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to scroll through the channels. Arrows on the left indicate that you can scroll up or down.

Step 4: Press **[<]** to return to the Diagnostics screen.

Network Statistics

The Network Statistics screen displays the statistics of the network. The DMX input values dynamically change. This screen is read-only.

Step 1: On the **Diagnostics** screen, scroll to **Network Statistics**.

Step 2: Press **[Enter]**.
When you access the screen, the dynamic values start at 0 and continue to increase.

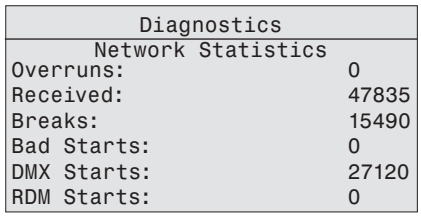


Figure-3.34 Network Statistics Screen with Dynamic Values.

Step 3: To reset the counters, press **[Enter]**.

Step 4: Press **[<]** to return to the Diagnostics screen.

Test

Test is used to test the fixture and display its output values. Test overrides all other control to the fixture. The action options are All Off, All On, Chase, and Ind Cntl (Individual control). The default is All Off.

To exit the Test screen, press **[<]** twice. The fixture will revert to its previous state.

Step 1: On the **Diagnostics** screen, scroll to **Test**.

Step 2: Press **[Enter]**.

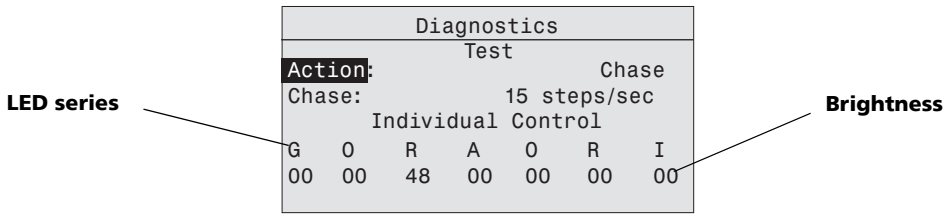


Figure-3.35 Test Screen in Chase Mode.

Step 3: With **Action** selected, press **[Enter]** to toggle between the options.

Step 4: Press **[▲]** or **[▼]**to commit the option.

Chase

Chase automatically sequences through each LED color and starts each at 0% intensity and steps up to 100% before moving to the next color. You can set the number of steps per second for sequencing through all LED colors individually.

Step 1: On the **Test** screen, scroll to **Action**.

Step 2: Press **[Enter]** until the **Chase** option displays.
The fixture begins to sequence through the LEDs.

Step 3: Press **[▼]** to select **Chase**.

Step 4: Press **[[Enter]** to select the values.

Step 5: Press **[▲]**or **[▼]** to set the number of steps per second.
The range is 10 to 20.

Step 6: Press **[Enter]** to commit the value.
The percent of intensity is displayed for each color as the fixture sequences through them.

Step 7: To stop the test, do one of the following.

- Press **[▲]** or **[▼]** to select **Action** and then press **[Enter]** until **All Off** displays.
- Press **[Back]** to return to **Action** and then press **[Enter]**until **All Off** displays.

Individual Control (Ind Cntl)

Use Individual Control to select each LED series and then adjust its intensity.

Step 1: On the **Test** screen, scroll to **Action**.

Step 2: Press **[Enter]**until the **Ind Cntr** option displays.
One of the LED series will illuminate.

Step 3: Press **[▼▼▼]**to select the series.

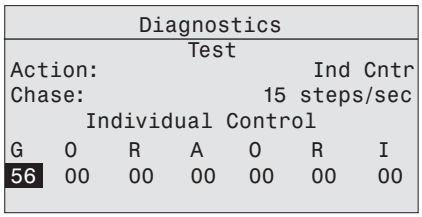


Figure-3.36 Test Screen in Individual Control Mode.

Step 4: Press **[▲▲▲]**or **[▼▼▼]** to set the intensity of the series.

Step 5: Press **[Enter]** to move to the next series.
The value you entered for the first series is applied to the next series.

Step 6: Press **[▲▲▲]** or **[▼▼▼]** to change the intensity of the series.

Step 7: Press **[<]** to return to **Action**.

Recalibrate Fixture

Service technicians may use this option to calibrate the constant current driver electronics for the LEDs. The calibration process goes through each series of LEDs, starting at 0 intensity and stepping up to 100%. The calibration is automatic and takes less than a minute. During this time, do not exit the screen until it is complete.

CAUTION:T *This calibration process does not measure or recalibrate the light output of the LEDs.*

Under normal use, it is not necessary to recalibrate the fixture, and doing so will likely have no beneficial effect on fixture performance. It is therefore NOT recommended to recalibrate the fixture without express instruction from an authorized technician.

Step 1: On the **Diagnostics** screen, scroll to **Recalibrate Fixture**.

Step 2: Press **[Enter]**.

Step 3: When asked if you are sure, select **Yes** and press **[Enter]**.
A new screen shows that the calibration is in progress and whether the LEDs pass the calibration.

Figure-3.37 LED Calibration Screen with Calibration in Process.

Step 4: Press **[Enter]** or **[<]** to return to the **Diagnostics** screen.

About Fixture

The About screen displays the following information. This is a read-only screen.

- The software version number
- The fixture serial number
- The assigned fixture RDM number and label
- The fixture model

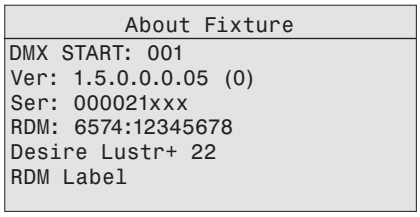


Figure-3.38 About Fixture Screen.

Step 1: On the **Diagnostics** screen, scroll to **About Fixture**.

Step 2: Press **[Enter]**.

Step 3: Press **[Enter]** or **[<]** to return to the **Diagnostics** screen.

Local Settings

The Local Settings menu gives you several options that affect the LCD and other functions of the fixture.

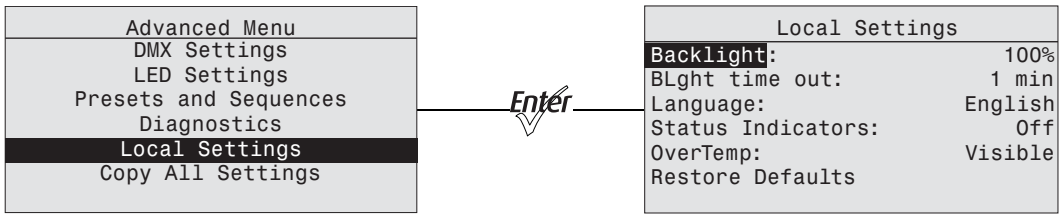


Figure-3.39 Selecting Local Settings on the Advanced Menu.

Step 1: On the **Advanced Menu**, scroll to **Local Settings**.

Step 2: Press **[Enter]**.

Step 3: Scroll to any of the menu choices and press **[Enter]**.

Backlight

You can change the brightness of the LCD backlight. The brightness level is 10 to 100%. The default is 100%.

Step 1: With **Backlight** selected, press **[Enter]**to select the value.

Step 2: Press **[▲]** or **[▼]** to set the desired brightness percentage. The effect can be seen as you make the adjustment.

Step 3: Press **[Enter]**.

BLght time out

You can change the length of time the LCD backlight remains on after a UI button has been pressed. The options are 30 seconds, 1 minute, 5 minutes, 15 minutes, and never. The default is 1 minute.

Step 1: With **BLght time out** selected, press **[Enter]**.

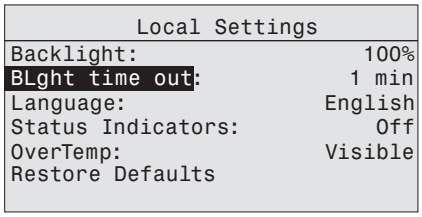


Figure-3.40 Setting Backlight Timeout.

Step 2: Continue to press **[Enter]** until the desired time is indicated.

Step 3: Press **[▲]**or **[▼]** to commit the option.

Language

The screen language is English.

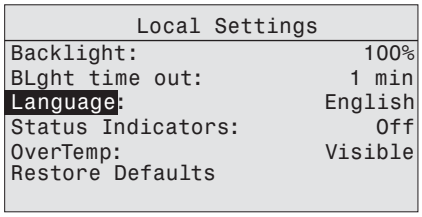


Figure-3.41 Screen Language Set to English.

Status Indicators

You can turn the status indicators on or off. The default is on.

Step 1: With **Status Indicators** selected, press **[Enter]**.

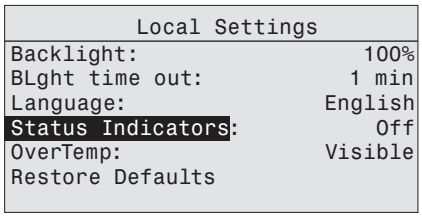


Figure-3.42 Setting the Status Indicator Display.

Step 2: Continue to press **[Enter]** to toggle between ON and OFF.

Step 3: Press **[▲▲▲]** or **[▼▼▼]** to commit the option.

CAUTION: *Although it may be desirable in some applications to eliminate all stray light from the back of the fixture, turning the Status Indicators OFF prevents them from communicating potentially critical information. Use discretion when selecting the OFF setting.*

OverTemp

You can change how an over-temperature situation is indicated in order to control stray light.

Visible (Vivid, Lustr+, Fire and Ice, Studio HD)

The fixture produces a low-level, red light from the LED array, displays a warning message on the LCD, turns on the LCD backlight, and turns on the error indicator light.

Visible (Studio Daylight and Studio Tungsten)

The fixture produces a low-level light from only some of the LEDs in the LED array, displays a warning message on the LCD, turns on the LCD backlight, and turns on the error indicator light.

Dark

The fixture turns off the LED array entirely and displays a warning message on the LCD without turning on the LCD backlight.

Step 1: With **OverTemp** selected, press **[Enter]**.

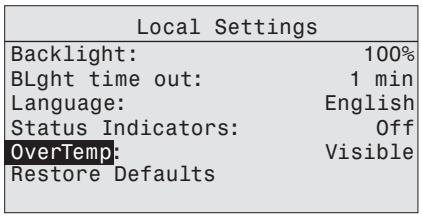


Figure-3.43 Setting Over Temperature Indication.

Step 2: Continue to press **[Enter]** to toggle between the two options.

Step 3: Press **[▲▲▲]** or **[▼▼▼]**to commit the option.

For more information, see *Thermal Shutdown Warning* on *page 53*.

Note: *When returning to normal operation, after the fixture has been in a shut-down status, the LED array automatically transitions its output back to the current control signal or stand-alone operation over a 10-second crossfade. There is no required reset function once the fixture temperature returns to a safe level.*

Restore Defaults

You can restore the fixture to the factory settings. This function clears all custom settings including all changes to Presets and Sequences.

Step 1: With **Restore Defaults** selected, press **[Enter]**.

Step 2: When asked if you are sure, select **Yes** and press **[Enter]**.

Step 3: Press **[Enter]**.

Copy All Settings

When DMX is not applied you can copy all settings, except DMX address, globally to all of the other fixtures in the same data chain in one step. This includes everything from Presets and Sequences to Quick Setups and Advanced options.

This feature is not available when the fixture is receiving an external DMX signal.

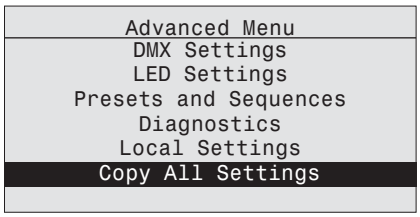


Figure-3.44 Copy All Settings on the Advanced Menu.

Step 1: With **Copy All Settings** selected, press **[Enter]**.

Step 2: When asked if you are sure, select **Yes** and press **[Enter]**.

Step 3: Press **[Enter]**.

Studio Settings

Vivid, Lustr+, Fire and Ice, Studio HD

The Studio profile produces only white light that is adjustable in brightness, white point, and tint (green/magenta balance). The Studio profile can be operated in a stand-alone mode from the user interface or can be controlled via DMX.

Note: *Studio profile is the default Quick Setup for fixtures containing the Studio HD LED array. Fixtures with other LED arrays may also be operated in Studio profile by selecting this setting from Quick Setups or DMX Settings. Fixtures with Studio HD LED arrays may also be operated in other setups.*

Operation From Home Status Screen (Studio Standalone)

When operating without an external control signal, the quality of the white light can be adjusted immediately and directly via menu options on the home screen.

When fixtures are connected together and there is no external control signal, all adjustments that you make on one fixture are automatically made on the connected fixtures.

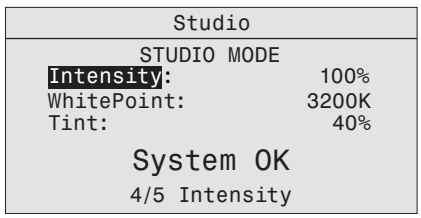


Figure-3.45 Studio Status Home Screen (Vivid, Lustr+, Fire and Ice, Studio HD).

- To adjust the Intensity, select it in the menu and press **[Enter]** and then **[▲▲]** or **[▼▼]**. The range is 0 to 100%.

- To immediately set the Intensity to 0, press the **[☼]** button. Pressing it again will return it to the previously-set Intensity.
- To adjust the White Point, select it in the menu and press **[Enter]** and then **[▲]**or **[▼]**. The range is 2700 to 6500K.
- To adjust the Tint, press select it in the menu and press **[Enter]**and then **[▲]** or **[▼].** Pressing **[▲]** increases magenta and **[▼]**increases green.
- To return to the Main Menu, press **[<]**.
- To return to the Studio status screen from the Main Menu, press **[<<]**.

Studio DMX Control

When controlled via DMX, the first three channels adjust the output in the following order. Channel 5 controls strobe.

Channel	Output
1	Intensity (Brightness)
2	White Point
3	Tint
5	Strobe

When adjusting white point via DMX, the full gamut of 2700 to 6500K is available, but common settings of 3200K and 5600K are quickly accessible at the lowest and highest DMX values, respectively. The range of control on channel 2 is distributed as follows.

DMX Value	White Point
000	3200K
001 to 254	Continuous adjustment from 2700 to 6500K
255	5600K

When adjusting tint via DMX, the range of control on channel 3 is distributed as follows.

DMX Value	Tint
000	Neutral white (at the specified white point)
001	Extreme green (approximately 2x plus green)
002 to 127	Moving from green toward neutral white
128	Neutral white
129 to 254	Moving from neutral white toward magenta
255	Extreme magenta (approximately 2x minus green)

Additional channels for other functions, such as strobe and Plus 7, can also be activated, if desired, starting with channel 4.

Note: *When using DMX to control the fixture in Studio mode, the default data-loss behavior is different than in other operational modes. If the DMX signal is lost, the fixture automatically holds the last look forever (HLL-4ever) and this look persists through infinite off/on power cycles, until the DMX signal is restored or the fixture settings are adjusted manually via the User Interface.*

Studio Daylight and Studio Tungsten

The Studio profile allows quick adjustment of Intensity. The Studio profile can be operated in a stand-alone mode from the user interface or can be controlled via DMX.

Operation From Home Status Screen (Studio Standalone)

When operating without an external control signal, the intensity of the white light can be adjusted immediately and directly by pressing the UI buttons on the fixture while on the home screen.

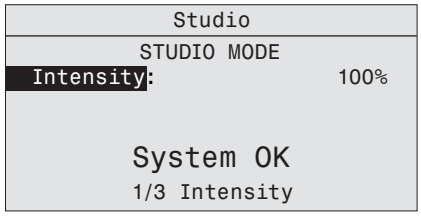


Figure-3.46 Studio Status Home Screen.

- To adjust the **Intensity**, press **[Enter]** and then **[▲]**or **[▼]**. The range is 0 to 100%.
- To return to the Main Menu, press **[≪]**.
- To return to the Studio status screen, from the Main Menu, press **[≪]**, **[<]**, or allow the UI to time out and automatically return to the status screen.

Studio DMX Control

When controlled via DMX, the channels adjust the following.

Channel	Output
1	Intensity (Brightness)
2	Strobe
3	Fan (D60 only)

Configure D60X using RDM

Up to 32 D60X fixtures can be daisy-chained on a DMX/RDM network. Each fixture can have an unique DMX address and each address can be configured separately. Also, more that one fixture can have the same address, allowing you to configure them identically.

You can use an RDM configuration tool or an RDM lighting control device to configure the fixtures. An RDM configuration tool is installed on a PC, which is connected to the DMX/RDM network via Gadget or a DMX/RDM gateway. After the fixtures are configured, Gadget or the gateway can be disconnected and a DMX or RDM control device can be connected to the network for continued operation.

See *Gadget* on *page 88* or *DMX/RDM Gateway* on *page 89*.

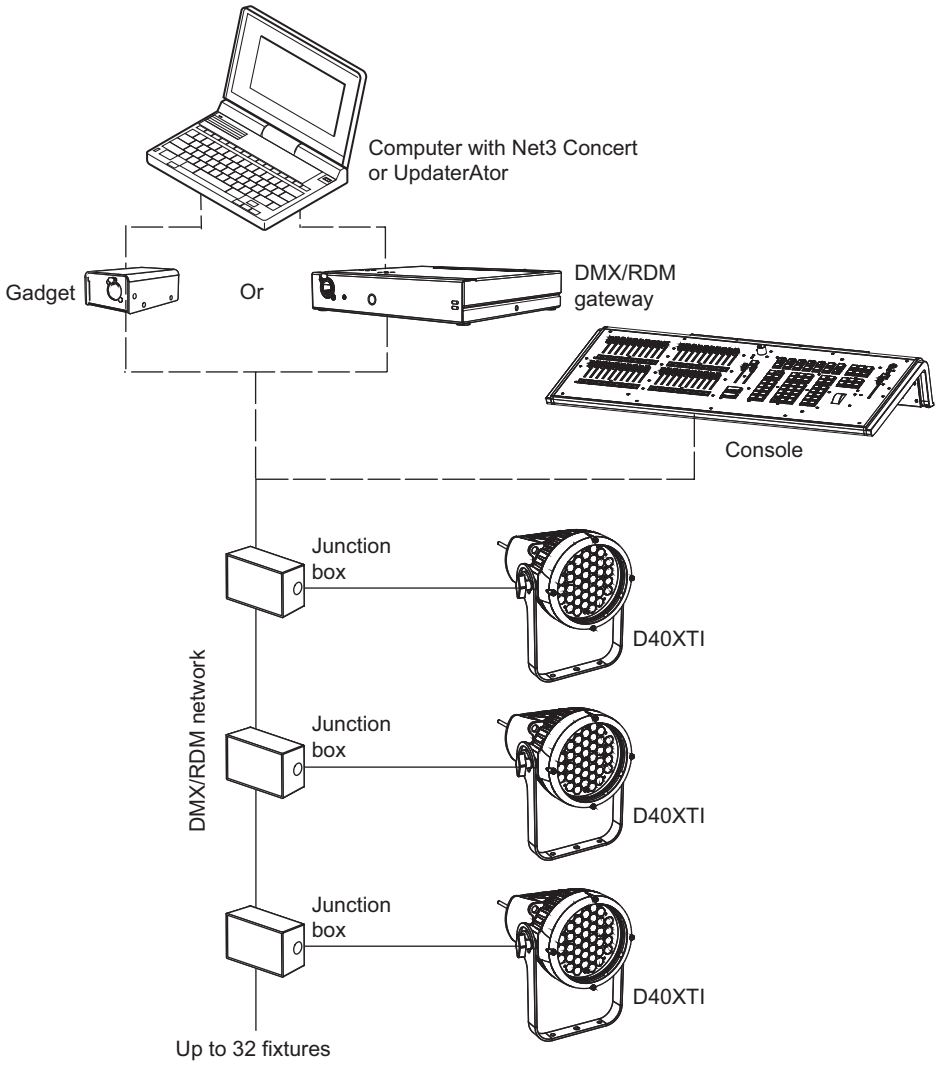


Figure-3.47 Architecture of a Desire series fixture network.

Gadget

Gadget provides a connection from a PC to your lighting system's DMX/RDM devices. Gadget provides DMX control level output, configuration, and monitoring for RDM devices including fixtures, dimmers, and more. You can also upgrade software for most DMX-based ETC products using UpdaterAtor or Net3 Concert software.

Prior to connecting Gadget, start the RDM configuration tool and apply power to the fixtures.

For detailed information, refer to *Gadget USB to DMX/RDM Interface Setup Guide.*

To Connect Gadget to a PC and the DMX/RDM network

Step 1: Connect the USB cable to the PC and the mini USB to Gadget.

Step 2: Connect the DMX cable to Gadget.

Step 3: Connect the other end of the DMX cable to the DMX/RDM network jack.

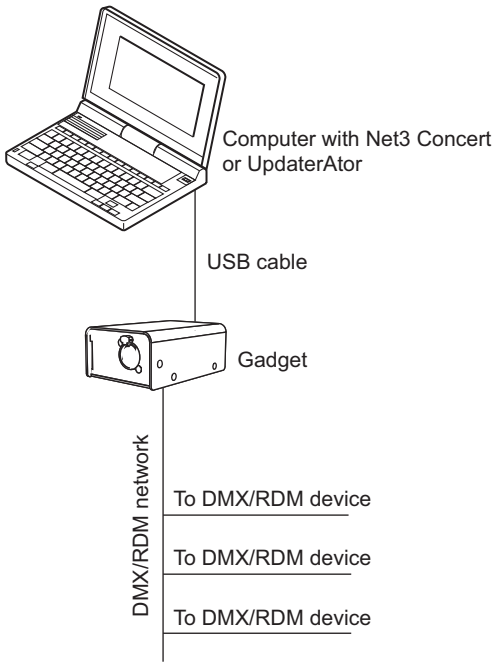


Figure-3.48 Gadget architecture.

Also see *DMX/RDM Gateway* on *page 89*.

For information on RDM commands, see *RDM Commands* on *page 103*

DMX/RDM Gateway

A DMX/RDM gateway, such as an ETC Gateway, can be used to connect a PC to the DMX/RDM network so that you can configure the fixtures on the network. The Gateway can be connected directly to a PC with an Ethernet cable.

Prior to connecting through a gateway, start the RDM configuration tool software and apply power to the fixtures.

To Connect a gateway to a PC and the DMX/RDM network

Step 1: Do one of the following.

- Connect the PC to the local area network via Ethernet and then use an RJ45 cable to connect the gateway to the same network.
- Using an RJ45 cable, connect the PC to the gateway.

Step 2: Connect the DMX cable to the gateway.

Step 3: Connect the other end of the DMX cable to the DMX jack that is connected to the DMX/RDM network.

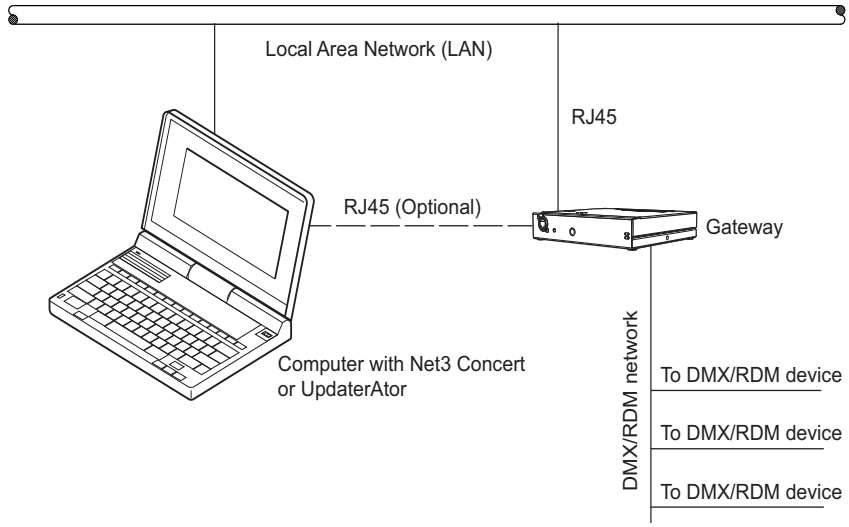


Figure-3.49 Gateway architecture.

Configuration

Use an RDM configuration tool to configure the Desire XTI Series fixtures. After you configure the fixtures and disconnect Gadget or a DMX/RDM gateway, you may control the fixtures with a DMX or RDM lighting control device.

For detailed information about LED Config software, refer to the *LED Configuration Software Programming Guide*.

For information on RDM commands, see *RDM Commands* on *page 103*.

Error Messages

When a system error is detected, a message displays on the home screen. The message changes to reflect the specific error type. When multiple errors are detected, each error message cycles, in increasing numerical order on the display for 1 second each. The following table lists the error messages.

Error Message	Description
LED Ambient Overtemp	The LED head ambient temp is too high and has been shut down. Let the fixture cool.
LED Ambient High	The LED head ambient is too hot. Let the fixture cool.
LED Ambient Low	The LED head ambient is too cold. Improper operating conditions.
Color System Fail	Fixture does not have its color information loaded. This error may represent a hardware failure. Contact ETC Technical Services.
LED Over Temp	A specific LED is too hot and the fixture has been shut down.
Internal Temp High	The fixture's internal temperature is too high.
Power Budget Active	The fixture is reducing the LED output due to high temperatures.
Internal Overtemp	The internal temperature of the fixture is too high, so it has been shut down. Let the fixture cool.
Configuration Error	The stored configuration has been compromised. The fixture will return to a default configuration.

Software Updates

The software for your Selador Desire fixture can be updated with UpdaterAtor Software. UpdaterAtor allows you to remotely update the fixture. UpdaterAtor is installed on your computer and connected from the computer to the fixture with a special cable or through a gateway. For more information, contact ETC Technical Services or visit www.etcconnect.com.

ETC Technical Support

Any time, any day–15 minute response time—that's our service commitment. ETC's Technical Service is unparalleled in the industry. With over 60 service employees worldwide, not to mention our extensive Authorized Service Center network, we are uniquely positioned to be able to help you anywhere, anytime. Call on our years of expertise for help with any lighting situation. Our commitment is to make your day shine brighter.

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608/831-4116 or toll-free in the U.S. at 800/688-4116

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(+44) 20 8896 1000

Germany

(+49) 8024 4700-0

Asia

(+852) 2799 1220

Routine Maintenance

To ensure optimum performance of your Desire series fixture, you should perform the following inspections and cleaning at least once a year. You may need to inspect or clean the fixture more often, depending on the type and amount of use your fixture experiences during the year.

CAUTION: *Allow fixture to cool down completely prior to cleaning.*

Disconnect all power and DMX cables prior to cleaning.

Check for excessive dust or debris in the heat-dissipating fins around the entire fixture enclosure. Clean using compressed air or a soft cloth. Keeping the components of the enclosure clean facilitates efficient cooling and extends LED longevity.

NEVER spray liquids into the fixture.

NEVER spray compressed air into a fixture that is powered-up.

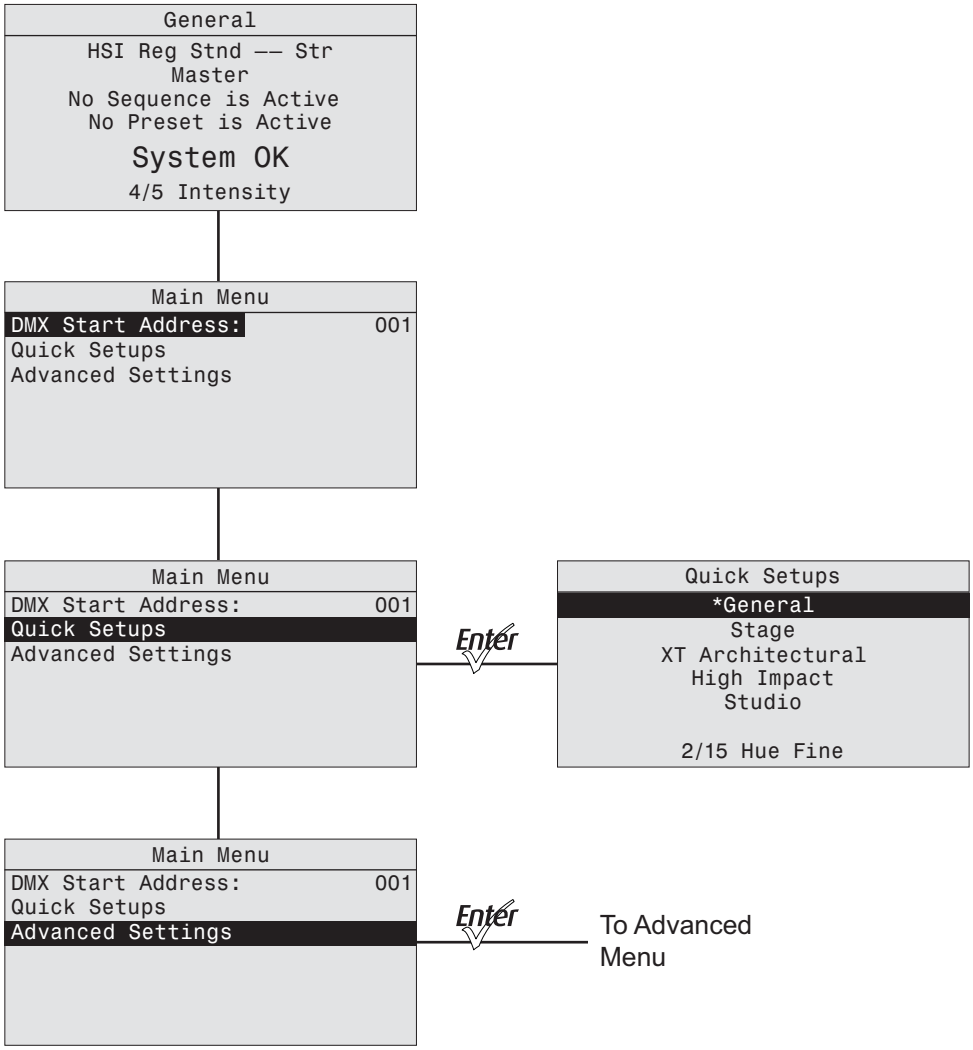
- ❑ A can of compressed air or oil-free air from an air compressor set at a low setting can be used to blow through the vent holes and remove dust or other debris from the interior of the fixture. Dust buildup can cause overheating and premature shutdown.
- ❑ Remove the secondary lenses (if used) and clean out any dust and debris. All components, including the secondary lenses, can be cleaned using compressed, oil-free air as described above or a clean micro-fiber cloth. The use of any liquid cleaning solution is not recommended for Desire fixtures.
- ❑ Inspect all mounting hardware for wear and, if necessary, clean using compressed, oil-free air or a soft, lint-free cloth.

Appendix A

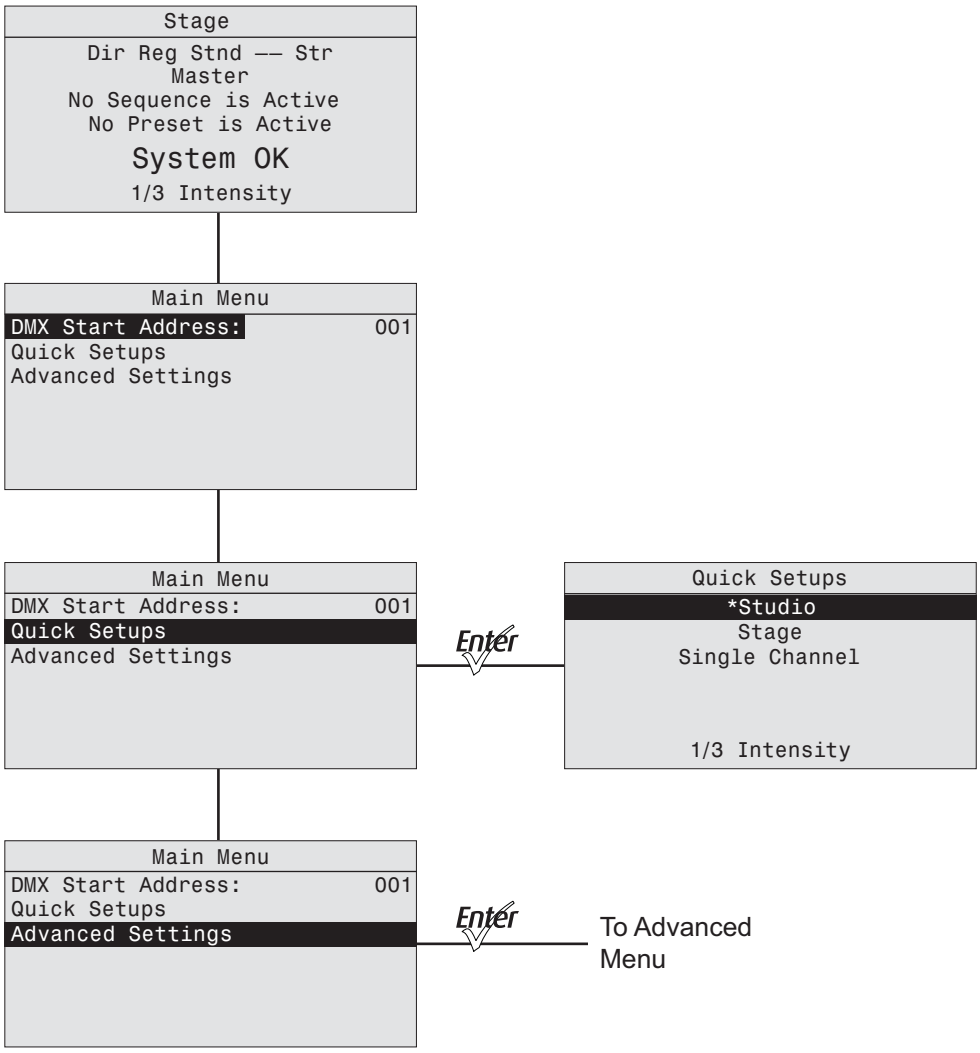
Menu Flow Chart

The following illustrations show each of the menus that are displayed on the Desire fixture LCD and the path to each one. This menu does not apply to the D60X fixture.

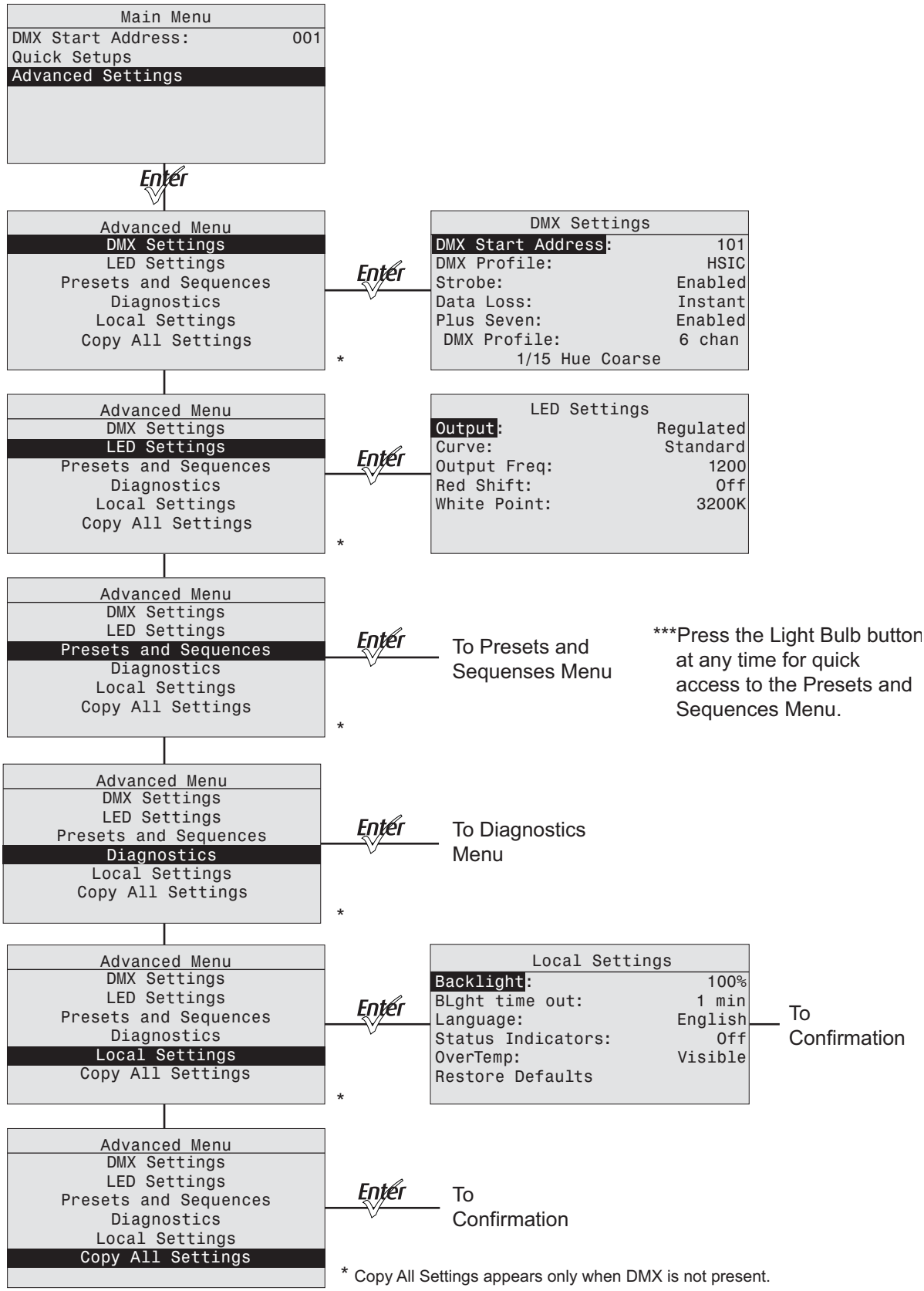
Home and Main Menus (Vivid, Lustr+, Fire and Ice, Studio HD)



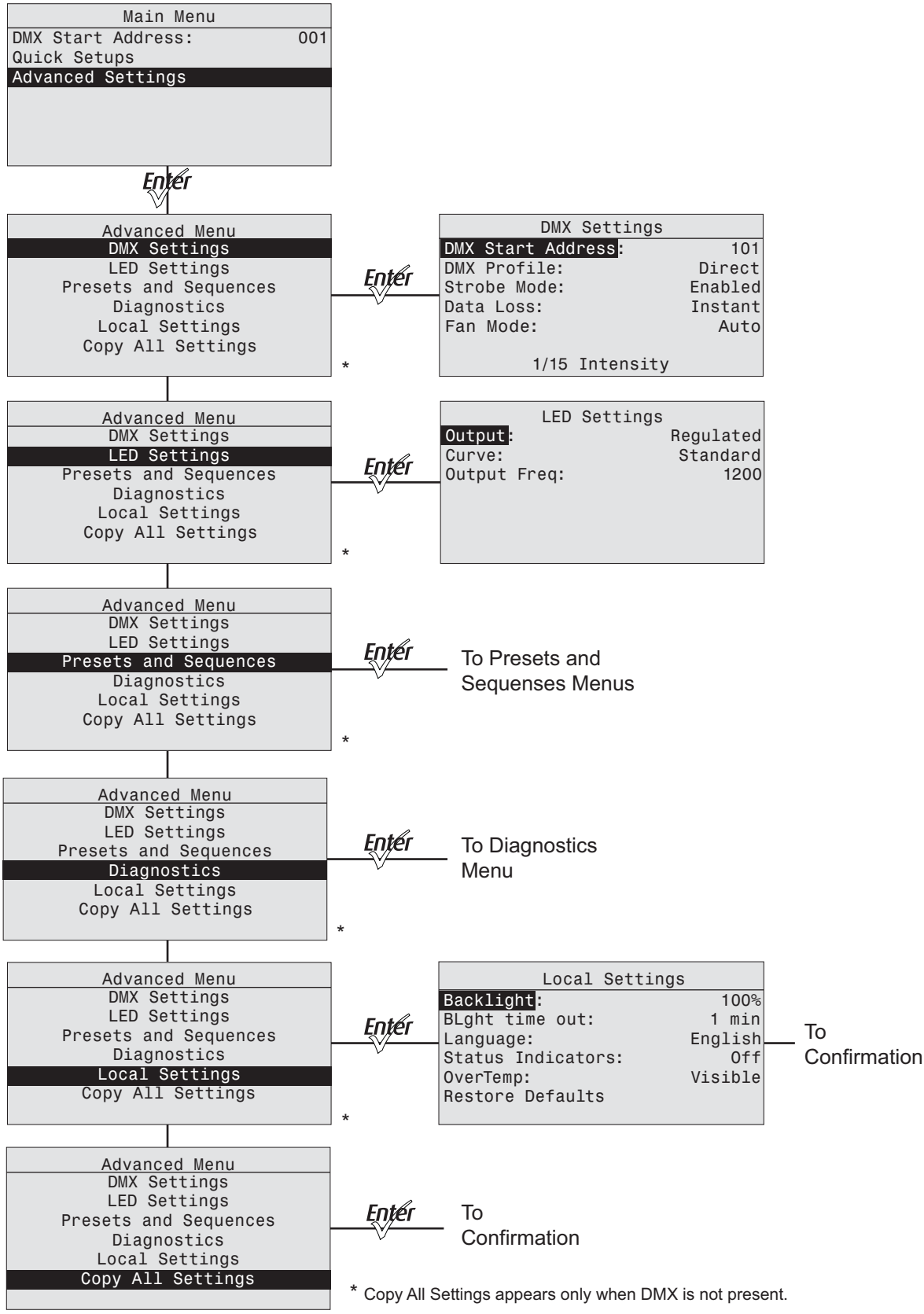
Home and Main Menus (Studio Daylight and Studio Tungsten)



Advanced Menu (Vivid, Lustr+, Fire and Ice, Studio HD)

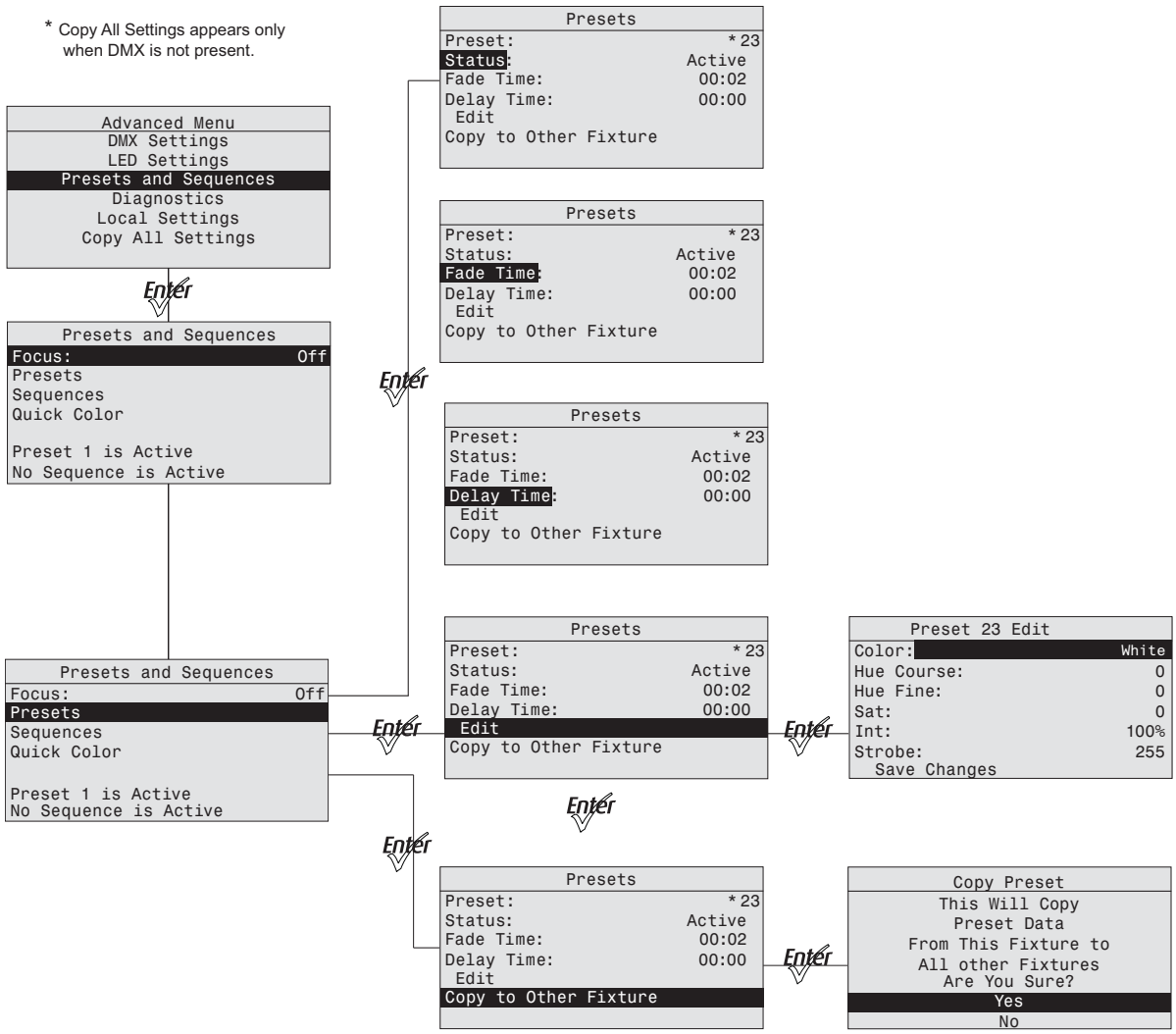


Advanced Menu (Studio Daylight and Studio Tungsten)

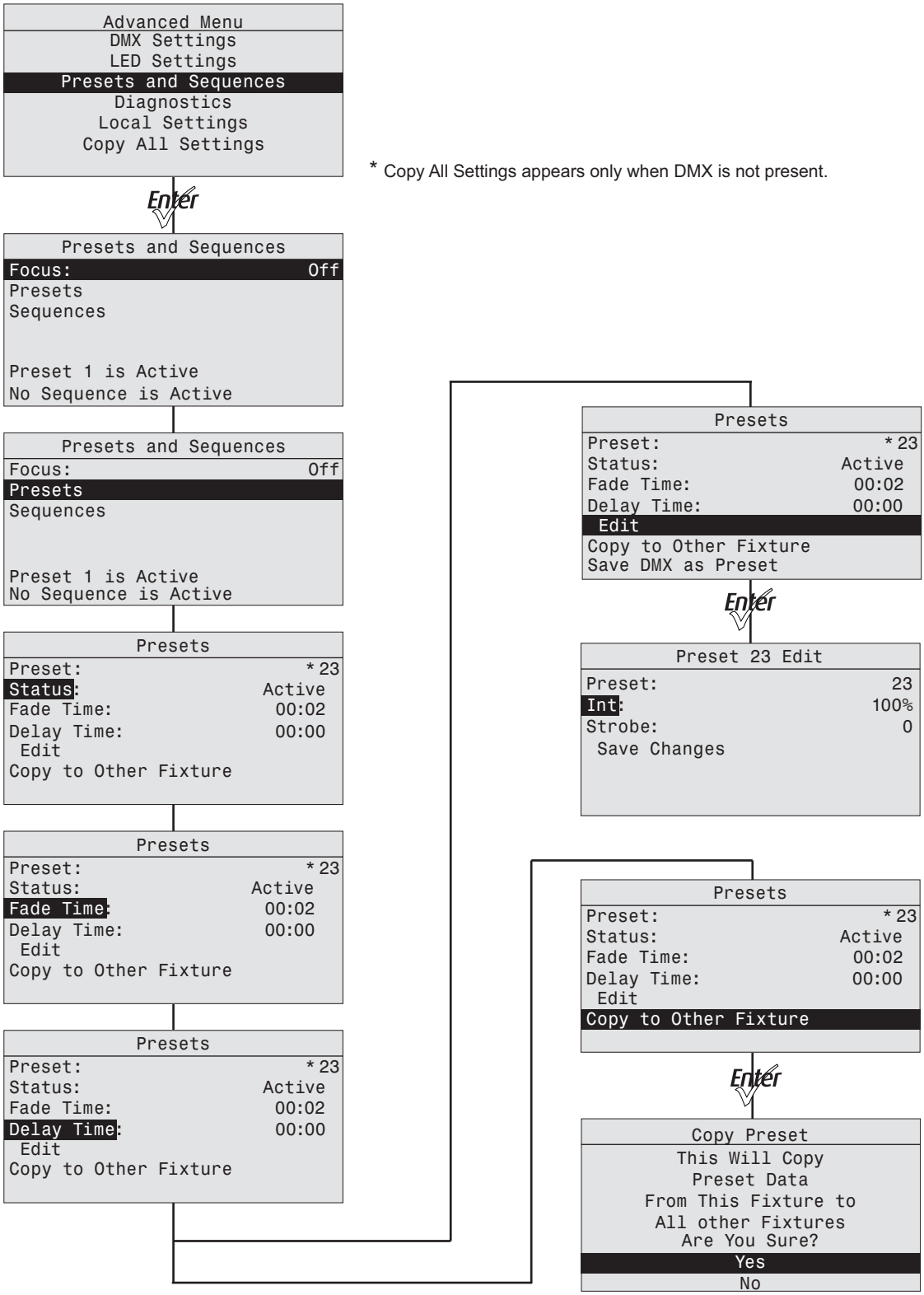


* Copy All Settings appears only when DMX is not present.

Presets (Vivid, Lustr+, Fire and Ice, Studio HD)

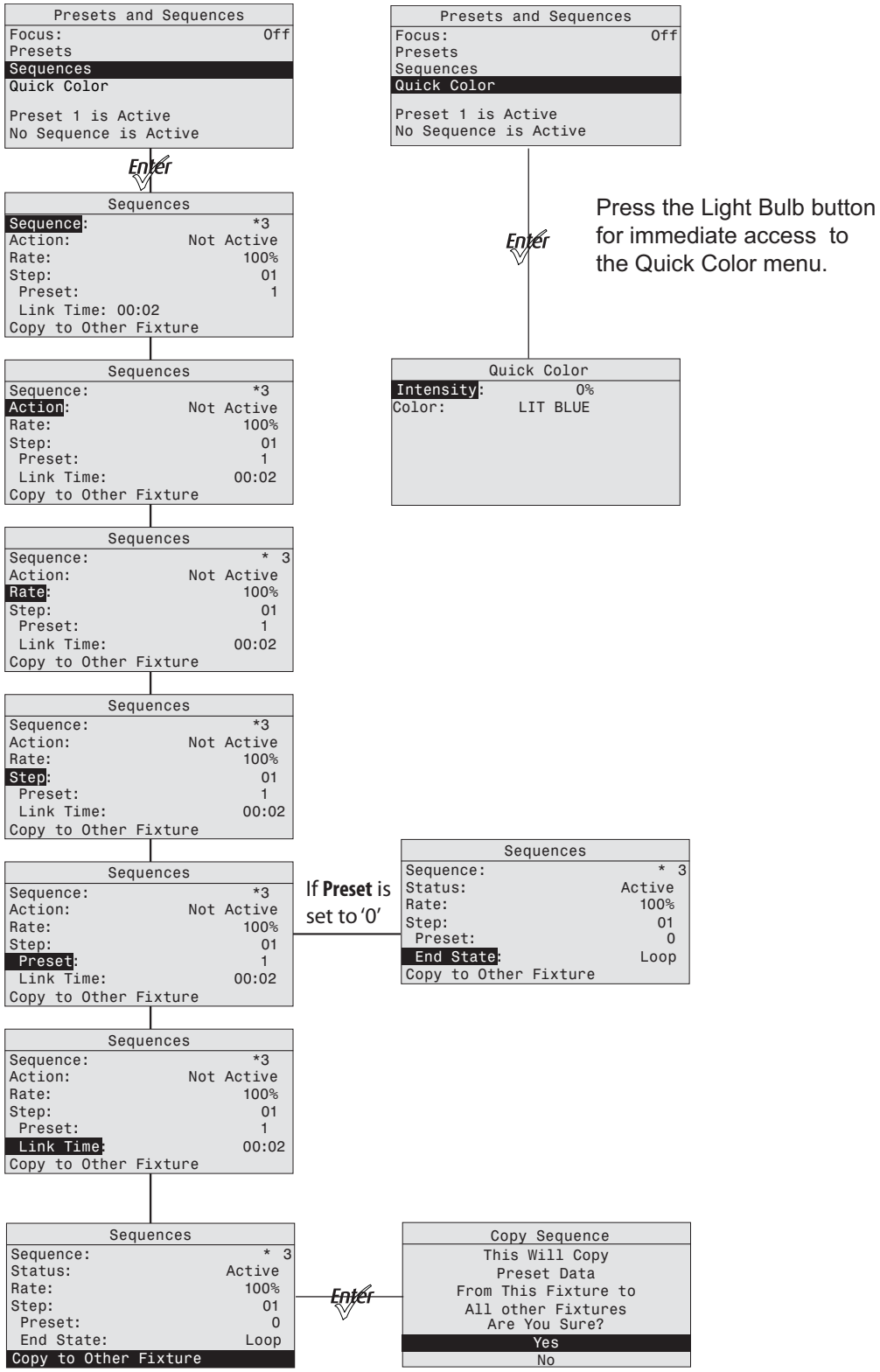


Presets Menu (Studio Daylight and Studio Tungsten)

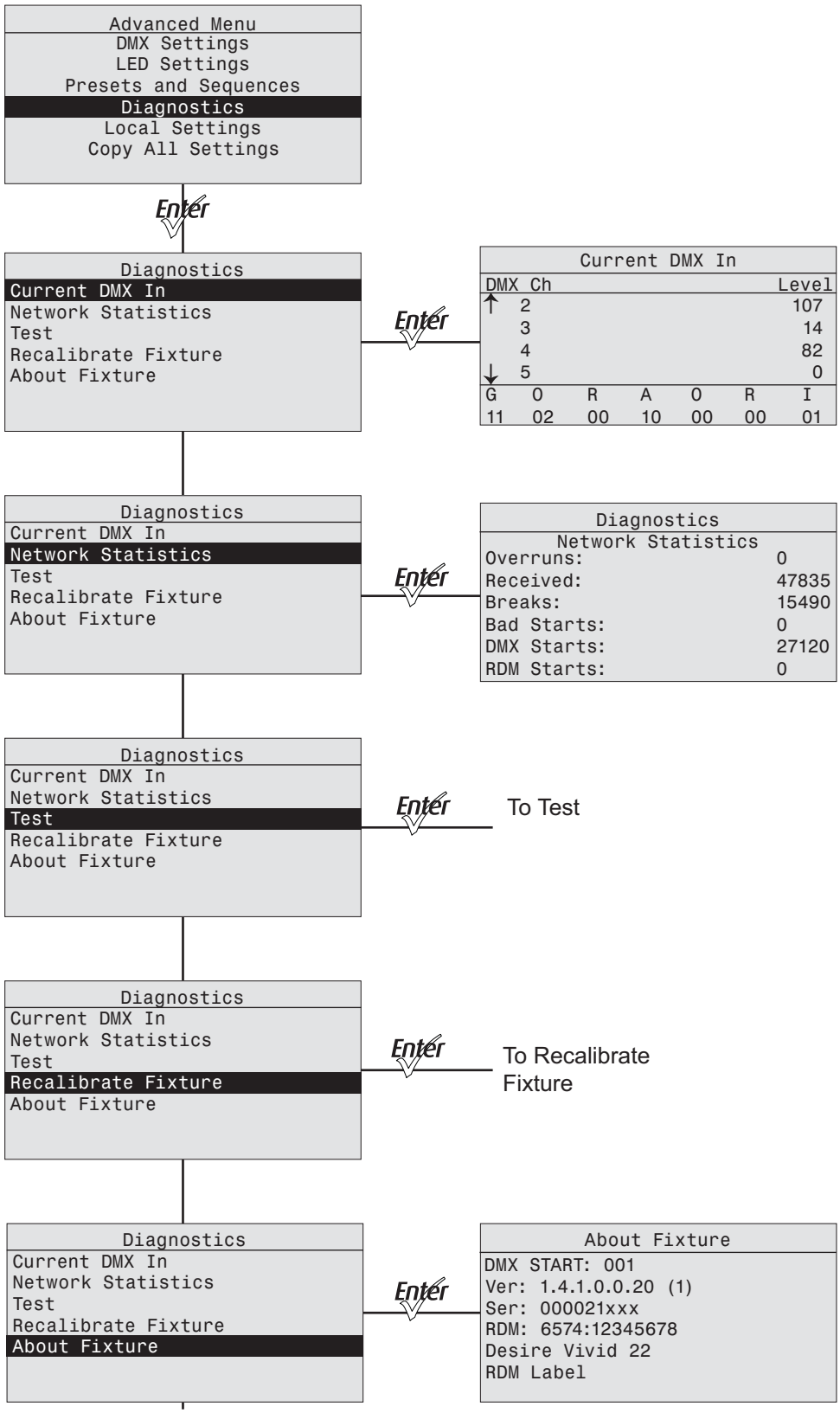


* Copy All Settings appears only when DMX is not present.

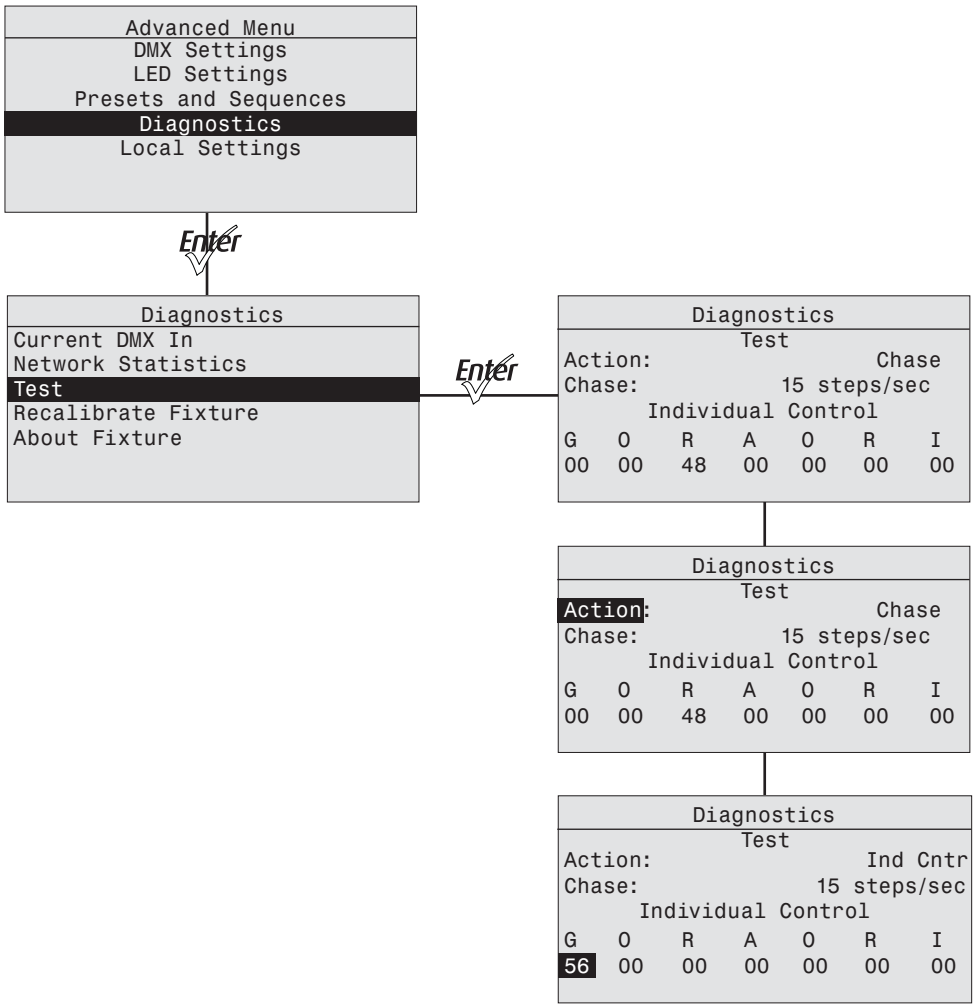
Sequences and Quick Color Menus (Vivid, Lustr+, Fire and Ice, Studio HD)



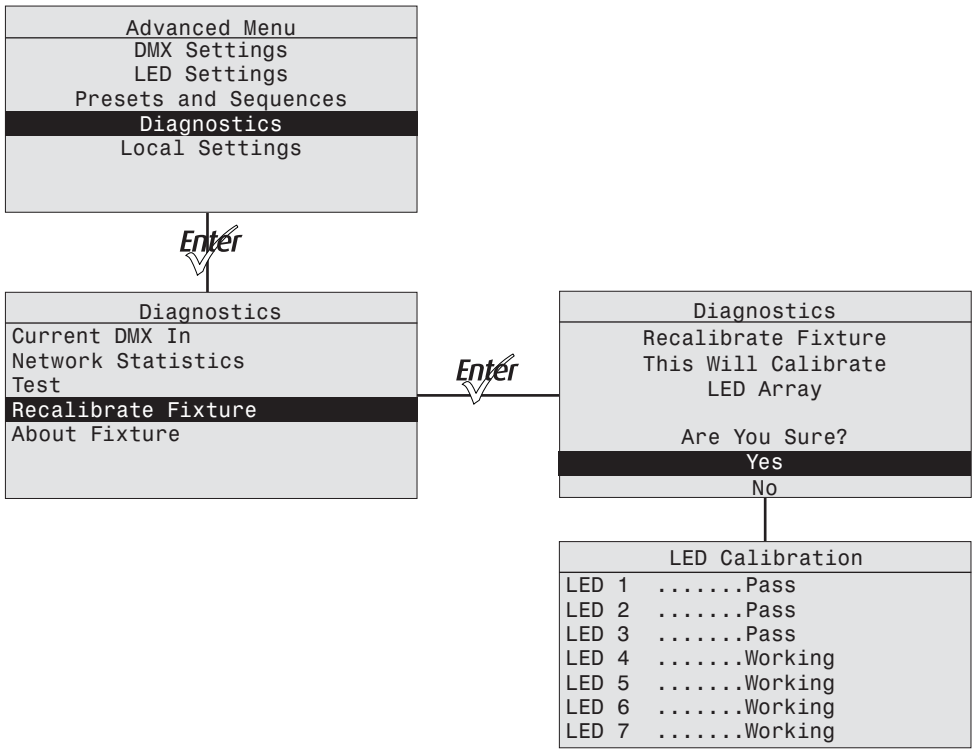
Diagnostics Menu



Diagnostics Test



Diagnostics Recalibrate Fixture



Appendix B

RDM Commands

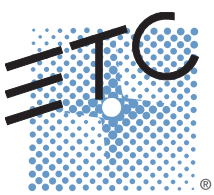
The following table lists the RDM commands applicable to the D60X fixture.

Feature	Get	Set	Queued	RDM Parameter ID	Parameter Values	Enumerations
Status Messages	Yes	No	Yes	E120_STATUS_MESSAGES	—	—
Supported Parameters	Yes	No	Yes	E120_SUPPORTED_PARAMETERS	See RDM E1.20-2006	—
Parameter Description	Yes	No	Yes	E120_PARAMETER_DESCRIPTION	See RDM E1.20-2006	—
Device Info	Yes	No	Yes	E120_DEVICE_INFO	See RDM E1.20-2006	—
Device Model Description	Yes	No	Yes	E120_DEVICE_MODEL_DESCRIPTION	ASCII string for Model Description	—
Manufacturer Label	Yes	No	Yes	E120_MANUFACTURER_LABEL	ASCII string for manufacturer label	—
Device Label	Yes	Yes	Yes	E120_DEVICE_LABEL	ASCII string for device label	—
Factory Defaults	No	Yes	Yes	E120_FACTORY_DEFAULTS	None	—
Software Version Label	Yes	No	Yes	E120_SOFTWARE_VERSION_LABEL	ASCII string for software label	—
DMX Personality	Yes	Yes	Yes	E120_DMX_PERSONALITY	0 thru 7	"7CH, 8CH, HSI, HSIC, RGB, EHSI, EHSIC"
DMX Personality Description	Yes	No	Yes	E120_DMX_PERSONALITY_DESCRIPTION	0 thru 7	"7CH, 8CH, HSI, HSIC, RGB, EHSI, EHSIC"
DMX Start Address	Yes	Yes	Yes	E120_DMX_START_ADDRESS	1 thru 512	DMX Address
Slot Info	Yes	No	No	E120_SLOT_INFO	—	—
Slot Description	Yes	No	No	E120_SLOT_DESCRIPTION	—	—
Default Slot Value	Yes	No	No	E120_DEFAULT_SLOT_VALUE	—	—
Sensor Definition	Yes	No	Yes	E120_SENSOR_DEFINITION	0 thru 8	"LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED Ambient, Control Ambient"
Sensor Value	Yes	No	Yes	E120_SENSOR_VALUE	0 thru 8	"LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED Ambient, Control Ambient"
Identify Device	Yes	Yes	Yes	E120_IDENTIFY_DEVICE	"0, 1"	"Stop Identify, Start Identify"
Reset Device	No	Yes	Yes	E120_RESET_DEVICE	—	—
LED Curve	Yes	Yes	Yes	ETC_LED_CURVE	"0, 1, 2, 3"	"Standard, Incandescent, Linear, Quick"
LED Curve Description	Yes	No	Yes	ETC_LED_CURVE_DESCRIPTION	"0, 1, 2, 3"	"Standard, Incandescent, Linear, Quick"

Feature	Get	Set	Queued	RDM Parameter ID	Parameter Values	Enumerations
Strobe	Yes	Yes	Yes	ETC_LED_STROBE	"0, 1"	"Disabled, Enabled"
Output Mode	Yes	Yes	Yes	ETC_LED_OUTPUT_MODE	"0, 1, 2"	"Regulated, Boost, Protected"
Output Mode Description	Yes	No	Yes	ETC_LED_OUTPUT_MODE_DESCRIPTION	"0, 1, 2"	"Boost, Regulated, Protected"
Red Shift[a]	Yes	Yes	Yes	ETC_LED_RED_SHIFT	"0, 1"	"Disabled, Enabled"
White Point[a]	Yes	Yes	Yes	ETC_LED_WHITE_POINT	"0, 1, 2, 3"	"2950K, 3200K, 5600K, 6500K"
White Point Description[a]	Yes	No	Yes	ETC_LED_WHITE_POINT_DESCRIPTION	"0, 1, 2, 3"	"2950K, 3200K, 5600K, 6500K"
Output Frequency	Yes	Yes	Yes	ETC_LED_FREQUENCY	900 thru 1500	Hertz
Data Loss Behavior	Yes	Yes	Yes	ETC_DMX_LOSS_BEHAVIOR	"0, 1, 2"	"Instant Black, Wait 2 min, HLL"
Data Loss Behavior Description	Yes	No	Yes	ETC_DMX_LOSS_BEHAVIOR_DESCRIPTION	"0, 1, 2"	"Instant Black, Wait 2 min, HLL"
Plus Seven[a]	Yes	Yes	Yes	ETC_LED_PLUS_SEVEN	"0, 1"	"Disable, Enable"
Backlight Brightness	Yes	Yes	Yes	ETC_BACKLIGHT_BRIGHTNESS	0 thru 255	"0 = off, 255 = max brightness"
Backlight Timeout	Yes	Yes	Yes	ETC_BACKLIGHT_TIMEOUT	"0, 1, 2, 3, 4"	"0 = Never, 1 = 30sec, 2 = 1min, 3 = 5min, 4 = 15min"
Status Indicators	Yes	Yes	Yes	ETC_STATUS_INDICATORS	"0, 1"	"0 = Indicators Off, 1 = On"
Recalibrate Fixture	No	Yes	No	ETC_RECALIBRATE_FIXTURE	—	—
Over Temp Mode	Yes	Yes	Yes	E120_ETC_OVERTEMPMODE	"0, 1"	"0 = Dark, 1 = Visible"
Quick Setup Mode	Yes	Yes	Yes	E120_ETC_SIMPLESETUPMODE	"0, 1, 2, 3, 4, 5"	"0 = General, 1 = Stage, 2 = Arch, 3 = Effects, 4 = Studio, 5 = Advanced"
LED Strobe Description	Yes	No	No	E120_ETC_LED_STROBE_DESCRIPTION	"0, 1"	—
LED Red Shift Description[a]	Yes	No	No	E120_ETC_LED_RED_SHIFT_DESCRIPTION	"0, 1"	—
LED Plus Seven Description[a]	Yes	No	No	E120_ETC_LED_PLUS_SEVEN_DESCRIPTION	"0, 1"	—
Backlight Timeout Description	Yes	No	No	E120_ETC_BACKLIGHT_TIMEOUT_DESCRIPTION	"0, 1, 2, 3, 4"	—
Quick Setup Description	Yes	No	No	E120_ETC_SIMPLESETUPMODE_DESCRIPTION	"0, 1, 2, 3, 4, 5"	—
Over Temp Description	Yes	No	No	E120_ETC_OVERTEMPMODE_DESCRIPTION	"0, 1"	—
Prepare For Software Download	No	Yes	No	E120_ETC_PREPAREFORSOFTWAREDOWNLOAD	—	—
Get requested CIE 1931 (x,y) coordinate	Yes	No	No	E120_ETC_LED_REQUESTED_XY	0 to 32767	0 = 0.0 32767 = 1.0

Feature	Get	Set	Queued	RDM Parameter ID	Parameter Values	Enumerations
Get current CIE 1931 (x,y) coordinate	Yes	No	No	E120_ETC_LED_CURRENT_XY	0 to 32767	0 = 0.0 32767 = 1.0
Get current PWM duty cycle	Yes	No	No	E120_ETC_LED_CURRENT_PWM	0 to 32767	—
Get LED CIE Tristimulus values	Yes	No	No	E120_ETC_LED_TRISTIMULUS	See ETC Manf RDM doc	—
Get LED information	Yes	No	No	E120_ETC_LED_INFORMATION	See ETC Manf RDM doc	—

a) Fire, Ice, Studio, Lustr+ only



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7410M1200-1.8.0 ▪ Rev B ▪ Released 2015-11 ▪ Product information and specifications subject to change.