



# ColorSource ThruPower User Manual

Version 1.2.0

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# Introduction

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Welcome to the ColorSource ThruPower User Manual. ColorSource ThruPower is a passively cooled wall-mount cabinet designed for use in low noise environments. This product continues the ETC tradition of providing the highest quality products for the entertainment and architectural lighting market.

## Document conventions

This document uses the following conventions to draw your attention to important information.



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

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**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.*

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

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

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All user documents are available for free download from our website: [etconnect.com](http://etconnect.com).

Please email comments about this manual to: [TechComm@etconnect.com](mailto:TechComm@etconnect.com).

## Help from ETC Technical Services

If you are having difficulties, your most convenient resources are the references given in this document. To search more widely, try the ETC website at [etcconnect.com](http://etcconnect.com). If your questions are not sufficiently addressed by these resources, contact ETC Technical Services directly at one of the offices identified below. Emergency service is available from all ETC offices outside of normal business hours.

*When calling for help, please:*

- Have a detailed description of the problem
- Be near the equipment, for troubleshooting
- Have the notification number if you have called in previously

### 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  
[service@etcconnect.com](mailto:service@etcconnect.com)

### United Kingdom

Electronic Theatre Controls Ltd.  
Technical Services Department  
26-28 Victoria Industrial Estate  
Victoria Road,  
London W3 6UU England  
+44 (0)20 8896 1000  
[techservtld@etcconnect.com](mailto:techservtld@etcconnect.com)

### Asia

Electronic Theatre Controls Asia, Ltd.  
Technical Services Department  
Room 1801, 18/F  
Tower 1, Phase 1 Enterprise Square  
9 Sheung Yuet Road  
Kowloon Bay, Kowloon, Hong Kong  
+852 2799 1220  
[service@etcasia.com](mailto:service@etcasia.com)

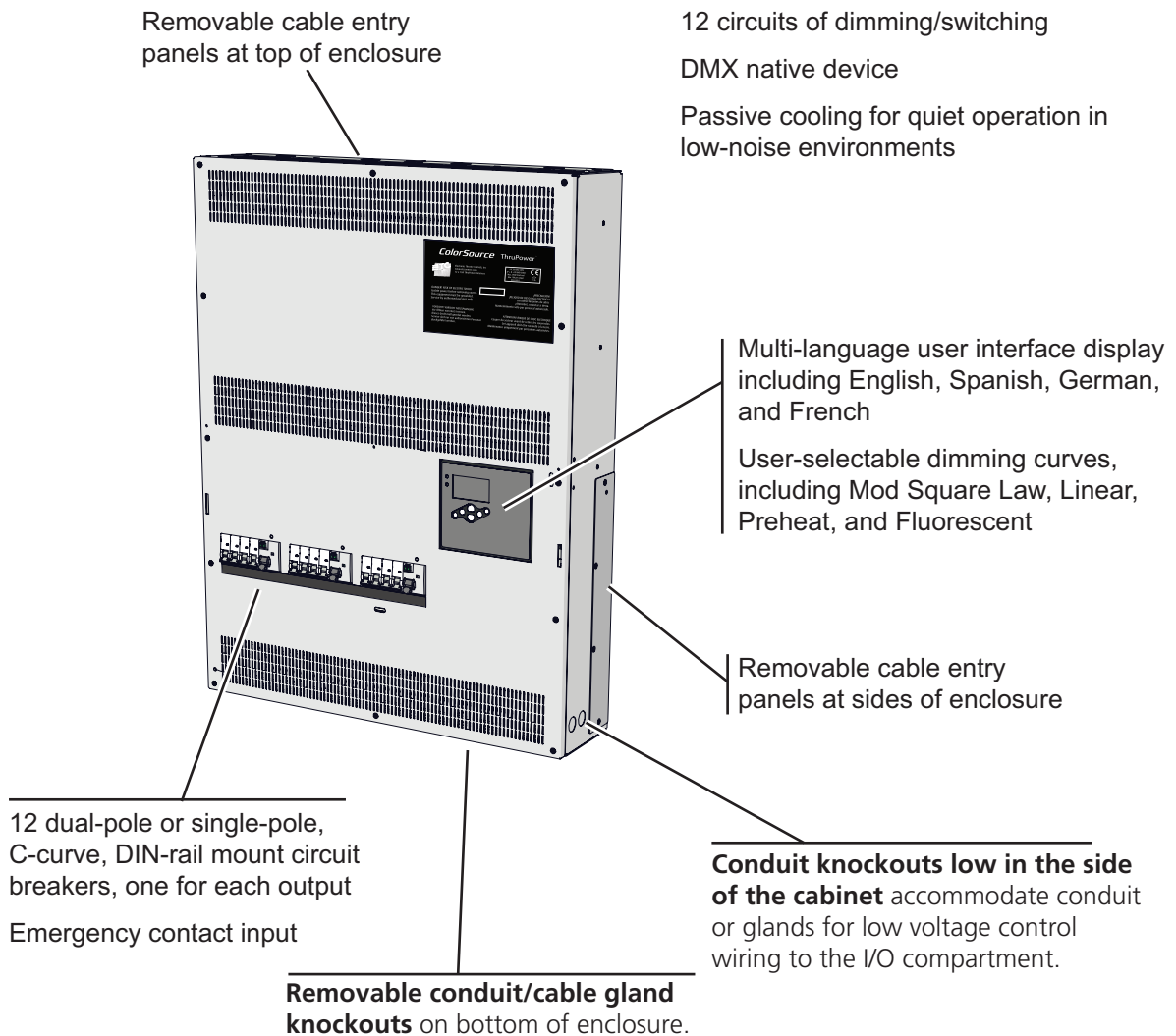
### Germany

Electronic Theatre Controls GmbH  
Technical Services Department  
Ohmstrasse 3  
83607 Holzkirchen, Germany  
+49 (80 24) 47 00-0  
[techserv-hoki@etcconnect.com](mailto:techserv-hoki@etcconnect.com)

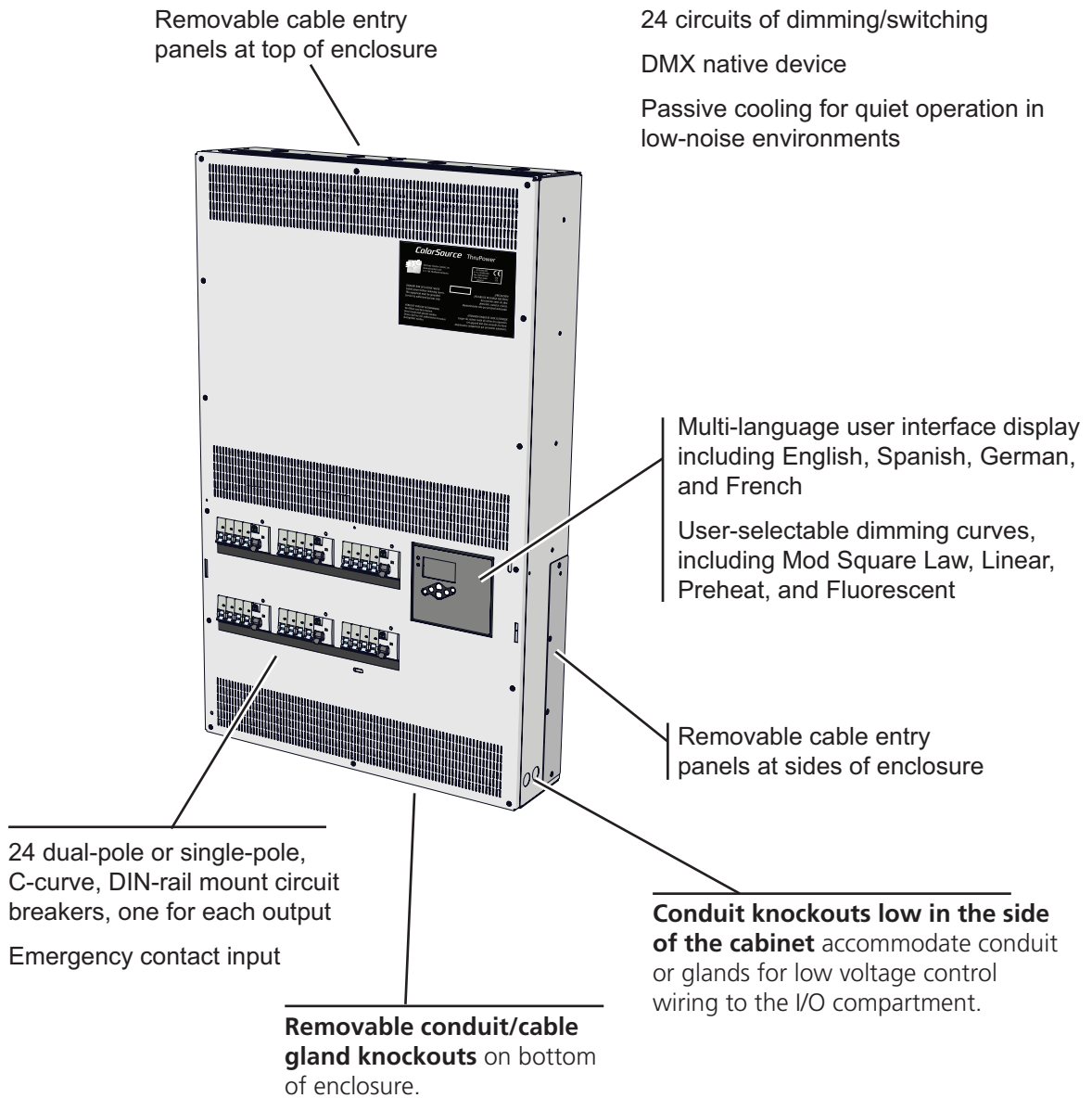
# Overview

The ColorSource ThruPower is designed to provide professional quality dimming, packaged for venues that require affordable, professional quality wall-mount dimming in low noise environments. The cabinet may be installed with or without other system components making it a cost-effective power solution.

## 12-circuit models (Standard and Enhanced)



## 24-circuit models (Standard only)



### Features

- DMX native device
- Passive cooling for quiet operation in low-noise environments
- Multi-language user interface display including English, Spanish, German, and French
- Removable cable entry panel at top of enclosure
- User-selectable dimming curves, including Mod Square Law, Linear, Preheat, and Fluorescent
- Dual-pole or single-pole, C-curve, DIN-rail mount circuit breaker for each output
- Emergency contact input





**WARNING: RISK OF DEATH BY ELECTRIC SHOCK!** Failure to disconnect all power to the cabinet before working inside could result in serious injury or death. This equipment is intended to be serviced and installed by suitably qualified personnel only.

## Option kits

The following option kits are available for the ColorSource ThruPower.

Model	Part Number	Option	Description
CSTP-DIN	7121K1006	ColorSource ThruPower DIN Accessory Kit	Contains two lengths of DIN rail, end stops, and fixings for mounting DIN rail products within the CSTP Accessory Bay.
CSTP-DOOR	7121K1000	Locking Door Kit	A locking front cover that provides controlled access to the circuit breakers and the user interface. Field installable. (Note that if you plan to use the Locking Door Kit and are installing multiple cabinets, leave enough space between the cabinets to install the locking door kit.)
CSTP-KIT-ND-RCD-24	7121K1001	RCD/4 Breaker Kit for 24 Circuit ND Cabinet	Factory or field-installable option. Provides a 30 mA RCD for each set of 4 circuits in the cabinet.
CSTP-KIT-ND-RCD-12	7121K1002	RCD/4 Breaker Kit for 12 Circuit ND Cabinet	
CSTP-KIT-SP-RCD-24	7121K1003	RCD/4 Breaker Kit for 24 Circuit SP Cabinet	
CSTP-KIT-SP-RCD-12	7121K1004	RCD/4 Breaker Kit for 12 Circuit SP Cabinet	

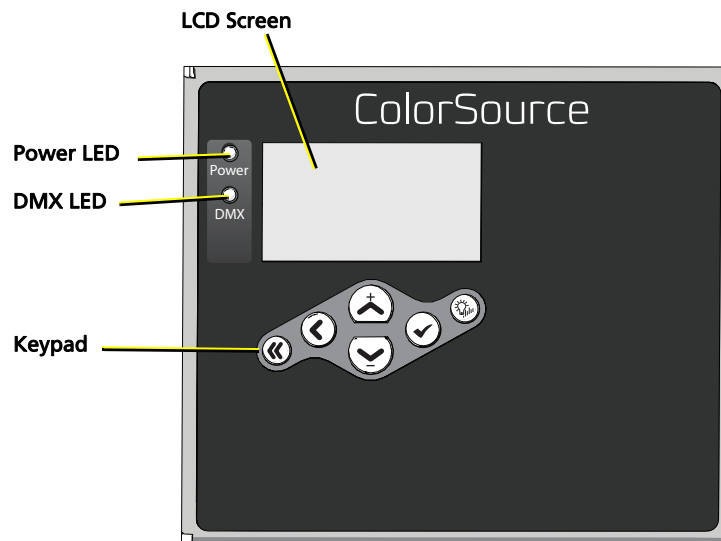
# Chapter 1

## Menus and configuration

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### User interface

The ColorSource ThruPower user interface and menu structure provide you with an easy, intuitive setup with multiple built-in language options.



### LED indicators

#### ***Power***

The power LED has four indication patterns:

- Blue LED: Indicates that the operation is normal and power is within normal parameters.
- Slow blink pattern: Indicates a problem with incoming power such as no or reduced voltage.
- Rapid blink pattern (together with LCD Backlight): The cabinet has been sent an *Identify* command via RDM.
- Double blink pattern: The cabinet is in the process of upgrading firmware.

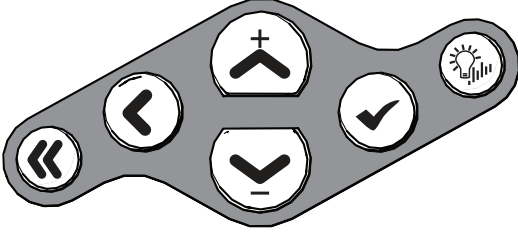
#### ***DMX***

The DMX LED is a red/green LED with the following indication patterns:

- Steady green illumination: Indicates that a DMX signal is present.
- Green LED in blinking pattern: Indicates that no DMX signal is present.
- Steady red illumination: Indicates that the unit is in Panic mode and is outputting a DMX signal.

## Keypad

The keypad allows you to easily navigate the menu system.



LED or Symbol	Description
⏪	Return to the home menu
⏩	Move backward one level in the menu
✓	Accept a menu choice or store a value
+	Increase a value or scroll through the menu
-	Decrease a value or scroll through the menu
💡	Activate the Test menu

## LCD

The LCD is a high-contrast, backlit display, 8 lines high and 20 characters wide.

DMX	
Mode	Start Address
DMX Start	1
DMX Loss Behaviour	
Record DMX Snapshot	

### *When configuring the ColorSource ThruPower:*

Navigate the menus using the **[Increase]** (+) or **[Decrease]** (-) buttons. If a complete row is highlighted, the (+) or (-) button will move up or down through rows. If the right hand section of a row is highlighted, using the (+) or (-) button will edit the selected value. In this mode, press the **[Enter]** (✓) button to confirm the edit, or press the **[Back]** (<) button to discard the edited value.

### *Adjusting the contrast of the LCD display*

To adjust the contrast of the LCD display, press and hold the **[Home]** (<<) button while pressing the **[Increase]** (+) or **[Decrease]** (-) button.

## Initial power-up display

The first time you apply power to the cabinet, you are asked to choose a language for the operating system.

Choose Language
English
Français
Deutsch
Espanol

## ThruPower configuration

Configure the ThruPower operational behaviors through the **Mode** menu. [See Mode on page 11.](#)

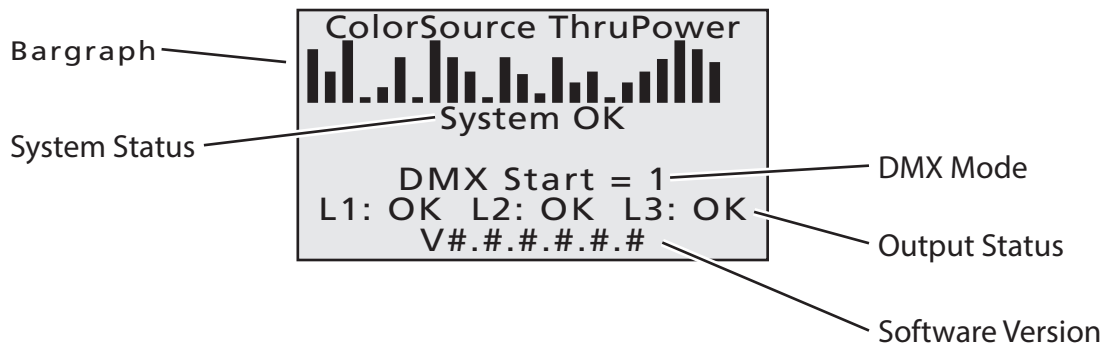
Mode
Dimmer
Relay
TPAuto
Always On
Off

# Menu structure

---

## Home screen

Following initial start-up and the selection of a language, the Home screen becomes the primary display when the ColorSource ThruPower is turned on. From anywhere in the menu system, you can return to the Home screen at any time by pressing the [Home] (<<) button. The display returns to the Home screen after 2 minutes of inactivity unless you change the default UI Timeout value. [See UI Timeout on page 16.](#)



*The Home screen displays the following:*

*Bargraph* – Shows active dimmer levels. Shows 12 or 24 bars, depending on the ColorSource model.

*System Status* – Shows one of three conditions:

- System OK – The system is operating normally
- Emergency Active – Emergency Input is active
- Temperature High – System is in a high-temperature condition



**WARNING:** *If an overtemperature condition is displayed, the internal heatsinks have reached 100° Celsius. Ensure that the exterior of the product is properly cooled:*

- The ambient temperature surrounding the cabinet must not exceed 40° Celsius.
- The cabinet must be provided adequate airflow.
- The vents must not be obstructed.

*Once the overtemperature condition is corrected, the error should clear. If the error persists, contact ETC Technical Services for assistance.*

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*DMX Mode* – Shows one of two conditions:

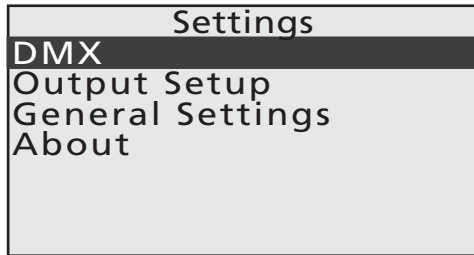
- DMX Start = [start address] – System is in Start Address mode
- DMX Patch – System is in Patched mode

*Power Status* – Shows the status of the incoming three power phases (L1, L2, and L3)

- OK – Output is detected OK
  - ERR – The phase is missing or is outside of the acceptable voltage and frequency for the cabinet
- Software Version* – The current software version

## Settings menu

You can open the **Settings** menu from the Home screen by pressing any button. Through the **Settings** menu you can open any of three configuration menus or view system version numbers.



### **DMX**

Used to set DMX-related parameters.

### **Output Setup**

Used to set output-related parameters.

### **General Settings**

Used to configure standard features of the ColorSource ThruPower cabinet.

### **About**

Displays the current software versions.

## DMX

The **DMX** menu is used to set the DMX mode and related parameters, as well as the DMX loss behavior.

DMX	
Mode	Start Address
DMX Start	1
DMX Loss Behaviour	
Record DMX Snapshot	

### *Mode*

The **Mode** menu allows you to switch between **Start Address** and **Patch**. To select the mode:

- 1: Scroll to **Mode** and then press the **[Enter]** (✓) button.
- 2: Press the **[Increase]** (+) or **[Decrease]** (–) button to scroll between the two menu options, **Start Address** or **Patch**.
- 3: Press the **[Enter]** (✓) button to set the mode option.

### *DMX Start*

The **DMX Start** menu and the start address are displayed if you selected the **Start Address** menu option in the **Mode** menu. The start address range is 001–512, minus the cabinet output count. Set the DMX start address as follows:

- 1: Scroll to **DMX Start** and then press the **[Enter]** (✓) button.
- 2: Press the **[Increase]** (+) or **[Decrease]** (–) button to increment or decrement the start address range.
- 3: Press the **[Enter]** (✓) button to set the start address.
- 4: When finished, press the **[Back]** (<) button to return to the previous menu, or press the **[Home]** (<<) button to return to the Home screen, where you can confirm that “DMX Start” is displayed as the active DMX mode.

### *DMX Patch*

The **DMX Patch** menu is displayed if you selected the **Patch** menu option in the **Mode** menu. **DMX Patch** allows you to patch different DMX addresses to selected dimmers. You use this menu whenever setting the DMX start address is not sufficient. To change the DMX patch parameters:

- 1: Scroll to **DMX Patch** and then press the **[Enter]** (✓) button.

DMX Patch	
Output:	1
DMX Address:	1

- 2: Scroll to **Output** and then press the **[Enter]** (✓) button.
- 3: Use the **[Increase]** (+) or **[Decrease]** (–) button to select a higher or lower dimmer channel. Dimmers are numbered 1–12 or 1–24, depending on the ColorSource ThruPower channel count. Initially, the DMX address is patched consecutively with the dimmer channel. If the DMX address should differ from the dimmer channel number, press the **[Enter]** (✓) button.
- 4: Press the **[Increase]** (+) or **[Decrease]** (–) button to scroll through the range of dimmer channels.
- 5: Press the **[Enter]** (✓) button to set the dimmer channel number.
- 6: Scroll to **DMX Address** and then press the **[Enter]** (✓) button.
- 7: Press the **[Increase]** (+) or **[Decrease]** (–) button to scroll through the range of DMX addresses.
- 8: Press the **[Enter]** (✓) button to set the DMX address.
- 9: Continue with steps 2 through 8 until all dimmers are patched to the required DMX address.
- 10: When finished, press the **[Back]** (<) button to return to the previous menu, or press the **[Home]** (<<) button to return to the Home screen, where you can confirm that **DMX Patch** is displayed as the active DMX mode.

### ***DMX Loss Behavior***

The **DMX Loss Behavior** menu allows you to set the behavior of the dimmers when data communication is lost.

DMX Loss Behaviour			
Mode:	Hold	Last	Look
Wait:	0 min	3 sec	
Fade:	0 min	3 sec	

### **Mode**

In the **Mode** menu option, select the loss behavior as follows:

- 1: Press the **[Enter]** (✓) button.
- 2: Use the **[Increase]** (+) or **[Decrease]** (–) button to highlight the desired loss behavior:
  - **Hold Last Look** – Holds the active dimmers at whatever levels they were receiving when the data was lost. The dimmers remain on until either data is restored or the cabinet is reset.
  - **Wait and Fade** – Holds active dimmers for a span of time, at whatever levels they were receiving when the data was lost, and then fades those dimmers to zero in a defined fade time. You can define both the wait time and the fade time, within a maximum of 59min:59sec.
- 3: Press the **[Enter]** (✓) button.

### **Wait**

When **Wait and Fade** is selected, this menu option allows you to set the time span for holding the dimmer levels before fading. To change the wait time:

- 1: Scroll to **Wait** and press the **[Enter]** (✓) button.
- 2: Use the **[Increase]** (+) or **[Decrease]** (–) button to set the minutes value, and then press the **[Enter]** (✓) button. Repeat for the seconds value.
- 3: Press the **[Enter]** (✓) button.



## Fade

When **Wait and Fade** is selected, this menu option allows you to set the time span over which the dimmers fade to zero. To change the fade time:

- 1: Scroll to **Fade** and press the **[Enter]** (✓) button.
- 2: Use the **[Increase]** (+) or **[Decrease]** (–) button to set the minutes value, and then press the **[Enter]** (✓) button. Repeat for the seconds value.
- 3: Press the **[Enter]** (✓) button.

When finished, press the **[Back]** (<) button to return to the previous menu, or press the **[Home]** (<<) button to return to the Home screen.

## DMX Snapshot

ColorSource ThruPower has a feature that allows you to record a DMX snapshot and to use this snapshot as a DMX source when the Emergency contact input is active. This allows the unit to bring on luminaires that require a DMX input to output light, either in an emergency situation or as a single “preset” look, controlled by a switch. During normal operation DMX is passed through the unit, but when the Emergency look is triggered, the unit transfers the DMX output to an internally generated source of DMX.

To record a DMX snapshot:

- 1: Connect a DMX source such as a lighting console, with the levels set as you would like them recorded.
- 2: From the user interface, select **DMX**, highlight the **Record DMX Snapshot** menu option, and then press the **[Enter]** (✓) button.
- 3: If the recording is created, a success message is shown. After a short time, the display returns to the previous screen.
- 4: If the recording was not successful, an error message is shown. Check that DMX is correctly connected to the panel and that you have control over the outputs. When finished, repeat the procedure by highlighting the **Retry** menu option and then pressing the **[Enter]** (✓) button.

## Output Setup

The **Output Setup** menu is used to set circuit-related parameters.

Output Setup	
From Dimmer:	1 to 1
Mode:	Dimmer
Curve:	Mod-Square
Emergency	Yes
Threshold	1%

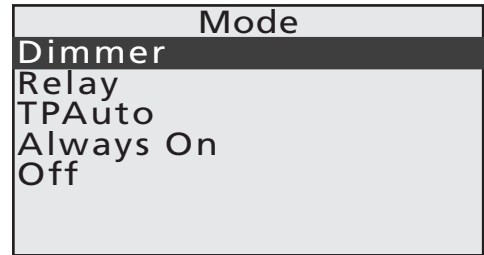
## From Dimmer

The **From Dimmer** menu allows you to select the dimmers for which you will configure the output. To select the dimmers:

- 1: Scroll to **From Dimmer** and then press the **[Enter]** (✓) button.
- 2: Press the **[Increase]** (+) or **[Decrease]** (–) button to scroll through the dimmer numbers, and then press the **[Enter]** (✓) button to set the first dimmer in the range.
- 3: Repeat the preceding step to set the last dimmer in the range.

## Mode

The **Mode** menu allows you to select and apply the output mode to the selected circuits.



## Dimmer

The output will dim according to the curve setting selected in the dimmer **Curve** menu (see [Curve](#) on [page 14](#)). The relay will not close at any level, including at full.

## Relay

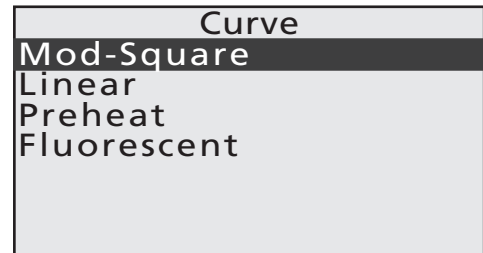
While the control level is below the threshold configured in the **Threshold** menu, the relay is switched off. When the control level reaches the threshold, the relay is switched on. [See Threshold on page 16](#).

## TPAuto

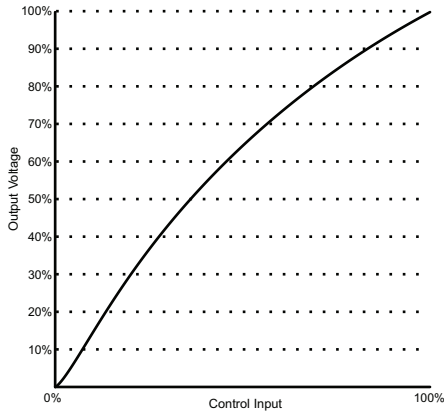
With ThruPower, dimming is operated between the DMX levels of 0 and 254, while latching the relay at DMX level 255. **TPAuto** can be used to allow the configuration of dimming versus relay mode, which can be stored as part of console show files for consoles that do not have RDM functionality available.

## Curve

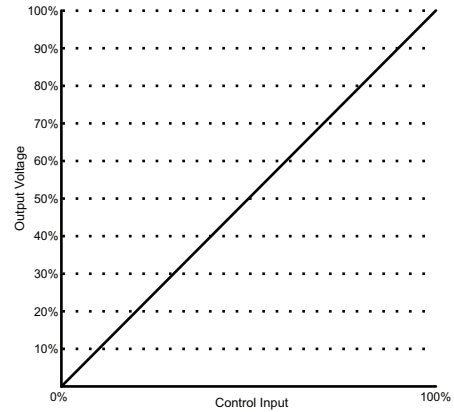
The **Curve** menu allows you to select and apply one of four curves.



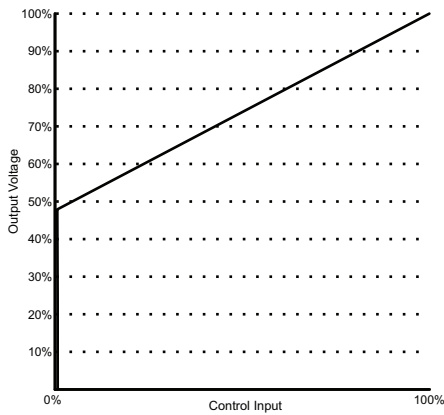
The ColorSource ThruPower is capable of dimming or switching multiple load types, including incandescent, low voltage, and 2-wire fluorescent. You can choose from four output curves:



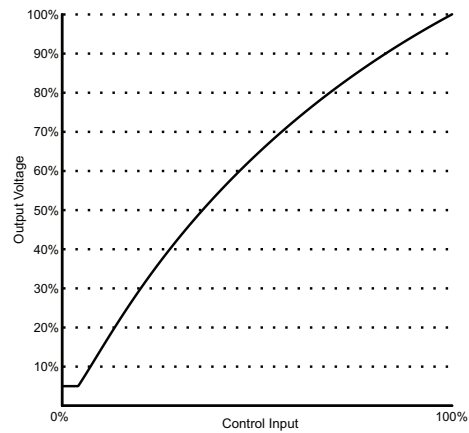
**Mod-Square:** The mod-square curve provides a non-linear relationship between control level and voltage. For most tungsten lamps, this provides the best relationship between brightness and level, and is the default.



**Linear:** The linear curve provides a linear relationship between input control level and output voltage.



**Fluorescent:** The fluorescent curve provides a linear curve which steps to 46% level when the level is raised above zero – this is helpful with dimmable fluorescents and other non-tungsten loads. This initial voltage is 47% of the incoming voltage.



**Preheat:** The preheat curve provides a fixed preheat at 5% of the incoming voltage (12V assuming a 230V input). Preheat is used to extend lamp life when lamps are being turned on rapidly from cold.

## Emergency

The **Emergency** menu option allows you to configure the emergency contact input. When an active emergency contact is received, all non-emergency dimmers in the cabinet are forced off, while all user-selected emergency dimmers are driven to full.

When an emergency contact input is active, the LCD displays a message advising "Emergency Active," and the menu locks out all access to the system. After normal power is restored, the cabinet resumes normal operation.

Activate the emergency contact input as follows:

- 1: After selecting the dimmers, scroll to the **Emergency** menu option and then press the **[Enter]** (✓) button.
- 2: Use the **[Increase]** (+) or **[Decrease]** (–) button to scroll between **Yes** or **No**, and then press the **[Enter]** (✓) button.

## Threshold

The **Threshold** menu option allows you to set the percentage level at which the relay switches on, within a range of 1-99% when the circuit is in relay mode. The default value is 1%.

## General Settings

The **General Settings** menu is used to configure standard features of your ColorSource ThruPower cabinet.

General Settings	
Backlight	Auto
UI Timeout (min):	2
Language	English
Relay Delay (ms):	0
Inrush Protect:	Yes
Restore Defaults	

## BackLight

To configure the LCD Backlight:

- 1: From the **General Settings** menu navigate to **Backlight**.
- 2: Press the **[Enter]** (✓) button.
- 3: Use the **[Increase]** (+) or **[Decrease]** (–) button to set the Backlight mode:
  - **Auto** – LCD dims when not in use for a period of time
  - **Off** – Always off
  - **On** – Always on
- 4: Press the **[Enter]** (✓) button.

## UI Timeout

**UI Timeout** allows you to set the time that elapses before the display returns to the Home screen when the display is not in use.

- 1: From the **General Settings** menu, navigate to **UI Timeout**.
- 2: Press the **[Enter]** (✓) button.
- 3: Use the **[Increase]** (+) or **[Decrease]** (–) button to set the time.
- 4: Press the **[Enter]** (✓) button.

## Language

The **Language** menu allows you to select from multiple language options:

- 1: Press the **[Enter]** (✓) button.
- 2: Use the **[Increase]** (+) or **[Decrease]** (–) button to highlight the language:
  - **English**
  - **Français** (French)
  - **Deutsch** (German)
  - **Español** (Spanish)
- 3: Press the **[Enter]** (✓) button.

## Relay Delay

**Relay Delay** allows you to set a delay that the ColorSource ThruPower uses to sequence relays on and off. This helps minimize the effects of inrush when the system is switching electronic or LED loads on relays. The time is configured in milliseconds of delay between relay activation.

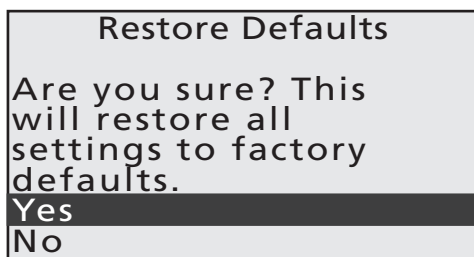
- 1: From the **General Settings** menu navigate to **Relay Delay**.
- 2: Press the **[Enter]** (✓) button.
- 3: Use the **[Increase]** (+) or **[Decrease]** (–) button to set the delay. The value changes in increments of 50 ms.
- 4: Press the **[Enter]** (✓) button.

## Inrush Protect

**Inrush Protect** allows you to turn on or off the Inrush Protect feature. In a system that includes high-wattage tungsten lamps, Inrush Protect provides a gradual start for the lamps to minimize the effects of inrush current. The feature gradually increases the voltage over approximately 10 mains cycles when the state of the lamp is changed from off to any non-zero level.

- 1: From the **General Settings** menu navigate to **Inrush Protect**.
- 2: Use the **[Increase]** (+) or **[Decrease]** (–) button to select **Yes** or **No**.
- 3: Press the **[Enter]** (✓) button.

## Restore Defaults



Resets the following attributes to default status:

- Dimmer Curves – Set to **Mod-Square**
- DMX Start Address – Set the start address to 1–12 or 1–24, depending on ColorSource model
- DMX Loss Behavior – Reset to **Hold Last Look**

### Yes

With the **Yes** menu item highlighted, press the **[Enter]** (✓) button to restore the above attributes to default status.

## No

To avoid resetting the above attributes to default, highlight the **No** menu option and then press the **[Enter]** (✓) button. Optionally, press the **[Back]** (<) button to return to the previous menu.

## About

### *Version*

Displays the current software version.

### *DimEng (Dimming Engine)*

Displays the current Dimming Engine version.

### *RDM ID*

Displays the ID of the current RDM device connected.

### *Serial*

Displays the serial number.

### *Triac Board 1 and 2*

Displays the version number, or a dash if not found.

About	
Version	#. #. #. #. #. #
DimEng	#. #. #. #
RDM ID	6874:ABCDE00F
Serial	4500000123
Triac Board 1	12
Triac Board 2	-

## Test menu

The **Test** menu is a tool for testing dimmers and loads. In the absence of a DMX control source, the test menu may also be used to set dimmer levels to snapshot a preset.

To enter the **Test** menu, press the **[Test]**  button from any menu.

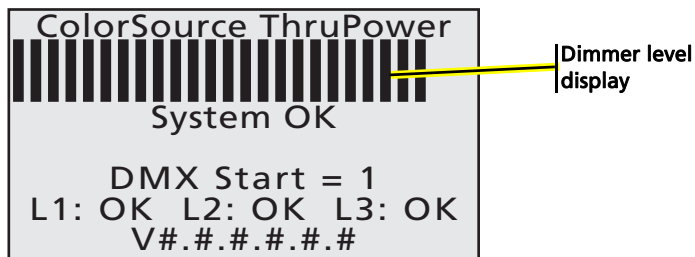
Test	
Dimmer	1 thru 24
Level	100%
Set	
Release All	

### Set dimmer levels in the Test menu

For testing, you can set all dimmers to the same level, or set dimmers individually or in groups to different levels.

### ***To set all dimmers to the same level:***

- 1: In the **Dimmer** menu option, all dimmers are selected by default, either **1 thru 12** or **1 thru 24**, depending on the ColorSource model.
- 2: In the **Level** menu option, **100%** is set by default. To change the level, press the **[Enter]** (✓) button and then the **[Increase]** (+) or **[Decrease]** (–) button. When finished, press the **[Enter]** (✓) button.
- 3: In the **Set** menu option, press the **[Enter]** (✓) button. This activates the dimmers you chose, at the level you selected. This can be verified on the Home screen, by pressing the **[Home]** (<<) button.



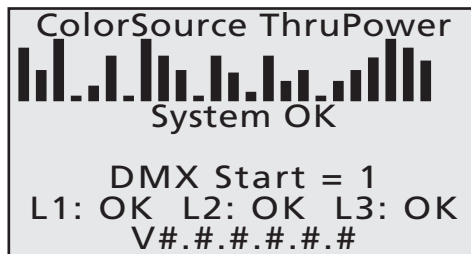
### ***To set groups of dimmers to different levels:***

- 1: In the **Dimmer** menu option, all dimmers are selected by default, either **1 thru 12** or **1 thru 24**, depending on the ColorSource model.
- 2: To select a range of dimmers, press the **[Enter]** (✓) button and then press the **[Increase]** (+) or **[Decrease]** (–) button to set the first dimmer. Press the **[Enter]** (✓) button again and then set the last dimmer in the range, using the **[Increase]** (+) or **[Decrease]** (–) button. When finished, press the **[Enter]** (✓) button.
- 3: In the **Level** menu option, **100%** is set by default. To change the level, press the **[Enter]** (✓) button and then the **[Increase]** (+) or **[Decrease]** (–) button. When finished, press the **[Enter]** (✓) button.
- 4: In the **Set** menu option, press the **[Enter]** (✓) button.
- 5: Repeat steps 2 through 4 to set the remaining groups of dimmers.
- 6: This activates the groups dimmers you chose, at the levels you selected. This can be verified on the Home screen, by pressing the **[Home]** (<<) button.



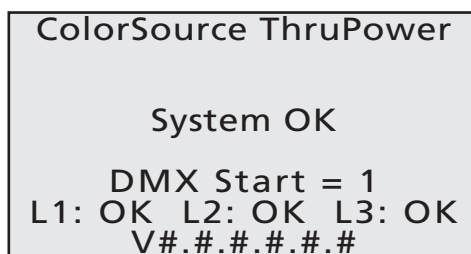
### ***To set individual dimmers to different levels:***

- 1: In the **Dimmer** menu option, all dimmers are selected by default, either **1 thru 12** or **1 thru 24**, depending on the ColorSource model.
- 2: To select an individual dimmer, set the first and last dimmers to the same number. Highlight the **Dimmer** menu option. Press the **[Enter]** (✓) button and then the **[Increase]** (+) or **[Decrease]** (-) button to select the dimmer. Press the **[Enter]** (✓) button again to set the end of range, and press the **[Increase]** (+) or **[Decrease]** (-) button to select the same number. For example, setting both start and end of range numbers to "1" selects dimmer #1, individually. When finished, press the **[Enter]** (✓) button.
- 3: In the **Level** menu option, **100%** is set by default. To change the level, press the **[Enter]** (✓) button and then the **[Increase]** (+) or **[Decrease]** (-) button. When finished, press the **[Enter]** (✓) button.
- 4: In the **Set** menu option, press the **[Enter]** (✓) button.
- 5: Repeat steps 2 through 4 to set the remaining dimmers.
- 6: This activates the dimmers at the levels you selected. This can be verified on the Home screen, by pressing the **[Home]** (<<) button.



### ***Exit the test***

- 1: In the **Dimmer** menu option, press the **[Enter]** (✓) button and then the **[Increase]** (+) or **[Decrease]** (-) button to set the start of range to 1.
- 2: Press the **[Enter]** (✓) button and then the **[Increase]** (+) or **[Decrease]** (-) button to set the end of range to the total number of dimmers, either **12** or **24**. When finished, press the **[Enter]** (✓) button.
- 3: Highlight the **Release All** menu option and then press the **[Enter]** (✓) button.
- 4: This turns off all the dimmers, ending the test. This can be verified on the Home screen, by pressing the **[Home]** (<<) button.





# Appendix A

## Service and maintenance

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To contact ETC Service, refer to [Help from ETC Technical Services](#) on [page 2](#).

### Maintenance

#### Vacuum the vents

Vacuum the dust from the airflow vents regularly. The interval between cleanings is dependent on the amount of dust and other contaminants present in the installation environment. Never allow the vents to become completely blocked with dust.

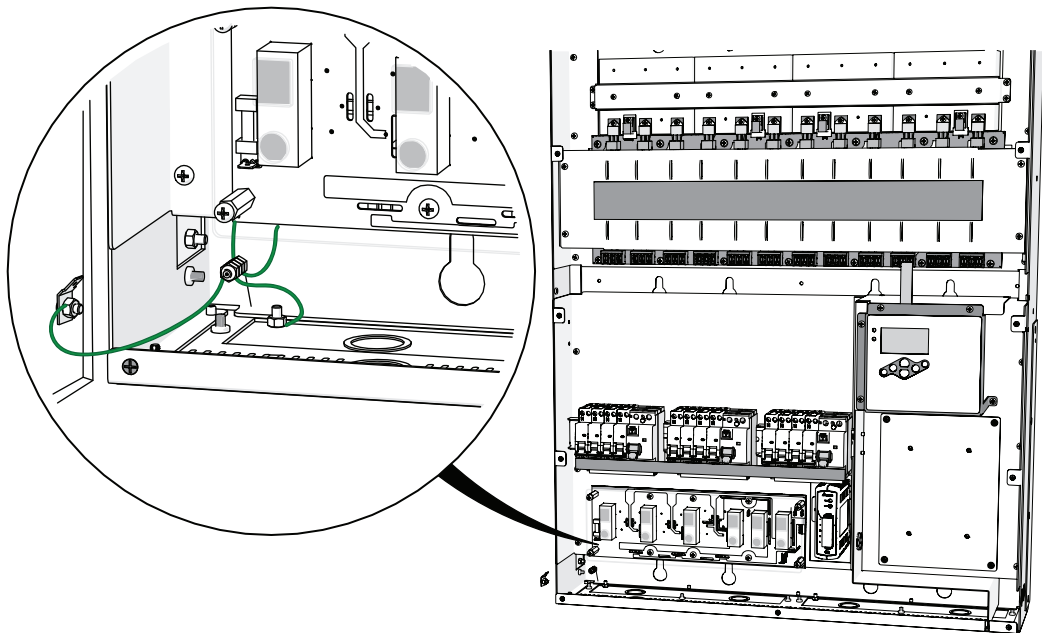
#### Vacuum the interior



**WARNING: RISK OF DEATH BY ELECTRIC SHOCK!** Failure to disconnect all power to the cabinet before working inside could result in serious injury or death. This equipment is intended to be serviced and installed by suitably qualified personnel only.

---

- 1: Disconnect power from the ColorSource ThruPower.
- 2: Remove the front cover of the cabinet and detach the ground wire.
- 3: Vacuum dust from the interior of the cabinet. Use compressed air from a can to blow dust from the circuit boards to avoid possible damage from electrostatic discharge.
- 4: Before applying power to the cabinet, ensure that the ground wire is reattached to the front cover and then reinstall the front cover.



## Replacement parts

The following field-replaceable parts are used in the ColorSource ThruPower. Field replacements are available from ETC or may be purchased at your local electrical supply house.

Location	Part	ETC Part Number
Power Input Board, Location F1	Fuse, 2 A 250 V F 5x20mm	F149
Triac Boards, Locations J1-J12	Triac, 40 A 800 V	Q325-F
Control Board, Chip U10	DMX Transceiver 75LBC182	Z1458-F

For all other field issues, please contact ETC technical services for assistance.

## Troubleshooting

---

Isolate and correct faults in the ColorSource ThruPower, according to the following.

### No Output to the Loads

- Ensure that correct power is supplied to the cabinet, and that the power cables are properly connected.
- Check that the DMX LED shows steady green illumination, indicating that a stable DMX signal is present. A blinking pattern indicates that no DMX signal is present. If the LED is blinking, check the DMX connections according to the ColorSource ThruPower Installation Manual.
- Check that the power LED shows steady blue illumination. A blinking pattern indicates a problem with the incoming power supply. Check the supply with the assistance of a suitably qualified electrician.
- Check that the cabinet is not in over-temperature mode. If the display shows overtemp, cool the cabinet appropriately until outputs turn back on.



**WARNING:** *If an overtemperature condition is displayed, the internal heatsinks have reached 100° Celsius. Ensure that the exterior of the product is properly cooled:*

- The ambient temperature surrounding the cabinet must not exceed 40° Celsius.
- The cabinet must be provided adequate airflow.
- The vents must not be obstructed.

*Once the overtemperature condition is corrected, the error should clear. If the error persists, contact ETC Technical Services for assistance.*

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### Outputs cannot be dimmed

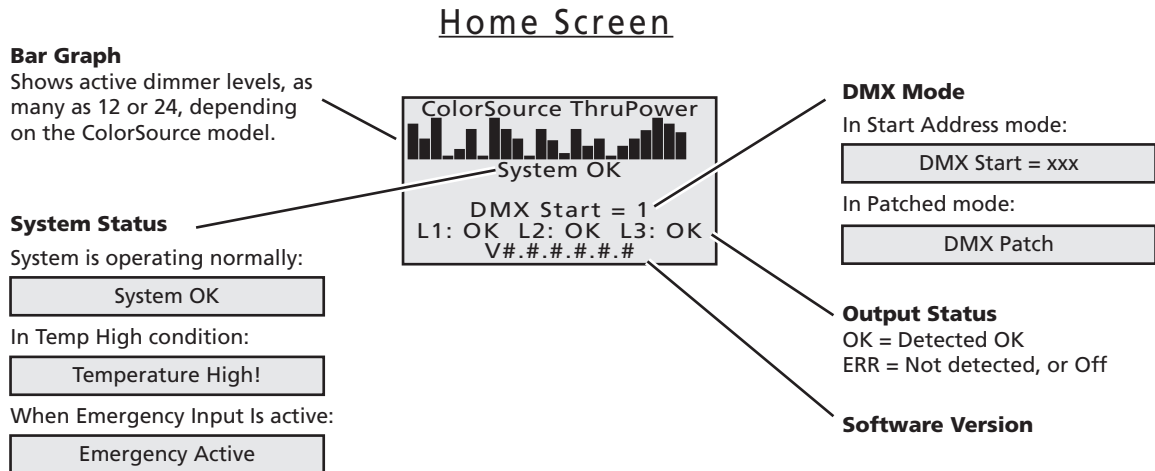
- Ensure that the incoming power to the cabinet is on (verify that Power LED is not blinking).
- Ensure that the outputs are configured for Dimmer mode (not Relay or TPAuto). For more on configuring outputs, see [ThruPower configuration](#) on [page 8](#).

### Outputs cannot be turned off

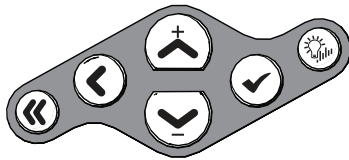
- Ensure that the bar graph on the home screen displays the expected levels for the outputs.
- If the bar graph shows zero but the output is still on, you may have a failed Triac. Consult a qualified service person to have the Triac replaced, or contact ETC technical services.

# Appendix B

## Menu flow chart



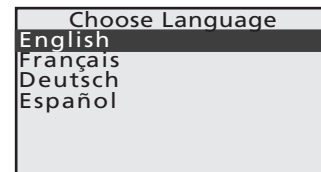
### Keypad



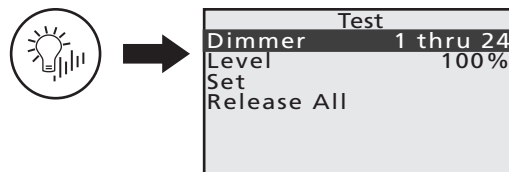
#### Buttons

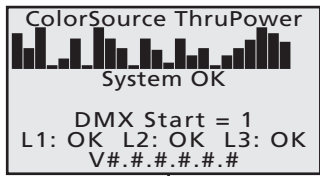
- ⏪ Return to the home screen
- ⏩ Move backward one menu level
- ✓ Accept the menu choice or store a value
- ⏴ Increase a value or scroll upward through the menu
- ⏵ Decrease a value or scroll downward through the menu
- 💡 Activate the Test menu

### First Time Power Up Display

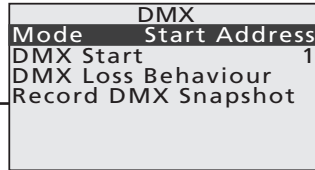
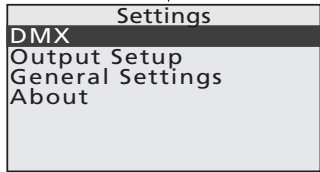


### Test Menu

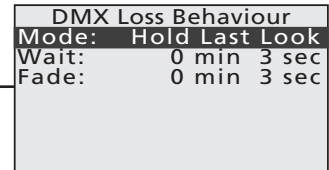
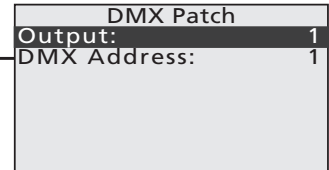
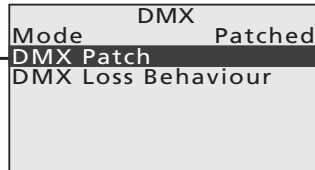




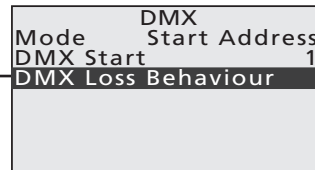
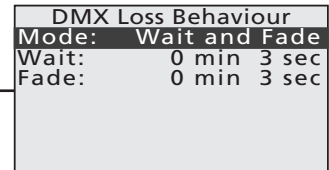
Press any button  
on keypad

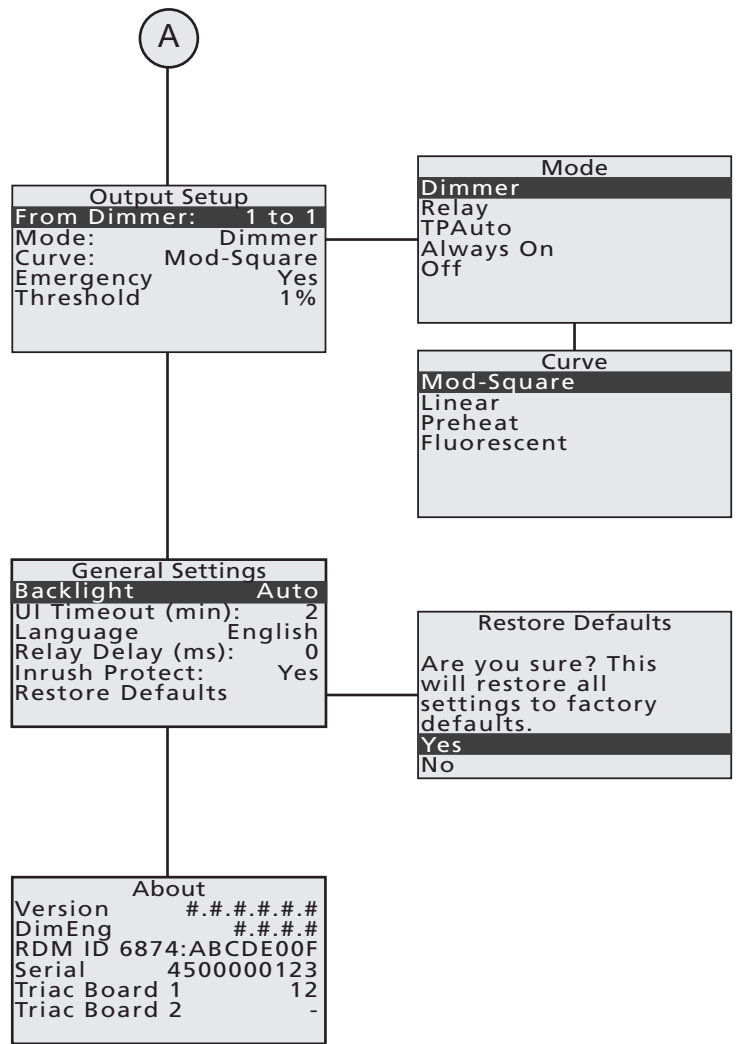


OR



OR











**Corporate Headquarters** Middleton, WI, USA +1 608 831 4116 **London, UK** +44 (0)20 8896 1000  
**Holzkirchen, DE** +49 (80 24) 47 00-0 **Rome, IT** +39 (06) 32 111 683 **Hong Kong** +852 2799 1220 **Paris, FR** +33 1 4243 3535  
**Web** [etconnect.com](http://etconnect.com) **Support** [etconnect.com/contactETC](http://etconnect.com/contactETC)  
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