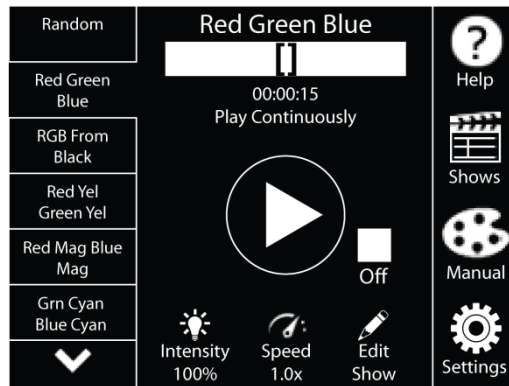


Easy Installation and Programming Manual

EasyTM Solo




Easy DMX Controller


Easy is for RGB LED fixtures with DMX control input


January 19, 2013

**READ AND FOLLOW ALL SAFETY INSTRUCTIONS!
SAVE THESE INSTRUCTIONS AND DELIVER TO OWNER AFTER INSTALLATION**

- To reduce the risk of death, personal injury or property damage from fire, electric shock, falling parts, cuts/abrasions, and other hazards please read all warnings and instructions included with and on the fixture box and all fixture labels.
- Before installing, servicing, or performing routine maintenance upon this equipment, follow these general precautions.
- Installation and service should be performed by a **qualified licensed electrician**.
- Maintenance should be performed by qualified person(s) familiar with the products' construction and operation and any hazards involved. Regular maintenance programs are recommended.
- **DO NOT INSTALL DAMAGED PRODUCT!** This product has been properly packed so that no parts should have been damaged during transit. Inspect to confirm. Any part damaged or broken during or after assembly should be replaced.
- These instructions do not purport to cover all details or variations in equipment nor to provide every possible contingency to meet in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's or owner's purposes, this matter should be referred to Acuity Brands Lighting, Inc.

	WARNING RISK OF ELECTRIC SHOCK
<ul style="list-style-type: none">✓ Disconnect or turn off power before installation or servicing.✓ Verify that supply voltage is correct by comparing it with the product information.✓ Make all electrical and grounded connections in accordance with the National Electrical Code (NEC) and any applicable local code requirements.✓ All wiring connections should be capped with UL approved recognized wire connectors.✓ All unused connector openings must be capped.	

	WARNING RISK OF BURN or FIRE
<ul style="list-style-type: none">✓ Do not exceed maximum wattage, ratings, or published operating conditions of product.✓ Do not overload.✓ Follow all manufacturer's warnings, recommendations and restrictions to ensure proper operation of product.	

	CAUTION RISK OF INJURY
<ul style="list-style-type: none">✓ Wear gloves and safety glasses at all times when installing, servicing or performing maintenance.	

Always read the fixtures complete installation instructions prior to installation for any additional fixture specific warnings.

Failure to follow any of these instructions could void product warranties. For a complete listing of product Terms and Conditions, please visit www.acuitybrands.com.



CAUTION: RISK OF PRODUCT DAMAGE

- ✓ Electrostatic Discharge (ESD): ESD can damage product(s). Personal grounding equipment must be worn during all installation or servicing of the unit.
- ✓ Do not touch individual electrical components as this can cause ESD and affect product performance.
- ✓ Do not stretch or use cable sets that are too short or are of insufficient length.
- ✓ Do not tamper with contacts.
- ✓ Do not modify the product.
- ✓ Do not change or alter internal wiring or installation circuitry.
- ✓ Do not use product for anything other than its intended use.
- ✓ If installing latching springs: ensure that the springs are fully engaged prior to moving to next connection.
- ✓ If installing wiring systems: Materials and component parts of a manufacturing wiring system as described in Article 604 of the National Electric Code and Underwriters Laboratories Standard for Safety #183 **MUST BE** installed.

Please see product specific installation instructions for additional warnings or any applicable FCC or other regulatory statements.

Failure to follow any of these instructions could void product warranties. For a complete listing of product Terms and Conditions, please visit www.acuitybrands.com.

Our Brands	Indoor/Outdoor	Indoor Lighting	Outdoor Lighting	Controls	Daylighting
	Lithonia Lighting	Gotham	American Electric Lighting	DARK TO LIGHT	SunOptics
	Carandini	Mark Architectural Lighting	Antique Street Lamps	LC&D	
	Holophane	Peerless	Hydrel	ROAM	
	RELOC	Renaissance Lighting	Tersen	Sensor Switch	
	Light Concepts	Winona Lighting		Synergy	

Acuity Brands Lighting, Inc. assumes no responsibility for claims arising out of improper or careless installation or handling of its products.

EasyL™

Theory of Operation

EasyL is an LCD touchscreen DMX controller for RGB lighting. EasyL has 12 preprogrammed shows which are field-changeable. In addition, EasyL can display a static color or rainbow.

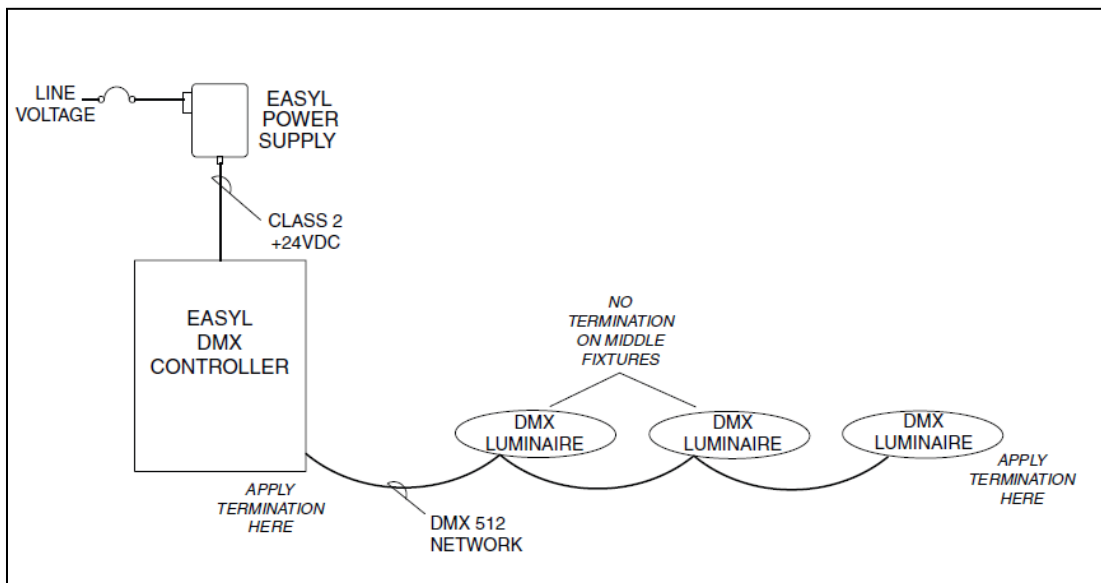
Components:

EasyL Station
EZSOLO XX XXX



EasyL Power Supply
EZPS XXX

EasyL Network Diagram



Startup Sequence

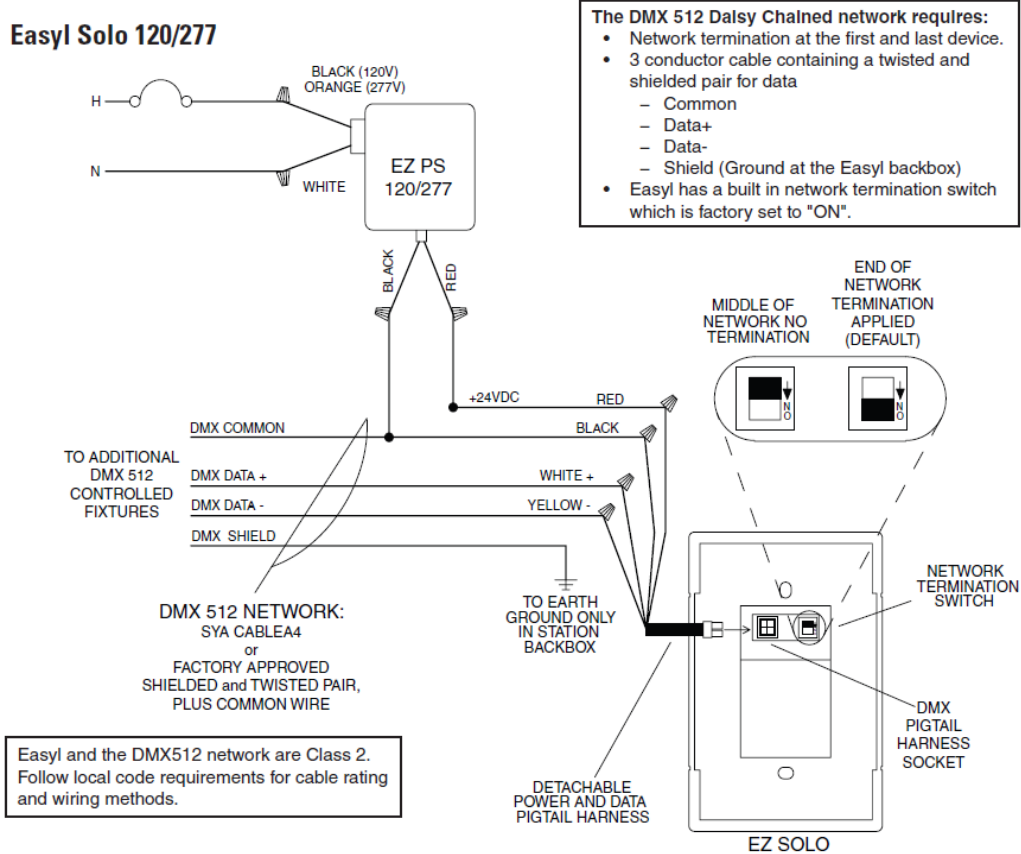
The EasyL startup and commissioning sequence follows these steps:

1. Installation
2. EasyL Navigation Overview
3. Fixture Configuration & Addressing Sequence
4. EasyL Configuration Sequence
5. EasyL Show Programming Sequence
6. Other features

PART 1: INSTALLATION

Installation follows these steps

1. Rough in a single gang backbox for the EasyL controller (touchscreen)
2. Install all DMX fixtures and route DMX cabling from fixtures to EasyL backbox.
NOTE: DMX wiring is Class 2 and must be daisy chained. Terminating resistors should be used (or termination switches engaged) for the first and last devices in the daisy chain.
3. Install EasyL Power Supply in a 4 x 4 J-box within 25' of the EasyL Controller
4. Route Low Voltage Wiring to the EasyL backbox
5. Connect EasyL wiring power (24VDC from EasyL Power Supply) and DMX wiring (from fixtures)
6. Fasten EasyL into wallbox using the 2 screws provided (lift the top & bottom sliding covers)
7. Connect line voltage 120 or 277V to the EasyL Power Supply (EZPS)
8. Energize the Power supply circuit – EasyL should power on to the “EasyL” splash screen. Touch the screen to use & program
9. Wiring Diagram Summary:



DMX Wiring Reference

DMX Network Cat-5 / Cat-5e / Cat 6 Wiring			
Pin (Wire) #	Wire Color	Easyl Wire Color	DMX512 Function per ANSI E1.11
1	white / orange	White	Data 1 +
2	orange	Yellow	Data 1 -
3	white / green	N/C	Data 2 + (optional)
4	blue	N/C	Not Assigned
5	white / blue	N/C	Not Assigned
6	green	N/C	Data 2 - (optional)
7	white / brown	Black	Data 1 common (0 v)
8	brown	Black	Data 2 common (0 v)

Notes from DMX Standard (ANSI E1.11) Document

Note 1: Pin numbering and color in accordance with ANSI/TIA/EIA-568 scheme T568B.

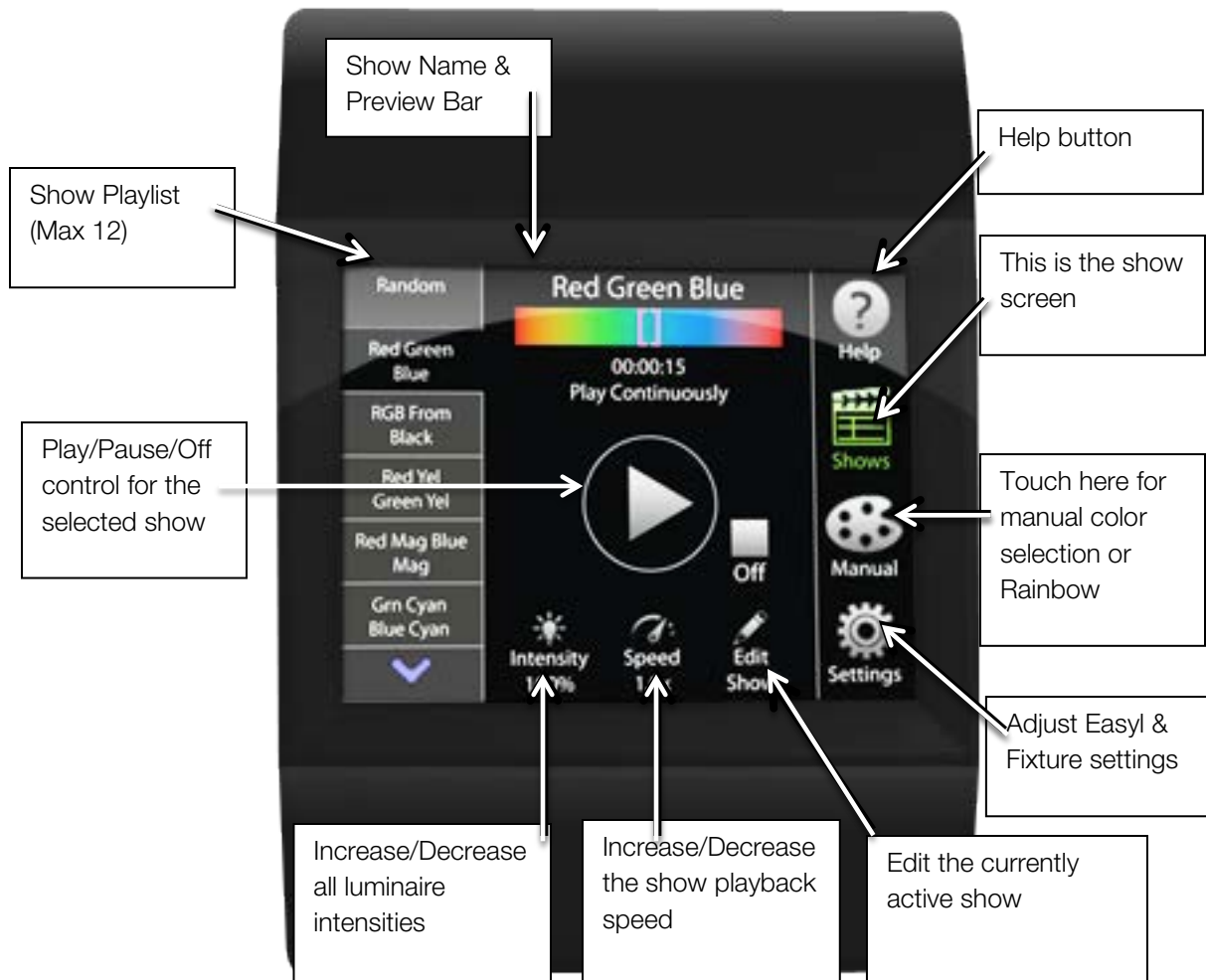
Note 2: Pin 8 should be wired as signal common even if pins 3 and 6 are NOT wired

DMX Network with XLR-5			
Pin (Wire) #	Wire Color	Easyl Wire Color	DMX512 Function per ANSI E1.11
1	N/A	Black	Common
2	N/A	Yellow	Data 1 -
3	N/A	White	Data 1 +
4	N/A	N/C	Data 2 - (optional)
5	N/A	N/C	Data 2 + (optional)

DMX Network with XLR-3			
Pin (Wire) #	Wire Color	Easyl Wire Color	DMX512 Function per ANSI E1.11
1	N/A	Black	Common
2	N/A	Yellow	Data 1 -
3	N/A	White	Data 1 +

PART 2: Easy! Navigation Overview

Welcome to the Easy!™ DMX Controller. When powered up, the Easy! station boots to the “Easy!” splash screen. When the screen is touched, the following home screen appears. Various elements are outlined below. The icons and menus within Easy! are accessed from the home screen.

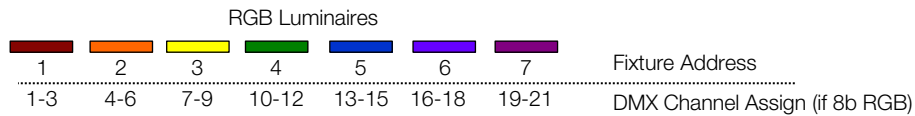


PART 3: Fixture Configuration & Addressing Sequence

DMX fixture channel assignment and profiles must be properly configured before programming EasyL. The fixture configuration & addressing sequence requires several steps:

1. Plan the project by recording fixture settings & profiles
2. Record fixture settings
3. Program EasyL's settings to match fixtures
4. Configure any RDM fixtures to match the fixture settings
5. Test the Configuration

About Fixture Numbers: To properly program EasyL, address fixtures in order from left to right in your space (relative to the way the lighting will be viewed). Therefore, the left most fixture should begin responding to DMX channel 1. Channel assignments should be sequentially arranged as shown below.



STEP 1 – Plan the Project by Recording Fixture Settings & Profiles

Complete the *Fixture Table* on page 10 prior to programming EasyL. Use fixture documentation to correctly record profiles and channel counts. DMX start channel (Start Channel #) and end channel (End Channel #) are manually calculated. Do not overlap channels.

EasyL Fixture Types: EasyL calculates DMX values for fixtures & configures the DMX strings per the DMX fixture type. Use the following table to select the EasyL Fixture type that BEST matches the fixture being used. Reference the EasyL Fixture Types on the next page to select the right profile to match your fixture.

Easy! Fixture Types

Name	Channels	Description
(3) RGB 8b	3	8 bit values for Red, Green & Blue
(4) RGBI 8b	4	8 bit values for Red, Green, Blue & Intensity; Intensity = Intensity slider on Easy!
(4) IRGB 8b	4	8 bit values for Intensity, Red, Green & Blue; Intensity = Intensity slider on Easy!
(4) RGBA 8b	4	8 bit value for Red, Green, Blue, Amber; Amber = minimum(Red, Green)
(4) RGBW 8b	4	8 bit value for Red, Green, Blue, White; White = minimum(Red, Green, Blue)
(5) RGBAW 8b	5	8 bit value for Red, Green, Blue, Amber; Amber = minimum(Red, Green), White = minimum (Red, Green, Blue)
(5) RGBWA 8b	5	8 bit value for Red, Green, Blue, Amber; White = minimum (Red, Green, Blue), Amber = minimum(Red, Green),
(6) RGB 16b LSB	6	16 bit values for Red, Green & Blue with the Low Byte First
(6) RGB 16b	6	16 bit values for Red, Green & Blue with the High Byte First
(8) RGBA 16b	8	16 bit value for Red, Green, Blue, Amber; Amber = minimum(Red, Green)
(8) RGBW 16b	8	16 bit value for Red, Green, Blue, White; White = minimum(Red, Green, Blue)
(10) RGBAW 16b	10	16 bit value for Red, Green, Blue, Amber; Amber = minimum(Red, Green), White = minimum (Red, Green, Blue)
(10) RGBWA 16b	10	16 bit value for Red, Green, Blue, Amber; White = minimum (Red, Green, Blue), Amber = minimum(Red, Green),
(1) White 8b min	1	8 bit value for White (single channel DMX fixture); White = minimum(Red, Green, Blue) on a color show*
(1) White 8b avg	1	8 bit value for White (single channel DMX fixture); White = average(Red, Green, Blue) on a color show*
(1) White 8b max	1	8 bit value for White (single channel DMX fixture); White = max(Red, Green, Blue) on a color show*
(2) White 16b min	2	16 bit value for White (single channel DMX fixture); White = minimum(Red, Green, Blue) on a color show*
(2) White 16b avg	2	16 bit value for White (single channel DMX fixture); White = average(Red, Green, Blue) on a color show*
(2) White 16b max	2	16 bit value for White (single channel DMX fixture); White = max(Red, Green, Blue) on a color show*
(2) White 16b min	2	16 bit value for White Low Byte First (single channel DMX fixture); White = minimum(Red, Green, Blue) on a color show*
(2) White 16b avg	2	16 bit value for White Low Byte First (single channel DMX fixture); White = average(Red, Green, Blue) on a color show*
(2) White 16b max	2	16 bit value for White (Low Byte First single channel DMX fixture); White = max(Red, Green, Blue) on a color show*

* Program plain white shows or create white zones in Easy! Pro to reduce confusion of mapping a color value to "White" luminaires

STEP 2 – Record Fixture Settings

Complete the *Fixture Table* on the following page prior to programming EasyL. An example follows:

Fixture Table

Fixt #	Fixture Profile	EasyL Profile	Channel Count	Start Channel #	End Channel #
1	RGB	(3) RGB 8b	3	1	3
2	RGBA	(4) RGBA 8b	4	4	7
3	RGBW	(4) RGBW 8b	4	8	11
4	RGB 16 Bit	(6) RGB 16b	6	12	17
5	RGBA	(4) RGBA 8b	4	18	21

Fixture Table

Fixt #	Fixture Profile	EasyL Profile	Channel Count	Start Channel #	End Channel #
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
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29					
30					

STEP 3 – Program EasyL's Fixture Settings

From the home screen, follow these menu selections:

Settings → RDM & Fixture Setup → Fixture Setup

1. Select Fixture 1 by tapping on the 1st line on the table
2. Select **Edit**
3. Note Start Address is: 001, which must match the Start Channel # in the Fixture Table.
4. Touch in the box next to "Fixture Type:" Select the fixture type from the list that matches the EasyL Profile recorded in the *Fixture Table*.
5. Select **Okay**
6. Note the DMX addresses used range is recorded. Verify it matches the *Fixture Table* Start Channel # and Stop Channel # values.
7. Select **Next**
8. The Fixture ID increments
9. Touch the box next to Start Address for the Fixture ID and enter Start Channel # value from the *Fixture Table* into the field.
10. Select **Okay**
11. Touch the box next to "Fixture Type:" Select the fixture type from the list that matches the EasyL Profile recorded in the *Fixture Table*.
12. Select **Okay**
13. Repeat steps 7 through 12 for all the fixture's in the *Fixture Table*

Once all of the fixtures settings are recorded in EasyL, complete the following steps to assign all remaining fixture numbers to "No Fixture":

1. Press **Next**, until the 1st unused fixture number appears.
2. Enter a Start Address that is one value higher than the last recorded Stop Channel # from the *Fixture Table*.
3. Select **Okay**
4. Touch in the box next to "Fixture Type:" Select "No Fixture"
5. Select **Okay**
6. Select **Copy**
7. Tap in the white box and enter "170"; this will assign all remaining fixture slots to "No Fixture". Note that EasyL will scale your entry and the "No Fixture" setting will apply to fixtures: ### - 170. If the values are ok, proceed
8. Select **Okay**
9. Fixture Edit is complete
10. Select **Okay**

STEP 4 – Configure RDM Fixtures

If fixtures on the project are RDM responders complete this step.

From the home screen, follow these menu selections:

Settings → RDM & Fixture Setup → RDM Device List

1. Select **Discover**
2. The list on the screen is populated with RDM devices, Address Ranges, Personality and health status
3. Select the first RDM responding fixture by pressing the screen with 001 highlighted
4. Select **Identify**
5. RDM fixture 001 will flash.
6. Select **Edit**
7. Assign the RDM personality that matches the Fixture Profile selected in the *Fixture Table* by touching in the white box next to “RDM Personality:”
8. Select the correct personality from the list
9. Select **Okay**
10. Press **Identify** at any time to locate the fixture
11. Assign the start address (Channel Start #) from *Fixture Table* by touching **Change Assignment**
12. Select the correct fixture from EasyL’s fixture table to match the *Fixture Table*.
13. Select **Okay**
14. Verify the summary **Currently assigned to fixture ____ which is configured as ____** correctly matches the data entered in the *Fixture Table*.
15. If correct, press **Next**
16. Repeat steps 4 through 15 for all RDM fixtures. When EasyL does not increment any further, all known RDM devices are configured
17. Select **Okay multiple times to return to the home screen**

STEP 5 – Test

From the main menu, select show 1 and press play. All RGB fixtures should be synchronized and playing the same color.

If any fixture is out of synchronization, verify fixture addressing, fixture type and channel assignments.

As a further test:

1. Select **Manual**
2. Select **Rainbow Effects**
3. Select **Auto-Rainbow**

All fixtures, from 1 through N should be displaying the Rainbow Colors as shown on the EasyL station in the order shown on the station.

If any color is out of sequence verify fixture addressing, fixture type, and channel assignments.

PART 4: EasyL Configuration Sequence

EasyL has several functions which can be adjusted. These include:

- Access Control: User and Admin passwords require users to enter a password to operate the device and/or change settings
- Screen settings: Dim and Timeout to Splash Screen Settings to make EasyL more user friendly (if required, most users find the factory default settings sufficient)
- Touchscreen calibration (if required)

Access Control

EasyL has 2 password protection options. By default neither password option is activated. Read below before activating:

1. User Access Password: required to be entered (if enabled) once the touchscreen is activated from a sleep state; prevents users from selecting shows, pause or turning off lights if the password is not entered
2. Admin (Setup) Access Password: required to be entered if the user wishes to edit any show or change EasyL configuration settings.

Activating either or both passwords requires the following steps:

Settings → Access

Follow onscreen prompts to fill in a User Password and/or Setup Password. Select **Okay** when completed to save or press Cancel.

Screen Settings

Follow this sequence to adjust screen timeout, backlight dim and backlight intensity. For most users the factory defaults are acceptable.

Settings → Screen Settings [You will need to press Page Down to find this menu option]

Follow onscreen text to set. Choose whether or not to timeout to Logo Screen by tapping the "X". Press **Okay** to save or Cancel not to save

Touchscreen Calibration

Touchscreens on EasyL are factory calibrated but if bumped or handled roughly or installed forcefully, the screen may require recalibration. The most common symptom is screen insensitivity or having areas of the screen activate that are not directly under a finger press or stylus tap. Follow these steps:

Settings → Calibrate Touchscreen [You will need to press Page Down to find this menu option]

When prompted “Re-Calibrate Touchscreen?” Select **Yes**. Follow the on screen prompts.

Other Settings

Under the settings menu the following options are available but not frequently used:

- Reboot – causes the devices to soft-reboot, enables the password lock out immediately if activated
- Restore Defaults – erases all user programmed shows back to the factory default
- Format – erases all user settings
- Reorder Show List – allows users to move the order shows are presented on the main screen
- DMX Refresh Rate – in some applications fixture drivers and/or network wiring issues demand the refresh rate slow down for accurate RDM and DMX response. To slow down EasyL’s refresh rate (and potentially impact dimming performance), follow these steps:
Settings → RDM & Fixture Setup → DMX Refresh Rate. The default rate is the maximum at 44Hz (44 updates per second), the next choice should be 40Hz, then 37Hz then 32Hz if problems persist. If issues persist at 32Hz, an incompatible fixture and/or network wiring need to be fixed or replaced.

PART 5: EasyL Show Programming Sequence

Once Steps 1 through 4 are completed, EasyL and the DMX light fixtures should now be ready to respond correctly and play shows. The home screen user interface is described below:



Any of the shows (factory preloaded) may be edited, saved and stored. Show features that may be changed are: Color, Transition Timing, Length, Brightness, Show Repeat/Show End Style, and Name.

To **Edit** a show, follow these steps:

- Select **Edit** (if a show is playing, it will prompt you to stop the show). In the show edit menu show segments stacked vertically on the left hand side and all of the edit options are in the middle of the page
- To Add a segment: Select **+ Insert** icon. Then choose a color and select timing for the color segment (Note: Transition time is the amount of time it takes to fade from one color to the selected color – fading in; Hold time is how long the current color will be displayed)
- To Remove a segment: select the segment then, select **- Delete** icon
- To adjust a segment's color: Select the Segment and select **Color**
- To adjust a segment's timing: Select the Segment and select **Timing**
- To adjust the show name: select **Show Name** and enter a show name
- To move a segment in the show, select the segment then select **Shift Up** or **Shift Down**
- To adjust a show's end sequence: select the **Effects** button
- When finished, select **Okay**

Any show may be copied to another one of the show slots. Select **Copy**, then the follow the on-screen prompts to paste the show to another slot and name the show.

PART 6: Other Features

EasyL also features a Rainbow and Static Color playing option by selecting the **Manual** icon from the home screen.

Rainbow

Rainbows are a setup by manually selecting the colors desired. Insert **Colors** into the list on the left hand side of the screen, or remove colors as desired using the **Insert** and **Delete** icons. Once the colors are selected, press **Okay** and then tap the **Turn on Color** button on the screen to activate the rainbow.

Note: rainbows can be automatically generated by EasyL and/or mirrored by selecting appropriate buttons on the rainbow setup screen.

Static Color

Using the color pickers or favorite colors icons on the left of the screen, a color is selected. Select **Turn on Color** to have all the fixtures display the static color.

Shows can be made to play a static color by deleting all segments except for one in a show and then selecting only one color segment and setting the transition time to 0 seconds and hold time to 0 seconds. Set the show for Continuous Playback and the lighting will always play that static color without variation when the show is triggered.

SUPPORT

For Support please call:

800.922.9646

For Documentation please visit:

www.easyl.com