

Spectra Series Programming Manual



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SAFETY INSTRUCTIONS**INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRICAL SHOCK, OR INJURY TO PERSONS FOR SPECTRA SERIES LED LIGHTING FIXTURES.**

WARNING! - TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, FOLLOW THESE IMPORTANT SAFETY INSTRUCTIONS:

1. Turn off, unplug power, and allow fixture to cool before cleaning or servicing.
2. Ensure that fixture is properly grounded.
3. Ensure that ventilation slots are not obstructed.
4. Do not look directly at lighted LEDs.
5. Keep away from flammable materials.
6. No user serviceable parts inside. Replace entire LED assembly.
7. Do not touch the LEDs at any time. Use a soft lint free cloth to clean lens. Do not use solvents to clean. Use cloth dampened with water. Allow to dry completely before reenergizing.
8. Do not operate the unit with a missing or damaged lens.

-----**SAVE THESE INSTRUCTIONS!**-----

INSTRUCTIONS DE SÛRETÉ**LES INSTRUCTIONS AU SUJET D'UN RISQUE D'INCENDIE LE CHOC ÉLECTRIQUE, OU LA BLESSURE AUX PERSONNES POUR SS-CYC-100.**

AVERTISSEMENT! - POUR RÉDUIRE LE RISQUE D'INCENDIE, LE CHOC ÉLECTRIQUE, OU LA BLESSURE AUX PERSONNES, SUIVRE CES INSTRUCTIONS DE SÉCURITÉ IMPORTANTES:

1. Éteignez, débranchez la puissance, et permettez au montage de se refroidir avant le nettoyage ou l'entretien.
2. Assurez-vous que le montage est correctement relié à la terre.
3. Assurez-vous que des fentes de ventilation ne sont pas obstruées.
4. Ne regardez pas directement la LED allumée.
5. S'éloigner des matériaux inflammables.
6. Aucune pièces utiles d'utilisateur à l'intérieur. Remplacez la LED entière.
7. Ne touchez pas les voyants à tout moment. Utilisez un chiffon doux non pelucheux pour nettoyer la lentille. Ne pas utiliser de solvants pour nettoyer. Chiffon humidifié avec de l'eau utilisation. Laisser sécher complètement avant de redynamisation.
8. Ne pas faire fonctionner l'appareil avec un diffuseur antérieur ou une lampe.

-----**GARDER CES INSTRUCTIONS!**-----

Features

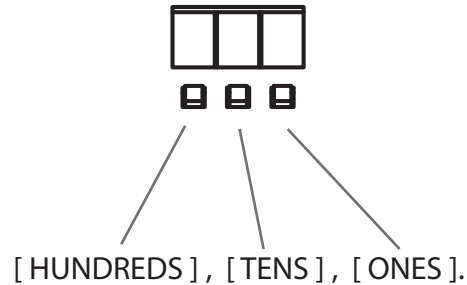
The SPECTRA SERIES LED lighting fixtures are the first of its kind in the Theatrical and Architectural Lighting Industry offered by Altman Lighting.

- Compatible with DMX512 and RDM protocols.
- 8/16 bit DMX512 control for smoother dimming.
- On board power supply, microprocessor controller, and current drivers.
- Feed thru DMX/RDM data with a maximum total run of 1000 feet.
- Push button addressing.
- Stand-Alone Pre-programmed modes.
- Keypad Lock functions to prevent accidental Re-Programming.
- Efficient cooling system offering Silent Operation with No Fans.

WARNING: ALL ELECTRICAL WIRING AND CONNECTIONS SHOULD BE PERFORMED BY A QUALIFIED ELECTRICIAN

OPERATION

There are 3 buttons below the 3 digit LED display on the side of the unit. The buttons are : (From left to right)



All settings for Modes, DMX address, Personalities, etc., can be made by using the three buttons on the back of the unit while power is on.

(Note: Display goes out after no activity for approx 4 sec. Touch any button once to bring it back on.)

There are 3 main operating Modes: **DMX**, **Fixed Color**, and **Locked**.

DMX Mode:

DMX Mode is used for Setting DMX address, Personalities, and Stand-alone Effects. This is the default mode for a new unit. (Also see Fixed Color Mode section on page 9.)

To Switch to DMX Mode from Fixed Color Mode (or vice versa) :

Wait a few seconds until the display goes blank,

- press and hold the [ONES] button
- press and hold the [TENS] button
- release the [ONES] button
- release the [TENS] button.

DMX ADDRESS

To set, press the buttons repeatedly (or hold) to count up until the desired DMX address (1-512), appears on the display. Wait a few seconds, the display will blink once quickly, and the address is set live and retained in memory, even if you remove power.

(RDM addressing sent from a remote unit will overwrite local DMX setting.)

PERSONALITIES:

There are 8 different personalities.

Each personality is made up of 3 settings: RESOLUTION (8 Bit /16 Bit), MASTER (On /Off), and SMOOTHING (On/Off) which are explained in greater detail below.

The current active Personality # is displayed for about 1 second during power up. The format is Pxx where xx is replaced by the active personality #01-08.

To set the desired Personality, you must be in DMX mode (not Fixed Color mode).

To select the personality:

- Press the buttons until the desired personality address (601-608) appears in the display (see list below).
- Wait a few seconds, and a confirmation display will appear that shows a question mark? on the left, followed by the personality #. This gives you an opportunity to either accept or reject the new setting.
- To **accept** the new personality, press the [ONES] button.
- To **reject** the new personality, press the [HUNDREDS] button (below the ?).

Once the new personality is accepted, it is entered into memory and retained even if power is disconnected. Once personality is either accepted or rejected, the display will go back to the current DMX address. The default personality for a new unit is #02.

EXAMPLE: Let's say that we want to select personality #05. We enter 605 on the display. After a few seconds the display will show ?05 . Since we want this, we press the [ONES] button (below the 5), and that enters personality #05 into memory.

PERSONALITY ADDRESS SETTINGS LIST

601-608: 4-COLOR CHANNELS:

601	Personality #01 Uses 4 DMX Channels	8 bit Channel order is RGBA	Master OFF	Smoothing OFF
602	Personality #02 Uses 4 DMX Channels	8 bit Channel order is RGBA	Master OFF	Smoothing ON
603	Personality #03 Uses 5 DMX Channels	8 bit Channel order is RGBAM	Master ON	Smoothing OFF
604	Personality #04 Uses 5 DMX Channels	8 bit Channels order is RGBAM	Master ON	Smoothing ON
605	Personality #05 Uses 8 DMX Channels	16 bit Channel order is RrGgBbAa	Master OFF	Smoothing OFF
606	Personality #06 Uses 8 DMX Channels	16 bit Channel order is RrGgBbAa	Master OFF	Smoothing ON
607	Personality #07 Uses 10 DMX Channels	16 bit Channel order is RrGgBbAaMm	Master ON	Smoothing OFF
608	Personality #08 Uses 10 DMX Channels	16 bit Channel order is RrGgBbAaMm	Master ON	Smoothing ON

609-612: 1-COLOR CHANNELS

609	Personality #09 Uses 1 DMX Channel	8 bit	Smoothing OFF
610	Personality #10 Uses 1 DMX Channel	8 bit	Smoothing ON
611	Personality #11 Uses 2 DMX Channels	16 bit	Smoothing OFF
612	Personality #12 Uses 2 DMX Channels	16 bit	Smoothing ON

RESOLUTION is selectable as either:

8 Bit (one DMX channel per color) this is normal resolution,
or

16 Bit (two DMX channels per color) Coarse+Fine high resolution similar to moving lights.

If unit is in 8 Bit mode, and the unit is set to DMX Channel 001, then the DMX channels would be:

CH1	Red
CH2	Green
CH3	Blue
CH4	Amber*

If unit is in 16 Bit Mode, and the unit was set to DMX Channel 001, then the DMX channels would be:

CH1	Red Coarse	CH2	Red Fine
CH3	Green Coarse	CH4	Green Fine
CH5	Blue Coarse	CH6	Blue Fine
CH7	Amber* Coarse	CH8	Amber* Fine

Master Channel is selectable as **ON** or **OFF** and provides a Master fade channel that dims all 4 colors proportionally at the same time in order to maintain the color .

If you are in 8 Bit mode and the unit is set to DMX Channel 001, then the DMX channels would be:

CH1	Red
CH2	Green
CH3	Blue
CH4	Amber*
CH5	Master

If you are in 16 Bit mode and the unit is set to DMX Channel 001, then the DMX channels would be:

CH1	Red Coarse	CH2	Red Fine
CH3	Green Coarse	CH4	Green Fine
CH5	Blue Coarse	CH6	Blue Fine
CH7	Amber* Coarse	CH8	Amber* Fine
CH9	Master Coarse	Ch10	Master Fine

SMOOTHING is selectable as **ON** or **OFF** and provides a smooth transition ramp from one level to another in a similar way to how an incandescent lamp behaves. This helps to eliminate the "steppiness" associated with LED fixtures that is caused by the instantaneous response of LEDs.

**Amber if RGBA, or White if RGBW*

STAND-ALONE MODE (does not require a control console):

Note: Must be in DMX Mode (see page 6). If Master Mode (see page 10) is on, stand-alone effects from a single unit will control other units connected via DMX cable to all synchronize. Set other units to DMX channel 001.

(Do not use the Stand-Alone Effects while connected to a control console or a conflict may result.)

Color Fades (700-799):

700 - 709 R»A»G»B fade 700 = faster - 709 = slower

740 - 749 B»G»A»R fade 740 = faster - 749 = slower

780 - 789 R»A»G»B»W fade 780 = faster - 789 = slower

790 - 799 W»B»G»A»R fade 790 = faster - 799 = slower

Strobes (800-879):

800 - 809 WHITE STROBE 800 = faster - 809 = slower

810 - 819 RED STROBE 810 = faster - 819 = slower

820 - 829 AMBER STROBE 820 = faster - 829 = slower

830 - 839 GREEN STROBE 830 = faster - 839 = slower

840 - 849 BLUE STROBE 840 = faster - 849 = slower

850 - 858 R-A-G-B RAINBOW STROBE 850 = faster - 859 = slower

870 - 879 B-G-A-R RAINBOW STROBE 870 = faster - 879 = slower

FIXED COLOR MODE:

This is a special mode that allows you to manually select colors for a single unit using the 3 keys. (Also see **DMX Mode** on page 6.)

To enter Fixed **Color Mode** (or exit to **DMX Mode**) :

Wait a few seconds until the display goes blank,

1. press and hold the [ONES] button
2. press and hold the [TENS] button
3. release the [ONES] button
4. release the [TENS] button

While in **Fixed Color Mode**, the hundreds button cycles through 'r', 'G', 'b', and 'A' colors . The tens and ones digits select 0-99 values. Level 99 is that channel at full.

Locked Mode:

To Lock (or unlock) the buttons:

Wait a few seconds until the display goes blank,

1. press and hold the [ONES] button
2. press and hold the [HUNDREDS] button
3. release the [ONES] button
4. release the [HUNDREDS] button.

Display will show **LOC** for a moment and then blink. Buttons will have no effect until they are unlocked.

MASTER MODE (Different than the Master Channel described on page 7.)

Master Mode only works while in STAND-ALONE EFFECTS MODE (see page 8). It causes the unit that is set to Master Mode to behave like a console and Transmit 4-channel (RGBA) 8-bit DMX set on address 001, reflecting its present light output.

Note: Only the first unit that is going to serve as the MASTER fixture should be set to Stand-alone Effects mode with Master Mode on. Stand-alone Effects Mode with Master Mode on should also not be used while units are connected to a DMX console. All fixtures following the Master fixture should be set with the Master Mode OFF, for Normal Operation.

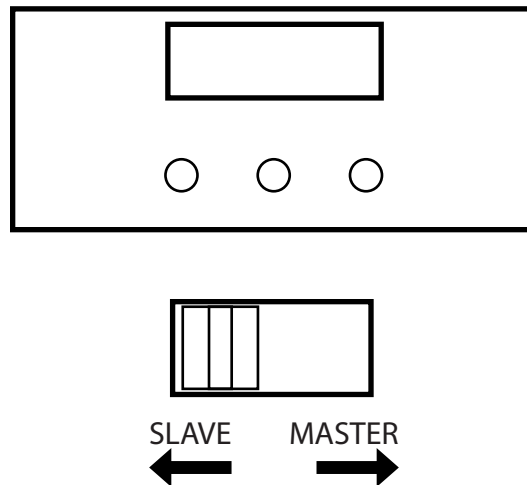
To Turn on **MASTER MODE**:

1. Place fixture in Stand-alone Mode (see page 8)
2. Wait a few seconds until the display goes blank
3. Press and hold the [HUNDREDS] button
4. Press and hold the [ONES] button
5. Release the [HUNDREDS] button
6. Release the [ONES] button
7. Display will show **ON** for a moment to indicate new setting and then blink.
8. Address remaining fixtures connected to the MASTER fixture to DMX address 001

To Turn off the **MASTER MODE**:

Wait a few seconds until the display goes blank
Press and hold the [HUNDREDS] button
Press and hold the [ONES] button
Release the [HUNDREDS] button
Release the [ONES] button
Display will show **OFF** for a moment to indicate new setting and then blink.

Spectra Strip Operation



MASTER and **SLAVE** modes refer to the origin of the control signal the fixture is listening to.

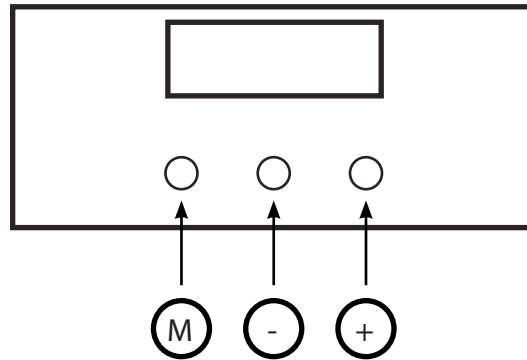
SLAVE

- Putting the switch in the **"Slave"** position means the fixture is listening to the incoming DMX signal.
- Also considered **"Normal"** operation.

MASTER

- Putting the switch in the **Master** position means the fixture is NO LONGER listening to the incoming DMX signal and has now become the source of DMX control information for all fixture coming after it. The **Master** fixture will broadcast the pre-built show included in the fixtures software that has been selected by the user. All fixtures coming after the **Master** fixture should be set to **Slave** to receive the DMX signal originated from the Master fixture. This feature allows for rudimentary color changing capability without the need of an outside DMX control device.
- Also considered **Stand-alone** operation.

Menu Navigation



Pressing **(M)**

- Shows the current mode or the next menu item; use the **(M)** button to browse menus and settings without making any changes
- Saves a changed value
- Turns off the display at the last menu item

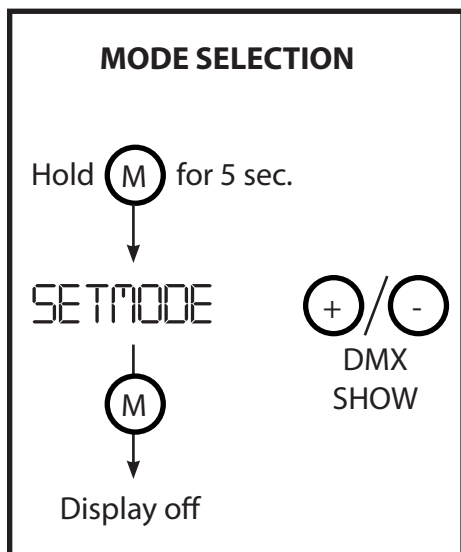
Pressing **(-)** or **(+)**

- Changes a value (which is only saved when **(M)** is pressed).

- Accidentally changed a value but haven't confirmed it yet by pressing **(M)**? By refraining from pressing the buttons for at least 8 seconds, you will leave the menu (display is turned off) without changing the value.
- If you are in a menu and want to change to another menu, refrain from pressing the buttons for at least 8 seconds (display is turned off), and subsequently press the button combination for the menu you want to change to.

Control Mode Selection

To operate the Spectra Strip, one of two control modes must be selected: **DMX Mode** or **Show Mode** (also known as Stand-alone mode).



DMX Mode:

Set/read the DMX start address of the fixture
Change network resolution to 8 or 16 bit
Select the interpolation mode

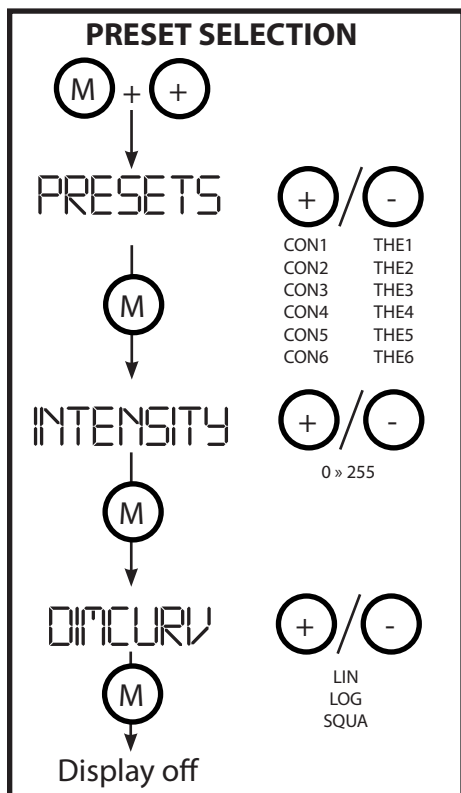
Show Mode:

- Selecting one of the 8 pre-programmed shows
- Change the speed of the selected show
- Turn Chase on or off

Note: When the Spectra Strip is in Show Mode, the fixture will not respond to any incoming DMX signal!

Preset Selection

Spectra Strip Presets govern the operation of the fixture including how each cell responds, the maximum intensity the fixture will output and the dimming curve the fixture will operate with.



Select Preset

Select one of the pre-programmed presets: Concert or Theater:

CON1-CON6: Concert Mode.

- Concert mode groups individual LED Cells into groups. CON1 is all LED cells responding to channels 1-4(RGBA). CON6 is each cell responding to channels 1-48(RGBA).

THE1-THE6: Theater Mode

- Theater Mode groups cell by traditional border light 3 circuit / 4 circuit emulation.

Set Intensity:

- Sets the maximum intensity for the fixture.
- Default is 255 or maximum intensity.

Dimming Curve*:

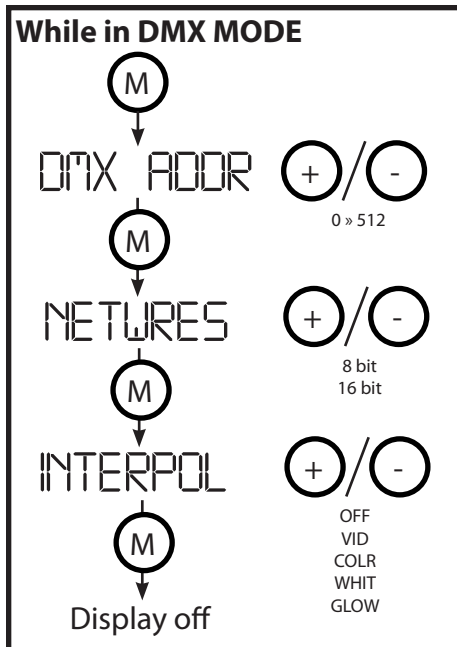
Selects the output dimming curve. Options are:

- LIN - Linear
- LOG - Logarithmic
- SQUA - Square

Default is LOG

DMX Mode parameter selection

Configuration of the operation of the Spectra Strip while in DMX mode, responding to a DMX control signal.

**Select DMX start address**

- This is the start address of the first output of the fixture.
- Total amount of addresses per fixture depends on fixture configuration and number of cells.
- Default address is 1.

Select network resolution:

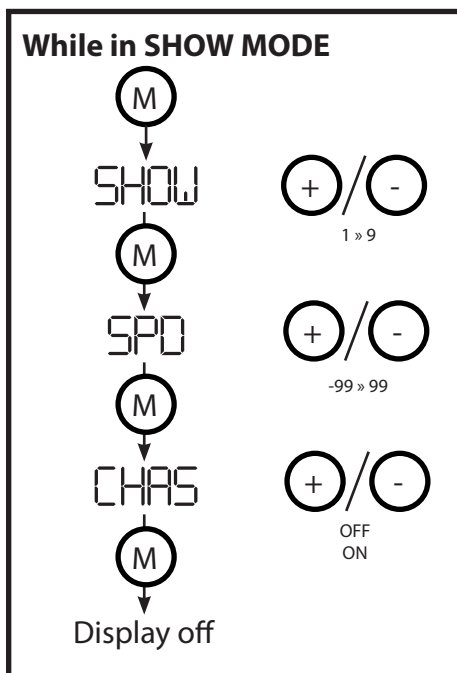
- Change between 8 and 16 bit resolution.
- Using 16 bit gives you 2 addresses per output: Address 1 - Coarse, Address 2 - Fine.

Interpolation modes:

To get the most optimized dimming performance for different applications. Default is COLR.

SHOW Mode parameter selection

Configuration of fixture operation while operating as a Stand-alone fixture or Master fixture.

**Select Show:**

Select one of the pre-programmed shows

- 1 - Static, all outputs 100%
- 2 - Static, R 100%
- 3 - Static, G 100%
- 4 - Static, B 100%
- 5 - Static, A 100%
- 6 - RGB color change
- 7 - RGBA color change
- 8 - RGB+A color shift
- 9 - All outputs off

Default is show 1

Set speed:

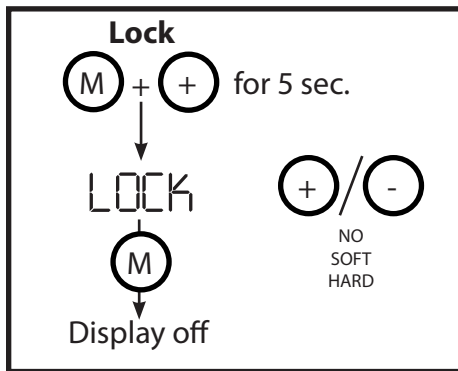
- Set the show speed between -99 and 99.
- Default is 0

Enable Chase mode:

- Selects the show chasing mode for more dynamic effects.
- Default is OFF

Fixture LOCK

Disabling of the menu while fixture is in operation.



Select Lock level:

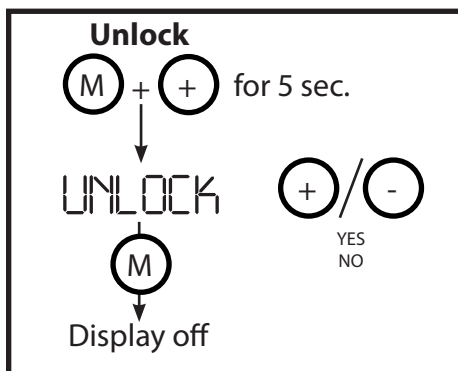
Soft: Disables menu operation until UNLOCK is applied.

Hard: Disables menu operation until FACTORY RESET is applied

NOTE: Only activate the hard lock after careful consideration: once you have hard-locked the fixture you can ONLY reset the fixture to its factory default setting.

Fixture unLOCK

Re-enabling of the menu while fixture is in operation.



Select Lock level:

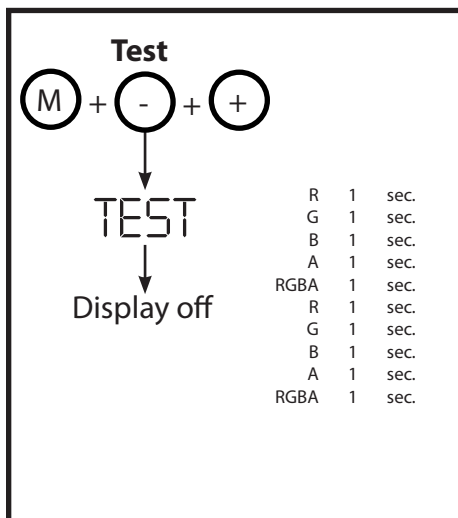
Soft: Disables menu operation until UNLOCK is applied.

Hard: Disables menu operation until FACTORY RESET is applied

NOTE: Only activate the hard lock after careful consideration: once you have hard-locked the fixture you can ONLY reset the fixture to its factory default setting.

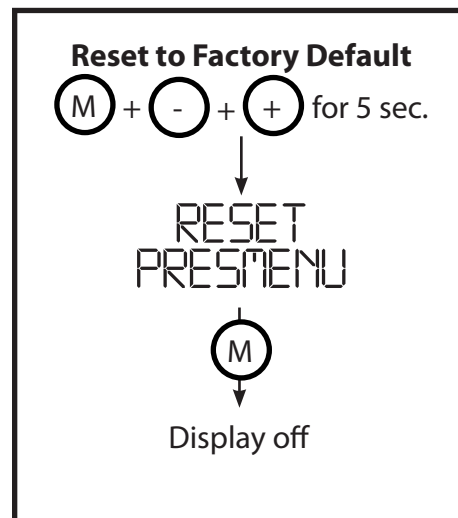
Fixture test

Individual testing of channels



Reset to factory defaults

Rests fixture to factory default values



PRESET CONFIGURATIONS FOR FIXTURES

Control configuration for each Preset setting per fixture.

2' SPECTRA STRIP



Concert 1	A	A	A	A
Concert 2	A	A	B	B

4' SPECTRA STRIP



Concert 1	A	A	A	A	A	A	A	A
Concert 2	A	A	A	A	B	B	B	B
Concert 3	A	A	B	B	C	C	D	D

6' SPECTRA STRIP



Concert 1	A	A	A	A	A	A	A	A	A	A	A
Concert 2	A	A	A	A	A	A	B	B	B	B	B
Concert 3	A	A	A	A	B	B	B	B	C	C	C
Concert 4	A	A	A	B	B	B	C	C	C	D	D
Concert 5	A	A	B	B	C	C	D	D	E	E	F
Concert 6	A	B	C	D	E	F	G	H	I	J	K

Theater 1	A	B	C	A	B	C	A	B	C	A	B	C
Theater 2	A	B	C	D	A	B	C	D	A	B	C	D
Theater 3	A	A	B	B	C	C	A	A	B	B	C	C
Theater 4	A	A	B	B	C	C	D	D	E	E	F	F

Interpolation Curves

