ALTMAN

L I G H T I N G

SPECTRA SERIES

Programming Manual

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Should you find an error, have a suggestion or question regarding your Altman Lighting product, we would love to hear from you.

You can reach us at:

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Our Commitment

Altman Lighting continually engages in research related to product improvement. New materials, production methods and design refinements are introduced into existing products without notice as a routine expression of the philosophy. For this reason any current Altman Lighting product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise noted.

IMPORTANT INFORMATION

Product Safety Notices

When using electrical equipment, basic safety precautions should always be followed including the following:

a. *READ AND FOLLOW ALL SAFETY INSTRUCTIONS*.

b. *Do not use outdoors unless the product is specified to operate in outdoor environments.*

c. *Do not mount near gas or electric heaters.*

d. *Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.*

e. *The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.*

f. *Do not use this equipment for other than intended use.*

g. *Refer service to qualified personnel.*

SAVE THIS MANUAL FOR FUTURE REFERENCE.

Warnings

WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltages and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to personnel.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

WARNING: This Lighting Fixture IS NOT for residential installation or use.

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY:

A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

CE PRODUIT DOIT ÊTRE INSTALLÉ SELON LE CODE D'INSTALLATION PERTINENT, PAR UNE PERSONNE

Altman Lighting Product Warranty

Warranty Term

Altman Lighting, Inc., a subsidiary of Altman Stage Lighting Company, Inc., herein referred to as Altman, warrants each new product (except for spare parts or products Altman does not manufacture) for a period of TWO (2) years from date of shipment to correct by repair or replacement any part defect due to faulty material or workmanship. Under these same terms products with an LED light source shall be warranted for a period of THREE (3) years.

Altman warrants for NINETY (90) days any spare part it manufactures. On spare parts or products Altman does not manufacture, including, but not limited to, lamps, sockets, lenses, roundels, electronics, ignitors, ballasts, etc.; Altman will grant the same warranty given Altman by its vendors.

Altman assumes no responsibility for damage or faulty performance caused by misuse, improper installation, careless handling or where repairs have been attempted by others.

This warranty is in lieu of all warranties or guarantees expressed or implied and no representative or person is authorized to assume Altman any other liability with the sale of Altman's products.

For complete warranty terms and conditions, please refer to our web site at www.altmanlighting.com.

Warranty Service

In order to request warranty service, you must receive a Return Material Authorization (RMA) number prior to return.

Return shipments must be visibly marked with the RMA number; the product must be returned *(shipping prepaid)* to the factory at:

Altman Lighting Inc.

Attention: RMA # _____

1400 East 66th Avenue

Denver, CO 80229

The return must be within THIRTY (30) days of receiving the RMA from Altman.

TABLE OF CONTENTS

PREFACE

About this Manual

This document only provides programming information for Spectra Series Products. For installation and operation information, please refer to the specific product's quick start guide or user's manual.

Retain this manual for future reference.

Products Covered

This manual covers the all Spectra Series Products models except as noted in this document. If you ever need assistance or have a question regarding your Altman Lighting product, please contact technical support at 1-303-500-7072 or email us at customerservice@altmanlighting.com.

Common Features

Spectra Series Products offer the following common features. For complete product details, refer to the product's specification sheet located on the Altman Lighting web site at www.altmanlighting.com.

- Compatible with DMX512 and RDM protocols.
- 8 and 16-bit DMX512 control for smoother dimming.
- On board power supply, microprocessor controller, and current drivers.
- Feed through DMX/RDM data with a maximum total run of 1000 feet.
- Push button addressing.
- Twelve (12) personalities Local Channel Control Stand Alone Effects.
- Keypad Lock functions to prevent accidental re-programming.

Programming Buttons Overview

Spectra Series Products offer three (3) buttons to program the fixture. With these three buttons, you can program or set. To activate the three digit display, press any of the three button. After 4 seconds of inactivity, the display will go blank.
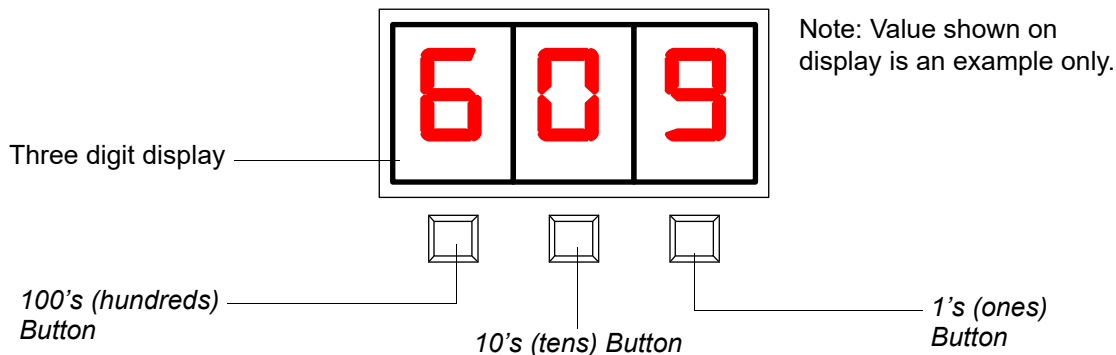

Note: Value shown on display is an example only.

Three digit display

100's (hundreds) Button

10's (tens) Button

1's (ones) Button

Figure 1: Spectra Series Three Digit Display and Programming Buttons

- DMX Address
- Personalities (twelve choices)
- Stand-Alone Effects
- Local Channel Control
- Lock the Fixture (from unwanted changes after programming)
- Master Control Mode

PROGRAMMING AND SETTINGS

DMX Mode

DMX Mode is used for **Personalities** (**"Personalities" on page 5**), **Stand-Alone Effects** (**"Stand-Alone Effects Mode" on page 9**), and **Setting DMX Address** (**"Setting DMX Address" on page 10**).

To Switch to DMX Mode to or from Local Channel Control (refer to **"Local Channel Control" on page 10***):*

Step 1. Wait until the display goes blank.

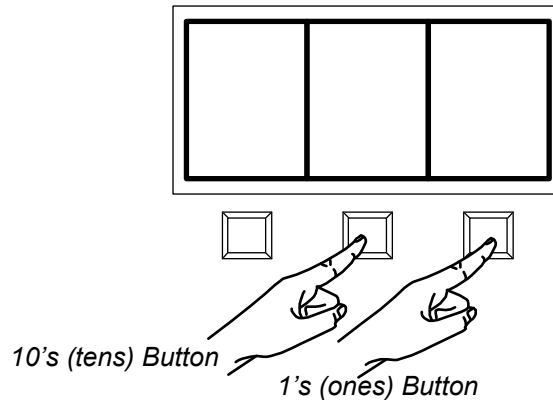10's (tens) Button
1's (ones) Button

Figure 2: Setting Unit to DMX Mode

Step 2. As shown in **Figure 2**, PRESS and HOLD [ONES] button.

Step 3. PRESS and HOLD [TENS] button.

Step 4. RELEASE [ONES] button.

Step 5. RELEASE [TENS] button.

Personalities

There are 12 programmable operational Personalities the luminaire can be set to. Each Personality is comprised of three settings:

• DMX Resolution (either 8-bit or 16-bit)

• Master Control Mode (On or Off)

• Smoothing (On or Off)

All are described within this section.

The current set Personality alpha-numeric number is displayed for about one second during luminaire power up. The format is shown in **Figure 3**. "P" designates Personality setting and "XX" is 01 through 12 is the specific setting of the Personality.
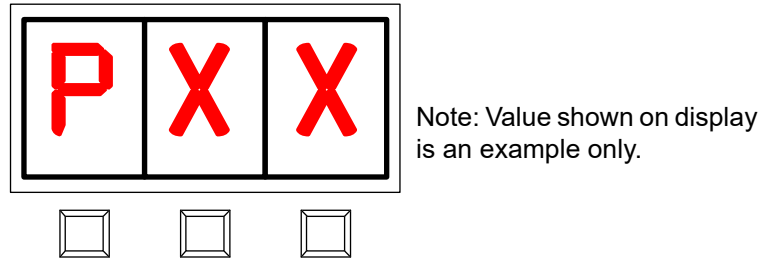

Note: Value shown on display is an example only.

Figure 3: Personality Setting

To set the luminaire's Personality:

Note: The unit must be set to DMX Mode (not Fixed Color mode) prior to setting the Personality. Refer to **"DMX Mode" on page 5** for more information.

Step 1. Press programming buttons until desired Personality address appears (refer to **Table 1 on page 7**).

Step 2. Wait a few seconds and a conformation display will appear with a question mark (?) in the hundreds digit and the Personality in the next two digits as illustrated in **Figure 4**. This is to confirm (or reject) the Personality shown.

  • To accept new Personality, press [ONES] button.

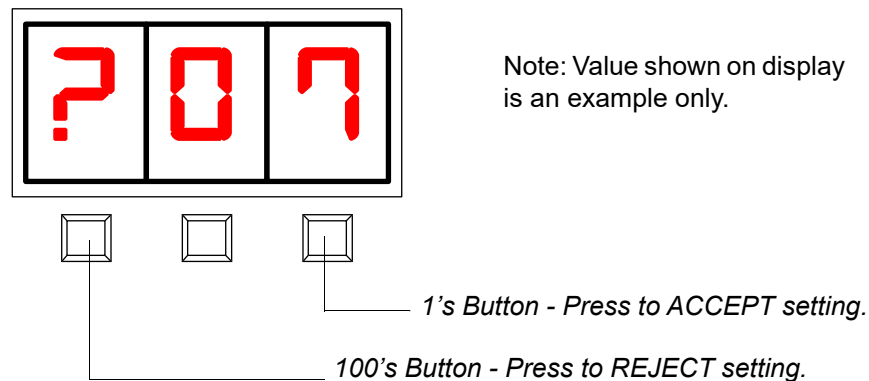 • To reject new Personality, press [HUNDREDS] button.

Note: Value shown on display is an example only.

1's Button - Press to ACCEPT setting.

100's Button - Press to REJECT setting.

Figure 4: Personality Setting - Confirm Setting

Note: Once Personality is set, it remains in the luminaire's memory and retained even if power is disconnected. The factory default Personality for RGBA or RGBW fixtures is P02. Single color fixtures, such as UV or White, are shipped set to Personality P10.

Note: For single color fixtures (such as UV or White) only Personalities 609 (P09), 610 (P10), 611 (P11), or 612 (P12) should be used. In the case of the SSUV30 and SSUV40 units, they can be set to four color control. This setting will allow for interdependent control over each UV Pod.

Step 3. After setting or rejecting Personality, luminaire display will show current DMX address.

Personality Settings

Table 1: Personality Settings / Descriptions

Value	Description	DMX Mode / Channel Order	Master Channel	Smoothing
		FOUR COLOR CHANNELS		
601	Personality 1 - Uses four DMX channels	8-bit / RGBA	OFF	OFF
602	Personality 2 - Uses four DMX Channels	8-bit / RGBA	OFF	ON
603	Personality 3 - Uses five DMX Channels	8-bit / RGBAM	ON	OFF
604	Personality 4 - Uses five DMX Channels	8-bit / RGBAM	ON	ON
605	Personality 5 - Uses eight DMX Channels	16-bit / RrGgBbAa	OFF	OFF
606	Personality 6 - Uses eight DMX Channels	16-bit / RrGgBbAa	OFF	ON
607	Personality 7 - Uses ten DMX Channels	16-bit / RrGgBbAaMm	ON	OFF
608	Personality 8 - Uses ten DMX Channels	16-bit / RrGgBbAaMm	ON	ON
		ONE COLOR CHANNELS		
609	Personality 9 - Uses one DMX channel	8-bit	N/A	OFF
610	Personality 10 - Uses one DMX channel	8-bit	N/A	ON
611	Personality 11 - Uses two DMX channels	16-bit	N/A	OFF
612	Personality 12 - Uses two DMX channels	16-bit	N/A	ON

Spectra Series fixtures have a number of different configurations RGBA (Red, Green, Blue, Amber) is shown in **Table 1** and in the following section as an example of channel order layout.

• For Red, Green, Blue, White, use RGBW

• For Tunable White 3K/6K, use 3K, 3K, 6K, 6K as the channel order

• For fixed color or white only LED units, use modes 609 to 612

Personality Meanings

DMX Resolution 8-bit (Four Channels) 601, 602

8-bit mode (one DMX channel per color) this is normal resolution. 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 (or White)

DMX Resolution 8-bit (Five Channels) 603, 604

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 (or White)

• CH5 Master Channel*

Note: *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 throughout the fade.

IMPORTANT! SS-UV 30 and SS-UV40 fixtures. For these fixtures, each channel will control each pod individually. For example, on the SS-UV40 - when set to mode 602 - each pod will be controlled (individually) via each control channel.

DMX Resolution 16-bit (Eight Channels) 605, 606

16-bit mode (two DMX channels per color - Coarse + Fine) is similar to moving lights. 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 (or White) Coarse
- CH8 Amber (or White) Fine

DMX Resolution 16-bit (Ten Channels) 607, 608

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 (or White) Coarse
- CH8 Amber (or White) Fine
- CH9 Master Coarse
- CH10 Master Fine

Smoothing

Smoothing is selectable as ON or OFF. When set to ON, Smoothing provides a smooth transition ramp from one level to another - similar to how an incandescent lamp behaves. This feature helps to eliminate any "steppiness" associated with LED fixtures that is caused by the instantaneous response of fixture's LEDs.

DMX Resolution 8-bit (One Channel) Personality 609 - Smoothing Off

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

- CH1 All Outputs - Smoothing Off

DMX Resolution 8-bit (One Channel) Personality 610 - Smoothing On

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

- CH1 All Outputs - Smoothing on

DMX Resolution 16-bit (Two Channels) Personality 611 - Smoothing Off

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

• CH1 All Outputs Coarse

• CH 2 All Outputs Fine

Note: The coarse and fine channels work in unison with each other. If only using the coarse channel in this mode the fade of the light will "step". When the fine channel is used in combination with the coarse channel, the fade of the luminaire will be smooth. It is always recommended that a control system that utilizes both coarse and fine channels be used when in this mode.

DMX Resolution 16-bit (Two Channel) Personality 612 - Smoothing On

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

• CH1 All Outputs Coarse

• CH 2 All Outputs Fine

Note: The coarse and fine channels work in unison with each other. If only using the coarse channel in this mode the fade of the light will "step". When the fine channel is used in combination with the coarse channel, the fade of the luminaire will be smooth. It is always recommended that a control system that utilizes both coarse and fine channels be used when in this mode.

Stand-Alone Effects Mode

Stand-Alone Effects Mode is used when a DMX controller or control console is not available or desired.

Note: The unit must be in **DMX Mode** (refer to **"DMX Mode" on page 5**). If Master Control Mode is ON, stand-alone effects from a single unit will control all other units connected via DMX cable. To all synchronize the units, set their DMX address to 001.

IMPORTANT! Do not use the Stand-Alone Effects Mode while connected to a control console or a conflict in operation (between the DMX controller or console and the unit sending commands) will result.

Table 2: Stand-Alone Effects Settings

Value Range	Description	Comments
Color Fades (700 to 799)		
700 to 709	R >> A >> G >> B Fade	700 = Fast to 709 = Slow
740 to 749	B >> G >> A >> R Fade	740 = Fast to 749 = Slow
780 to 789	R >> A >> G >> B >> W Fade	780 = Fast to 789 = Slow
790 to 799	W >> B >> G >> A >> R Fade	790 = Fast to 799 = Slow
Strobes (800 to 879)		
800 to 819	White Strobe	800 = Fast to 809 = Slow
820 to 829	Red Strobe	820 = Fast to 829 = Slow
830 to 839	Green Strobe	830 = Fast to 839 = Slow
840 to 849	Blue Strobe	840 = Fast to 849 = Slow
850 to 859	Red / Amber / Green / Blue - Rainbow Strobe	850 = Fast to 859 = Slow
870 to 879	Blue / Green / Amber / Red - Rainbow Strobe	870 = Fast to 879 = Slow

Setting DMX Address

To set the luminaire's DMX address, simply press the unit's three buttons (**Figure 5**) repeatedly (or press and hold and the numbers will sequence automatically) desired DMX address (1 through 512) appears on the display. After a few seconds after the last button press, the display will blink once quickly, and the address is set.
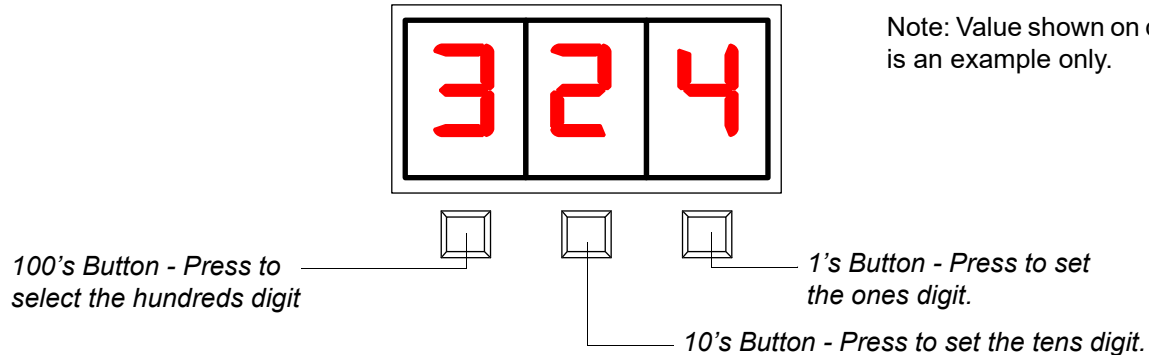

Note: Value shown on display is an example only.

100's Button - Press to select the hundreds digit

1's Button - Press to set the ones digit.

10's Button - Press to set the tens digit.

Figure 5: Setting DMX Address

The address is retained in memory, even if disconnected from its power source.

IMPORTANT! RDM addressing sent from a remote unit will overwrite local DMX settings.

Local Channel Control

Local Channel Control is a special mode that allows you to manually select colors for a single unit using the luminaire's three buttons. *Special Note: for one color units display will still reflect R,G,B,A, which will drive the outputs of channels 1-4.*

To Switch to Local Channel Control to or from DMX Mode (refer to "DMX Mode" on page 5):

Step 1. Wait until the display goes blank.

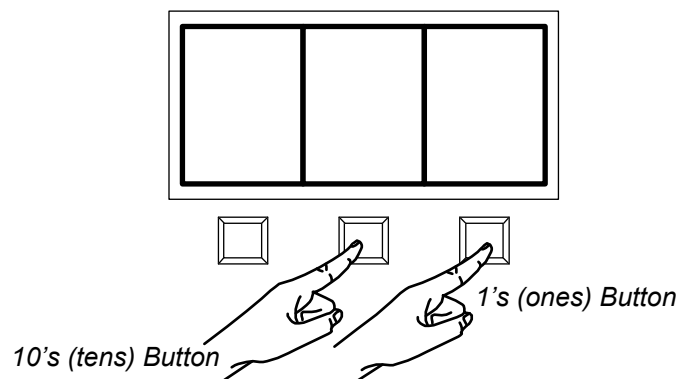*1's (ones) Button*

10's (tens) Button

Figure 6: Setting Unit to Local Channel Control

Step 2. As shown in **Figure 6**, PRESS and HOLD [ONES] button.

Step 3. PRESS and HOLD [TENS] button.

Step 4. RELEASE [ONES] button.

Step 5. RELEASE [TENS] button.

Selecting Colors in Local Channel Control

• While in Local Channel Control, the hundreds button cycles through Red, Green, Blue, and Amber (or White) colors.

- The tens and ones buttons will display a value between 0 through 99. Note, value 99 is channel at full.

Master Control Mode

Note: Master Control Mode is different than Master Channel described in **"Personality Settings" on page 7**.

Master Control Mode only works while the unit is set to Stand-Alone Mode (refer to **"Stand-Alone Effects Mode" on page 9**). This mode allows the unit set to Master Control Mode to behave like a DMX control source or console and transmit 4-channel (RGBA) 8-bit DMX set on DMX address 001 - reflecting its present light output.

Master Control Mode Notes

- Only the first unit in the DMX chain is going to serve as the master fixture and it should be set to Stand-Alone Mode with Master Control Mode Channel set to ON.

- Stand-Alone Mode with Master Control Mode Channel ON should NOT be used while the units are connected to a DMX control device or console.

- All fixtures connected to and following the unit set to Master Control Mode should have their Master Control Mode Channel set to OFF.

Enabling Master Control Mode

To turn ON Master Control Mode:

Step 1. Set fixture to Stand-Alone Mode (see **"Stand-Alone Effects Mode" on page 9**)

Step 2. Allow display to go blank.

100's (hundreds) Button   *1's (ones) Button*
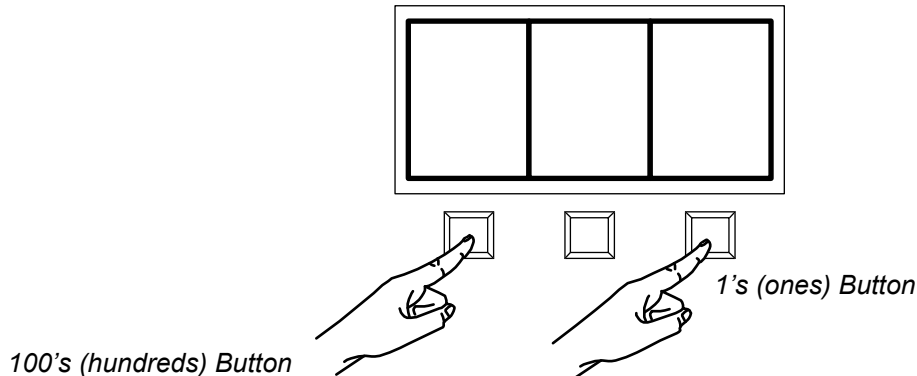
Figure 7: Setting Unit to Master Control Mode ON

Step 3. As shown in **Figure 7**, PRESS and HOLD [HUNDREDS] button.

Step 4. PRESS and HOLD [ONES] button.

Step 5. RELEASE [HUNDREDS] button.

Step 6. RELEASE [ONES] button.

Step 7. Display will briefly show ⌂⌂ to indicate unit is set to Master Control Mode and then blink.

Step 8. Address fixtures to DMX 001 that are connected to unit in Master Control Mode.

Disabling Master Control Mode

To turn OFF Master Control Mode:

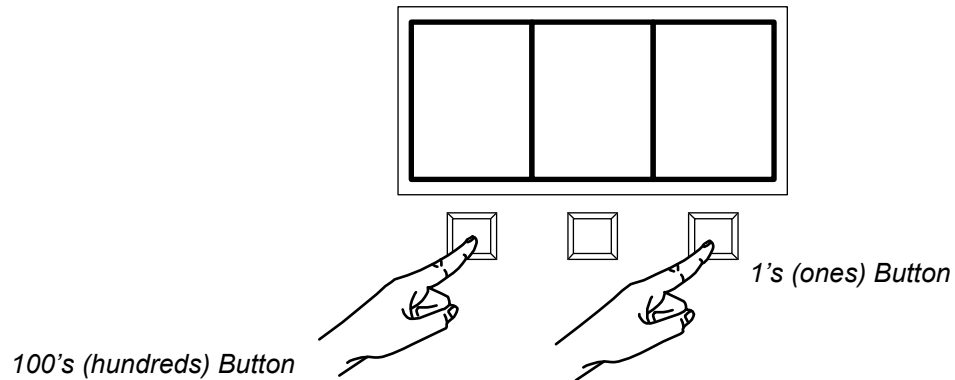Step 1. Allow display to go blank.

Figure 8: Setting Unit to Master Control Mode OFF

Step 2. As shown in **Figure 8**, PRESS and HOLD [HUNDREDS] button.

Step 3. PRESS and HOLD [ONES] button.

Step 4. RELEASE [HUNDREDS] button.

Step 5. RELEASE [ONES] button.

Step 6. Display will briefly show OFF to indicate unit is no longer set to Master Control Mode and then blink.

Locking the Fixture's Buttons (Locked Mode)

The luminaire can have its buttons disabled or locked so unwanted changes cannot be made.

To Lock (or Unlock) the fixture's buttons:

Step 1. Wait a few seconds until the display goes blank,
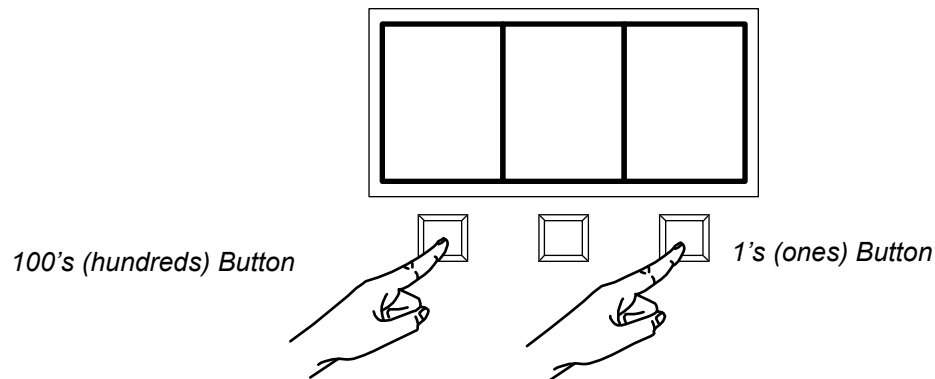

Figure 9: Setting Unit to Locked Mode ON or OFF

Step 2. As shown in **Figure 9 on page 12**. PRESS and HOLD [ONES] button.

Step 3. PRESS and HOLD [HUNDREDS] button.

Step 4. RELEASE [ONES] button.

Step 5. RELEASE the [HUNDREDS] button.

Step 6. Display will briefly show ⌐OⳆ to indicate unit is set to Locked Mode and then blink. In this mode, pressing the buttons will ave no effect until they are unlocked.

IMPORTANT! Locked Mode only affects the luminaire's buttons. The unit can still be addressed and changed via a RDM device.

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