This product manual contains important information about the safe installation and use of this controller. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.
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   4.4 Technical specifications

1.1 What is included
   1) ORCONTROL DMX Controller
   2) DC 9-12V 500mA, 90V-240V Power Adapter
   3) Manual with warranty card

1.2 Unpacking Instructions
   Immediately upon receiving a fixture, carefully unpack the carton, check the contents to ensure that all parts are present, and have been received in good condition. Notify the shipper immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing materials if at all possible.

1.3 Safety Instructions

⚠ Please read these instructions carefully. They include important information, usage and maintenance of your ORCONTROL.

- Keep this Manual for future reference.
- Connect only to proper AC source, and confirm voltage.
- This product is intended for indoor use only!
- To prevent risk of fire or shock, do not expose fixture to rain or moisture.
- Make sure there are no flammable materials close to the unit while operating.
- Always disconnect from power source before servicing.
- Refer unit to professional service personnel only. Do not open unit, there are no user serviceable parts inside.

2. INTRODUCTION

2.1 Features
- Universal DMX512 Controller
- Controls 12 Intelligent Lights up to 16 Channels
- 30 Banks of 8 Scenes (240 Scenes Total)
- Set up to 6 Chases containing 240 Scenes
- Executes Multiple Chases Simultaneously
- Channels are Re-assignable
- Assignable 16-bit Pan / Tilt Joystick Controller
- Beat Activation, Tap Sync, Auto Run Mode
- Selectable DMX Output Polarity
2.2 General Overview

The ORCONTROL is a universal intelligent lighting controller. It allows the control of 12 fixtures composed of 16 channels each and up to 240 programmable scenes. Six chase banks can contain up to 240 steps composed of the saved scenes and in any order. Programs can be triggered by music, midi, automatically or manually. All chases can be executed at the same time.

2.3 Product Overview

<table>
<thead>
<tr>
<th>Item</th>
<th>Button or Fader</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scanner select buttons</td>
<td>Fixture selection</td>
</tr>
<tr>
<td>2</td>
<td>Scanner indicator LEDS</td>
<td>Indicates the fixtures currently selected</td>
</tr>
<tr>
<td>3</td>
<td>Scene select buttons</td>
<td>Universal bump buttons representing scene location for storage and selection</td>
</tr>
<tr>
<td>4</td>
<td>Channel faders</td>
<td>For adjusting DMX values, Ch 1<del>8 can be adjusted immediately after pressing the respective scanner select button, Ch 9</del>16 after pressing the Page select button</td>
</tr>
<tr>
<td>5</td>
<td>Page A indicator LED</td>
<td>Represents Ch 1~8 range selected. Tap A, B then B again to control both pages simultaneously.</td>
</tr>
<tr>
<td>6</td>
<td>Page B indicator LED</td>
<td>Represents Ch 9~16 range selected</td>
</tr>
</tbody>
</table>

Item | Button or Fader | Function |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Page select button</td>
<td>In manual mode, press to toggle between pages of control or to select both pages simultaneously. Both LEDs on will allow control of both lower and upper range channel.</td>
</tr>
<tr>
<td>8</td>
<td>Program button</td>
<td>Used to enter programming mode</td>
</tr>
<tr>
<td>9</td>
<td>Music/Bank Copy button</td>
<td>Used to activate Music mode and as the copy command during programming</td>
</tr>
<tr>
<td>10</td>
<td>LCD display window</td>
<td>Status window displays pertinent operational data</td>
</tr>
<tr>
<td>11</td>
<td>Mode Indicator LEDS</td>
<td>Provides operating mode status, (manual, music or auto)</td>
</tr>
<tr>
<td>12</td>
<td>Bank Up button</td>
<td>Function button to traverse Scene/Steps in banks or chases Incremental DMX values while FINE button is active.</td>
</tr>
<tr>
<td>13</td>
<td>Bank Down button</td>
<td>Function button to traverse Scene/Steps in banks or chases Decremental DMX values while FINE button is active.</td>
</tr>
<tr>
<td>14</td>
<td>Tap Display button</td>
<td>This is a Tap-Sync during playback and during programming changes the DMX value displayed in the LCD panel to percentages</td>
</tr>
<tr>
<td>15</td>
<td>Blackout button</td>
<td>Sets the shutter or dimmer value of all fixtures to “0” causing all light output to cease</td>
</tr>
<tr>
<td>16</td>
<td>Midi/Rec button</td>
<td>Activates MIDI external control and also used to confirm the record/save process</td>
</tr>
<tr>
<td>17</td>
<td>Assign LED</td>
<td>Indicated the controller is in Channel assign mode during the initial setup of the controller</td>
</tr>
<tr>
<td>18</td>
<td>Auto/Dei button</td>
<td>Used to activate Auto mode and as the delete function key during programming</td>
</tr>
<tr>
<td>19</td>
<td>Chaser buttons</td>
<td>Chase memory 1~6</td>
</tr>
<tr>
<td>20</td>
<td>Speed fader</td>
<td>This will adjust the hold time of a scene or a step within a chase</td>
</tr>
<tr>
<td>21</td>
<td>Fade-Time fader</td>
<td>Also considered a cross-fade, sets the interval time between two scenes in a chase</td>
</tr>
<tr>
<td>22</td>
<td>Fine button</td>
<td>Activates 16 bit control of the wheel, movement will be in extremely small increments. Note: While FINE is active Bank UP/DOWN buttons will increase and decrease DMX values by one for either the wheel or the slider in focus or currently moved.</td>
</tr>
<tr>
<td>23</td>
<td>Reverse LED</td>
<td>Generally used to control the pan and tilt movement of a fixture</td>
</tr>
<tr>
<td>24</td>
<td>PAN/TILT Wheel (Joystick)</td>
<td>Activates 16 bit control of the wheel, movement will be in extremely small increments. Note: While FINE is active Bank UP/DOWN buttons will increase and decrease DMX values by one for either the wheel or the slider in focus or currently moved.</td>
</tr>
<tr>
<td>25</td>
<td>Mode button</td>
<td>Used to activate Auto mode and as the delete function key during programming</td>
</tr>
<tr>
<td>26</td>
<td>Override button</td>
<td>To activate the fog machine</td>
</tr>
<tr>
<td>27</td>
<td>Fog machine ready indicator</td>
<td>Represents Ch 9~16 range selected</td>
</tr>
<tr>
<td>28</td>
<td>Fog machine heating indicator</td>
<td>Represents Ch 9~16 range selected</td>
</tr>
</tbody>
</table>
2.4 Product Overview (rear panel)

<table>
<thead>
<tr>
<th>Item</th>
<th>Button or Fader</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Audio input jack</td>
<td>Direct audio feed for use in sound-active mode</td>
</tr>
<tr>
<td>31</td>
<td>MIDI input port</td>
<td>For external triggering of Banks and Chases using a MIDI device</td>
</tr>
<tr>
<td>32</td>
<td>DMX polarity switch</td>
<td>May be used to correct signal polarity</td>
</tr>
<tr>
<td>33</td>
<td>DMX output connector</td>
<td>DMX control signal</td>
</tr>
<tr>
<td>34</td>
<td>DMX input connector</td>
<td>Used to transfer programmed data between 2 controllers</td>
</tr>
<tr>
<td>35</td>
<td>Fog machine socket</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>DC Input jack</td>
<td>Main power feed</td>
</tr>
<tr>
<td>37</td>
<td>USB Lamp socket</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>ON/OFF power switch</td>
<td>Turns the controller on and off</td>
</tr>
</tbody>
</table>

2.5 Common Terms

The following are common terms used in intelligent light programming.

- **Blackout** is a state by where all lighting fixtures light output are set to 0 or off, usually on a temporary basis.
- **DMX-512** is an industry standard digital communication protocol used in entertainment lighting equipment. For more information read Sections DMX Primer and DMX Control Mode in the Appendix.
- **Fixture** refers to your lighting instrument or other device such as a fogger or dimmer of which you can control.
- **Programs** are a bunch of scenes stacked one after another. It can be programmed as either a single scene or multiple scenes in sequence.
- **Scenes** are static lighting states.
- **Sliders** also known as faders.
- **Chases** can also be called programs. A chase consists of a bunch of scenes stacked one after another.

3. OPERATING INSTRUCTIONS

3.1 Setup

3.1.1 SETTING UP THE SYSTEM

1) Plug the included power supply to the system back panel and then to the mains outlet

2) Plug in your DMX cable(s) to your intelligent lighting as described in the fixtures respective manual.

3) Use only the power supply provided. For a quick Primer on DMX see the “DMX Primer” section in the Appendix of this manual.

3.1.2 FIXTURE ADDRESSING

The ORCONTROL is programmed to control 16 channels of DMX per fixture, therefore the fixtures you wish to control with the corresponding SCANNER buttons on the unit, must be spaced 16 channels apart.

<table>
<thead>
<tr>
<th>FIXTURE OR SCANNER #</th>
<th>DEFAULT DMX STARTING ADDRESS</th>
<th>BINARY DIPSWITCH SETTINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>1, 5</td>
</tr>
<tr>
<td>3</td>
<td>33</td>
<td>1, 6</td>
</tr>
<tr>
<td>4</td>
<td>49</td>
<td>1, 5, 6</td>
</tr>
<tr>
<td>5</td>
<td>65</td>
<td>1, 7</td>
</tr>
<tr>
<td>6</td>
<td>81</td>
<td>1, 5, 7</td>
</tr>
<tr>
<td>7</td>
<td>97</td>
<td>1, 6, 7</td>
</tr>
<tr>
<td>8</td>
<td>113</td>
<td>1, 5, 6, 7</td>
</tr>
<tr>
<td>9</td>
<td>129</td>
<td>1, 8</td>
</tr>
<tr>
<td>10</td>
<td>145</td>
<td>1, 5, 8</td>
</tr>
<tr>
<td>11</td>
<td>161</td>
<td>1, 6, 8</td>
</tr>
<tr>
<td>12</td>
<td>177</td>
<td>1, 5, 6, 8</td>
</tr>
</tbody>
</table>

Please refer to your individual fixture’s manual for DMX addressing instructions. The table above refers to a standard 9 dipswitch binary configurable device.
3.1.3 JOYSTICK ASSIGNMENT

Because not all intelligent lighting fixtures are alike or share the same control attributes, the ORCONTROL allows the user to assign the Joystick the correct pan and tilt channel for every individual fixture including 16 bit channel assignments. It also allows the user to re-assign physical faders to fixture DMX channels so that the user can combine or unify control of similar or the same attributes across different types of fixtures.

Action:
1) press and hold the PROGRAM button until the led blinks
2) Press and hold FINE & MODE buttons together
   (2) times to access the channel assignment mode, the assign led will light.
   The Joystick can be reassigned to output on a different DMX channel.
3) press a SCANNER button that represents the fixture you would like to set the pan/tilt
4) Use the BANKUP/DOWN buttons to select pan/tilt

Action:
5) Press the TAP/DISPLAY button to switch pages
6) press and hold MODE button, then press the SCENES buttons to select the DMX channel. All LEDs will blink.
7) Press and hold FINE & MODE buttons to exit

3.1.4 Review wheel assignment or reverse

Reverse Joystick Assignment
1) Press and hold FINE & MODE buttons together to access the wheel assignment mode
2) press a SCANNER button to select a scanner
3) Press and hold FINE & MODE buttons to exit

Review Joystick Assignment
1) Press and hold FINE & mode buttons together(2) times to access the channel reverse mode
2) press a SCANNER button to select a scanner
3) Press and hold FINE & MODE buttons to exit

3.1.5 COPY SCANNER

Example: Copying Scanner 1 into Scanner 2
1) Press and hold SCANNER button # 1.
2) While holding button # 1 press SCANNER button # 2.
3) Release SCANNER button # 1 first before releasing SCANNER button # 2.
4) All SCANNER LED indicators will flash to confirm successful copy

3.1.6 REVERSE CHANNEL OUTPUT

Action:
1) press and hold the PROGRAM button until the led blinks
2) Press and hold FINE & MODE buttons together to access the channel assignment mode, then press the SCANNER button
3) Use the BANKUP/DOWN buttons to select pan/tilt
   You can permanently reverse the output of any given channel on the controller.
4) Press the TAP/DISPLAY button to switch between pages
5) press and hold MODE button, then press the SCENES buttons to select the DMX channel. All LEDs will blink.
6) Press and hold FINE & MODE buttons(2) times to exit

3.1.7 FADE TIME ASSIGN

You can choose whether the board’s fade time during scene execution is implemented broadly to all output channels or only to the Pan & Tilt movement channels. This is relevant because often you will want gobos and colors to change quickly while not affecting the movement of the light.

Action:
1) Turn OFF the controller.
2) Hold the MODE and TAP/DISPLAY buttons simultaneously.
3) Turn ON the controller.
4) Press the TAP/DISPLAY button to toggle between the two modes. Either ALL CH (all channels) or ONLY X/Y (Pan & Tilt only)
5) Press MODE and TAP/DISPLAY to save settings.
   All LEDs will blink to confirm.

3.2 Operation

3.2.1 MANUAL MODE

The manual mode allows direct control of all scanners. You are able to move them and change attributes using the channel faders and Joystick.

Action:
1) Press the AUTO DEL button repeatedly until the MANUAL LED is lit.
2) Select a SCANNER button.
3) Move Joystick and faders to change fixture attributes.
   PAGE/SELECT A/B button
   Use to switch between fader control of (A: Ch1–8), (B: Ch 9–16)
   TAP/DISPLAY button:
   Press to toggle the output indicator on the LCD display between DMX values (0-255) and percentage (0-100)

3.2.2 REVIEW SCENE OR CHASE

This instruction assumes that you have already recorded scenes and chases on the controller. If no scenes are recorded, skip section and go to programming.
SCENE Review:
1) Select any one of the 30 banks by pressing the BANK UP/DOWN buttons.
2) Select a SCENE button (1–8) to review.
3) Move joystick and faders to change fixture attributes.

Chase Review:
1) Press any one of the 6 CHASE buttons.
2) Press the TAP DISPLAY button to view the step number on the display.
3) Press the BANK UP/DOWN buttons to review all scenes in the chase.

3.3 Programming
A program (bank) is a sequence of different scenes (or steps) that will be called up one after another. In the ORCONTROL 30 programs can be created of 8 scenes each in.

3.3.1 ENTERING PROGRAM MODE
1) Press the PROGRAM button until the LED blinks.

3.3.2 CREATE A SCENE:
A scene is a static lighting state. Scenes are stored in banks. There are 30 bank memories on the controller and each bank can hold 8 scene memories. The ORCONTROL can save 240 scenes total.

Action:
1) Press the PROGRAM button until the LED blinks.
2) Position SPEED and FADE TIME sliders all the way down.
3) Select the SCANNERS you wish to include in your scene.
4) Compose a look by moving the sliders and wheel.
5) Tap MIDI/REC button.
6) Choose a BANK (01–30) to change if necessary.
7) Select a SCENES button to store.
8) Repeat steps 3 through 7 as necessary. 8 scenes can be recorded in a Program.
9) To exit program mode, hold the PROGRAM button.

Notes:
Deselect Blackout if LED is lit.
You can select more than one fixture.
You can access channels 9–16 by pressing the Page Select button. This is necessary for fixtures that use more than 8 channels of control.
There are 30 scenes available in every bank.
All LEDs will flash to confirm. The LED display will now indicate the Scene number and Bank number used.

Tip! Press the FINE button, activate joystick or slider by moving it then use the Bank Up/Down buttons to change values in increments of “1”.


3.3.3 RUNNING A PROGRAM
Action:
1) Use BANK UP/DOWN buttons to change Program banks if necessary.
2) Press the AUTO DEL button repeatedly until the AUTO LED turns on.
3) Adjust the PROGRAM speed via the SPEED fader and the loop rate via the FADE TIME fader.
4) Alternatively you can tap the TAP DISPLAY button twice. The time between two taps sets the time between SCENES (up to 10 minutes).

Notes:
Deselect Blackout if LED is lit.
Also called a Tap-Sync.

3.3.4 CHECK PROGRAM
Action:
1) Press and hold the PROGRAM button until the LED blinks.
2) Use the BANK UP/DOWN buttons to select the PROGRAM bank to review.
3) Press the SCENES button to review each scene individually.

3.3.5 EDITING A PROGRAM
Scenes will need to be modified manually.

Action:
1) Press and hold the PROGRAM button until the LED blinks.
2) Use BANK UP/DOWN buttons to change Program banks if necessary.
3) Select the desired fixture via the SCANNERS button.
4) Adjust and change fixture attributes using the channel faders and joystick.
5) Press the MIDI/REC button to prepare the save.
6) Select the desired SCENES button to save.

3.3.6 COPY A PROGRAM
Action:
1) Press and hold the PROGRAM button until the LED blinks.
2) Use BANK UP/DOWN buttons to select the PROGRAM bank you will copy.
3) Press the MIDI/REC button to prepare the copy.
4) Use BANK UP/DOWN buttons to select the destination PROGRAM bank.
5) Press the MUSIC BANK COPY button to execute the copy. All LEDs on the controller will blink.

Notes:
All 8 scenes in a Program bank will be copied.

3.4 Chase Programming
A chase is created by using previously created scenes. Scenes become steps in a chase and can be arranged in any order you choose. It is highly recommended that prior to programming chases for the first time, you save all chases from memory. See “Delete All Chases” for instructions.

3.4.1 CREATE A CHASE
A Chase can contain 240 scenes as steps. The term steps and scenes are used interchangeably.

Action:
1) Press and hold the PROGRAM button to enter programming mode.
2) Press the CHASE (1–6) button you wish to program.
3) Change BANK if necessary to locate a scene.
4) Select the SCENE to insert.
5) Tap the MIDI/REC button to store.
6) Repeat steps 3 – 5 to add additional steps in the chase. Up to 240 steps can be recorded.
7) Press and hold the PROGRAM button to save the chase.
3.4.2 RUNNING A CHASE
Action:
1) Press a CHASE button then press the AUTO DEL button.
2) Adjust the Chase speed by tapping the TAP DISPLAY button twice at a rate of your choosing.

Notes:
The time between 2 taps will set the chase speed (up to 10 minutes).

3.4.3 CHECKING A CHASE
Action:
1) Press the PROGRAM button until the LED blinks.
2) Select the desired CHASE button.
3) Press the TAP DISPLAY button to switch the LCD display to steps.
4) Review each scene/step individually by using the BANK UP/DOWN buttons.

3.4.4 EDIT CHASE (COPY BANK INTO CHASE)
Action:
1) Press and hold the PROGRAM button to enter programming mode.
2) Press the desired CHASE button.
3) Select the BANK that contains the scene to be copied using the BANK UP/DOWN buttons.
4) Press MUSIC/BANK COPY button to prepare copy.
5) Press MIDI/REC button to copy the bank. All LEDs will blink.

3.4.5 EDIT CHASE (COPY SCENE INTO CHASE)
Action:
1) Press and hold the PROGRAM button to enter programming mode.
2) Press the desired CHASE button.
3) Select the BANK to be using the BANK UP/DOWN buttons.
4) Press the SCENE button that corresponds to the scene to be copied.
5) Press MIDI/REC button to copy the scene. All LEDs will blink.

3.4.6 EDIT CHASE (INSERT SCENE INTO A CHASE)
Action:
1) Press and hold the PROGRAM button to enter programming mode.
2) Press the desired CHASE button.
3) Press the TAP DISPLAY buttons to switch the LCD display to steps view.
4) Use the BANK UP/DOWN buttons to navigate steps and locate the insert point of the new scene. The display will read the step number.
5) Press MIDI/REC button to prepare the insert.

6) Use the BANK UP/DOWN button to locate the SCENE.
7) Press the SCENE button that corresponds to the scene to be inserted.
8) Press MIDI/REC button to insert the scene. All LEDs will blink.

3.4.7 DELETE A SCENE IN A CHASE
Action:
1) Press and hold the PROGRAM button to enter programming mode.
2) Press the desired CHASE button that contains the scene to be deleted.
3) Press the TAP DISPLAY button to switch the LCD display to steps.
4) Select the scene/step to be deleted using the BANK UP/DOWN buttons.
5) Press AUTO DEL button to delete the step/scene. All LEDs will blink.

3.4.8 DELETE A CHASE
Action:
1) Press and hold the PROGRAM button to enter programming mode.
2) Press the CHASE button (1~6) to be deleted.
3) Press and hold AUTO DEL button and the respective CHASE button to delete the chase. All LEDs will blink.

3.4.9 DELETE ALL CHASE PROGRAMS
CAUTION! This procedure will result in irrevocable loss of chase step memory. The individual scenes and program banks will be preserved.

Action:
1) Turn OFF controller.
2) Press and hold the BANK DOWN button and the AUTO DEL button while turning ON the controller.
3) All LEDs will blink.

3.5 Scene Programming (Steps)
3.5.1 INSERT A SCENE
Action:
1) Press and hold the PROGRAM button to enter programming mode.
2) Press the desired CHASE button.
3.5.2 COPY ASCENE

**Action:**
1) Press and hold the PROGRAM button to enter programming mode.
2) Select the BANK that contains the scene to be copied using the BANK UP/DOWN buttons.
3) Press the SCENE button that corresponds to the scene to be copied.
4) Press the MIDI/REC button to copy the scene.
5) Select the destination BANK that contains the scene memory to record onto using the BANK UP/DOWN buttons.
6) Press the desired SCENE button to complete copy. All LEDs will blink.

**Notes:**
- When deleting a scene the physical location is not removed, however, all 192 DMX channels available to the scene will be set to value 0.

3.5.3 DELETE ASCENE

**Action:**
1) Press and hold the PROGRAM button to enter programming mode.
2) Select the BANK that contains the scene to be deleted by using the BANK UP/DOWN buttons.
3) Press and hold the AUTO DEL button.
4) Press the SCENE button that corresponds to the scene you want to delete. All LED's will blink.

3.5.4 DELETE ALL SCENES

**Action:**
1) Press and hold the PROGRAM button and the BANK DOWN button while turning off power to the controller.
2) Turn the controller back on.

3.6 Playback

3.6.1 RUNNING IN SOUND-MODE

**Action:**
1) Press the MUSIC BANK COPY button until the MUSIC LED turns on.
2) Select the program BANK to run in soundactive mode using the BANK UP/DOWN buttons.
3) Alternatively you can press a single CHASE button (1-6) or several CHASE buttons in sequence and all selected chases will loop in the order selected.
4) You can adjust the duration time using the FADE TIME fader.

**Notes:**
- In the Sound mode, programs will be triggered by the sound using its built-in microphone.
- Multiple chases selected will loop and run in the order originally selected.

3.6.2 RUNNING IN AUTO-MODE

**Action:**
1) Press the AUTO DEL button until the AUTO LED turns on.
2) If a CHASE button is not pressed the controller will automatically run a BANK program.
3) Change BANK programs by using BANK UP/DOWN buttons.
4) Alternatively you can press a single CHASE button (1-6) or several CHASE buttons in sequence and all selected chases will loop in the order selected.
5) You can adjust the time between steps by moving the SPEED fader and the duration of the step by moving the FADE TIME fader.

**Notes:**
- In the Auto mode, programs will be triggered by controllers fade and speed time as set on the faders.
- Multiple chases selected will loop and run in the order originally selected.

3.6.3 RUN MULTIPLE CHASES SIMULTANEOUSLY

**Action:**
1) Press and hold AUTO DEL button.
2) While holding down AUTO DEL, in succession press and release each CHASE, you would like to run simultaneously.

**Notes:**
- IMPORTANT! To avoid conflict between scenes running simultaneously that control the same fixture attributes consider creating individual color and gobo chases.

3.6.4 BLACKOUT

The Blackout button brings all lighting output to 0 or off.

3.7 Midi Operation

The controller will only respond to MIDI commands on the MIDI channel which is set to full stop. All MIDI control is performed using Note on commands. All other MIDI instructions are ignored. To stop a chase, send the blackout on note.

**Action:**
1) Press and hold the MIDI/REC button for about 3 seconds.
2) Select the MIDI control channel (1-16) via the BANK UP/DOWN buttons to set.
3) Press and hold the MIDI/REC button for 3 seconds to save settings.
4) To release MIDI control, press any other button except the BANK buttons during step 2.

**Notes:**
- This is the Channel that the controller will receive MIDI note commands.
4 APPENDIX

4.1 DMX Primer

There are 512 channels in a DMX–512 connection. Channels may be assigned in any manner. A fixture capable of receiving DMX 512 will require one or a number of sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the controller. There are many different types of DMX controllable fixtures and they all may vary in the total number of channels required. Choosing a start address should be planned in advance. Channels should never overlap. If they do, this will result in erratic operation of the fixtures whose starting address is set incorrectly. You can however, control multiple fixtures of the same type using the same starting address as long as the intended result is that of unison movement or operation. In other words, the fixtures will be slaved together and all respond exactly the same.

4.2 Fixture Linking

DMX fixtures are designed to receive data through a serial Daisy Chain. A Daisy Chain connection is where the DATAOUT of one fixture connects to the DATA IN of the next fixture. The order in which the fixtures are connected is not important and has no effect on how a controller communicates to each fixture. Use an order that provides for the easiest and most direct cabling. Connect fixtures using shielded two-conductor twisted pair cable with three pin XLR male to female connectors. The shield connection is pin 1, while pin 2 is Data Negative (S-) and pin 3 is Data Positive (S+).

Caution: At the last fixture, the DMX-cable has to be terminated with a terminator. Solder a 120 ohm resistor between Signal (-) and Signal (+) into a 3-pin XLR-plug and plug it in the DMX-output of the last fixture.

In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals. The DMX terminator is simply an XLR connector with a 120W (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.

If you wish to connect DMX-controllers with other XLR-outputs, you need to use adapter-cables.
4.3 DMX Dipswitch Quick Reference Chart

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<th>#4</th>
<th>#5</th>
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<td>165</td>
<td>197</td>
</tr>
</tbody>
</table>

DMX Address Quick Reference Chart

4.4 Technical Specifications

- DMX Protocol: DMX-512 USITT
- DMX Connections: DMX XLR 3-Pin Input & Output
- Additional Connections: Audio Input (Sound Active Mode) MIDI Input (Bank/Scene Select) 5-Pin DIN plug (Fog Machine Control) USB Lamp Socket / Power Port
- Power Supply: DC 9-12v 500mA (Use Supplied Power Supply Only)
- Dimensions L xWxH (in): 492 x 190 x 90
- Dimensions L xWxH (mm): 7.7 lbs / 3.5kg

Dip Switch Position  DMX Address