

# DMX-40B DMX Controller

## Snapshot

Ok on Dimmer	⊘
Outdoor OK	⊘
Sound Activated	✓
DMX512	✓
Master/Slave	⊘
115V/230V Switch	⊘
Replaceable Fuse	⊘
User Serviceable	⊘
Duty Cycle	⊘

*USER MANUAL*



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# BEFORE YOU BEGIN

## What is included

- DMX-40B controller
- DC 9-12V 500mA, 110V Power Adapter or 230V Power Adapter
- Manual with warranty card

## 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.

## Safety Instructions



Please read these instructions carefully, which includes important information about the installation, usage and maintenance?

- Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction booklet.
- Always make sure that you are connecting to the proper voltage and that the line voltage you are connecting to is not higher than that stated on decal or rear panel of the fixture.
- 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.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Always disconnect from power source before servicing or replacing lamp or fuse and be sure to replace with same lamp source.
- In the event of serious operating problem, stop using the unit immediately. Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center. Always use the same type spare parts.
- Don't connect the device to a dimmer pack.
- Make sure power cord is never crimped or damaged.
- Never disconnect power cord by pulling or tugging on the cord.
- Do not operate this device in more than 113° F ambient temperature conditions.

**Caution!** *There are no user serviceable parts inside the unit. Do not open the housing or attempt any repairs yourself. In the unlikely event your unit may require service, please contact CHAUVET at: 954-929-1115.*

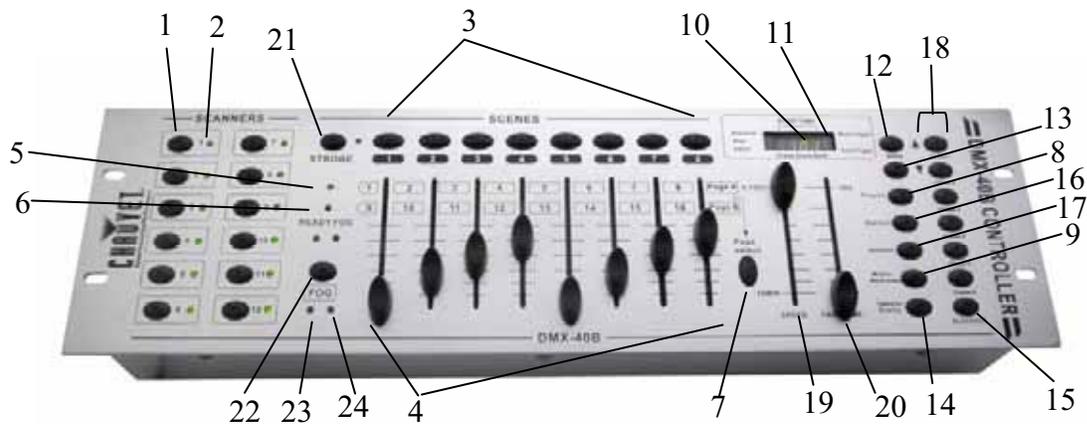
# INTRODUCTION

The DMX-40B 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. Channel assignments can be reprogrammed for ease of controlling different fixtures. On the surface you will find various programming tools such as 8 universal channel sliders, quick access scanner and scene buttons, and an LED display indicator for easier navigation of controls and menu functions.

## Features

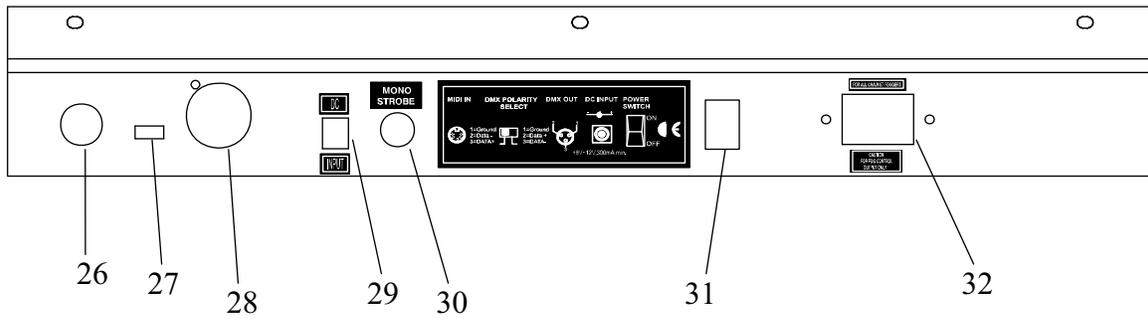
- Universal DMX-512 controller
- Controls up to 12 intelligent lights of up to 16 channels each
- 30 banks of 8 scenes, 240 scenes max
- 192 DMX channels of control
- 6 sets of chases containing 240 scenes
- Reversible sliders
- Re-assignable channels
- Sequential linking of chases
- Fog & strobe control buttons
- Grab any fixture on the fly
- Beat activation, tap-sync and auto run
- Polarity selector
- 3 space 19" rack mount
- MIDI compatible

## Product Overview (front)



Item	Button or Fader	Function
1	Scanner select buttons	Fixture selection
2	Scanner indicator LED's	Indicates the fixtures currently selected
3	Scene select buttons	Universal bump buttons representing scene location for storage and selection
4	Channel faders	For adjusting DMX values, Ch 1~8 can be adjusted immediately after pressing the respective scanner select button, Ch 9~16 after pressing the Page select button
5	Page A Indicator LED	Represents Ch 1~8 range selected
6	Page B Indicator LED	Represents Ch 9~16 range selected
7	Page select button	Press to toggle between pages of control.
8	Program button	Used to enter programming mode
9	Music/Bank Copy button	Used to activate Music mode and as the copy command during programming
10	LED display window	Status window displays pertinent operational data
11	Mode Indicator LED'S	Provides operating mode status, (manual, music or auto)
12	Bank Up button	Function button to scroll through banks in ascending order.
13	Bank Down button	Function button to scroll through banks in descending order.
14	Tapsync/Display button	Sets the chase speed by tapping, and toggles between values and percentages.
15	Blackout button	Reduces all DMX values to zero.
16	Midi/Add button	Activates MIDI external control and also used to confirm the record/save process
17	Auto/Del button	Used to activate Auto mode and as the delete function key during programming
18	Chase buttons	Chase memory 1 ~ 6
19	Speed fader	This will adjust the hold time of a scene or a step within a chase
20	Fade Time fader	Also considered a cross-fade, sets the interval time between two scenes in a chase
21	Strobe button	Used for Chauvet strobes.
22	Fog button	Strobe button
23	Reverse Channel LED	Indicates reverse channel programming mode
24	Fade LED	Indicates fade programming mode

## Product Overview (rear panel)



Item	Button or Fader	Function
26	MIDI input port	For external triggering of banks, scenes, chases, and blackout using a MIDI device
27	DMX polarity switch	May be used to change signal polarity
28	DMX output connector	DMX control signal
29	DC Input jack	Main power feed
30	Strobe connector	Chauvet Mono Strobe 1/4" connector for built in strobe controller
31	ON/OFF power switch	Turns the controller on and off
32	Fog connector	Chauvet fog controller IEC connector

## Common Terms

The following are common terms used in intelligent light programming.

- **Blackout** is a state 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 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** are also known as faders.
- **Chases** can also be called programs. A chase consists of a bunch of scenes stacked one after another.
- **Scanner** refers to a lighting instrument with a pan and tilt mirror; however DMX controllers can use this term to control any DMX-512 compatible device as a generic fixture.
- **MIDI** is a standard for representing musical information in a digital format. A MIDI input would provide external triggering of scenes using midi device such as a midi keyboard.
- **Stand Alone** refers to a fixture's ability to function independently of an external controller and usually in sync to music, due to a built in microphone.
- **Fade** slider is used to adjust the time between scenes within a chase.
- **Speed** slider affects the amount of time a scene will hold its state. It is also considered a wait time.
- **Shutter** is a mechanical device in the lighting fixture that allows you to block the lights path. It is often used to lessen the intensity of the light output and to strobe.
- **Patching** refers to the process of assigning faders to a DMX channel within a fixture.
- **Playbacks** can be either scenes or chases that are directly called to execution by the user. A playback can also be considered program memory that can be recalled during a show.

# OPERATING INSTRUCTIONS

## Setup

### SETTING UP THE SYSTEM

- 1) Place the DMX-40B on a level surface. Note! The DMX-40B can also be rack mounted, occupying three rack spaces (3U).
- 2) Plug the AC to DC power supply into the system back panel and into the mains outlet.
- 3) Plug in your DMX cable(s) to your intelligent lighting as described in the respective fixture's manual. For a quick overview of DMX see the "DMX Primer" on page 18.
- 4) Reset the system using the instructions below.

### RESETTING THE SYSTEM

**Warning:** this will reset the controller to its factory defaults. This will erase all programs and settings.

- 1) Turn off the unit.
- 2) Press and hold **BANK UP** and **AUTO/DEL**.
- 3) Turn on power to the unit (while still holding **BANK UP** and **AUTO/DEL**).

### FIXTURE ADDRESSING

The DMX-40B 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 (check the respective fixture's manual for how to enter the information into the fixture).

**Note:** failure to use these DMX assignments may cause a lack of control of the fixtures.

FIXTURE OR SCANNER #	DEFAULT DMX STARTING ADDRESS	BINARY DIPSWITCH SETTINGS SWITCH TO THE "ON POSITION"
1	1	1
2	17	1,5
3	33	1,6
4	49	1,5,6
5	65	1,7
6	81	1,5,7
7	97	1,6,7
8	113	1,5,6,7
9	129	1,8
10	145	1,5,8
11	161	1,6,8
12	177	1,5,6,8

## PHYSICAL FADER ASSIGNMENT (OPTIONAL SETUP)

Use this feature to combine or unify fixture control attributes for different fixtures. For example; if you were controlling 4 moving mirrors and 4 moving yokes, the color, gobo and dimmer channels may not line up ideally on the physical faders. Use this function to re-assign the dimmer, color and gobo channels to faders 1, 2 and 3. From now on you will be able to control the same attributes on all fixtures using the same fader location.

### Action

- 1) Press and hold **PROGRAM & TAPSYNC** buttons together (1) time to access the channel assignment mode.
- 2) Press a **SCANNER** button that represents the fixture whose faders you would like to re-assign.
- 3) Move the **SPEED** fader until you arrive at controller channel (number).
- 4) Move the **FADE TIME** fader to select the DMX channel.
- 5) Press the **MIDI/ADD** button to confirm setting.
- 6) Repeat steps 3 ~ 5 as often as necessary.

If you wish to copy a scanner's physical assignments to another scanner, continue by following steps 7-13. If you do not wish to do this, press and hold **PROGRAM & TAPSYNC** buttons (2) times to exit mode.

### *Example:* Copying Scanner 1 into Scanner 2

- 7) Press and hold **SCANNER** button # 1.
- 8) While holding button # 1 press **SCANNER** button # 2.
- 9) While holding **SCANNER** buttons # 1 and # 2, press and hold **MIDI/ADD** button.
- 10) Release **SCANNER** button # 1 first before releasing **SCANNER** button # 2.
- 11) Release **MIDI/ADD** button.
- 12) All **SCANNER** LED indicators will flash to confirm successful copy.
- 13) Press and hold **PROGRAM & TAPSYNC** buttons (2) times to exit mode.

### Notes

*All physical faders can be re-assigned to output on a different DMX channel. Faders are given a channel number and are labeled on the surface of the controller as such.*

## REVERSE CHANNEL OUTPUT (OPTIONAL SETUP)

### Action

- 1) Press and hold **PROGRAM & TAPSYNC** buttons together (2) times to access the channel assignment mode then press the **SCANNER** button.
- 2) Move the **SPEED** fader until you arrive at the controller channel you wish to alter.
- 3) Move the **FADE TIME** fader all the way up until N changes to Y.

If you wish to copy a scanner's reverse channel assignments to another scanner, continue by following steps 4-10. If you do not wish to do this, press and hold **PROGRAM & TAPSYNC** buttons (1) times to exit mode.

### Example: Copying Scanner 1 into Scanner 2

- 4) Press and hold **SCANNER** button # 1.
- 5) While holding button # 1 press **SCANNER** button # 2.
- 6) While holding **SCANNER** buttons # 1 and # 2, press and hold **MIDI/ADD** button.
- 7) Release **SCANNER** button # 1 first before releasing **SCANNER** button # 2.
- 8) Release **MIDI/ADD** button.
- 9) All **SCANNER** LED indicators will flash to confirm successful copy.
- 10) Press and hold **PROGRAM & TAPSYNC** buttons (1) times to exit mode.

### Notes

*You can permanently reverse the output of any given channel on the controller.*

## FADE TIME ASSIGN (OPTIONAL SETUP)

You can choose whether the board's fade time during scene execution is implemented broadly to all output channels or only to the Pan and 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 **BLACKOUT** and **TAPSYNC** buttons simultaneously.
- 3) Turn ON the controller.
- 4) Press the **TAPSYNC** button to toggle between the two modes. Either all channels (A) or select channel Pan & Tilt only (P)
- 5) Press **BLACKOUT** and **TAPSYNC** to save settings. All LED's will blink to confirm.

### Notes

# Programming

A program (bank) is a sequence of different scenes (or steps) that will be called up one after another. In the DMX-40B 30 programs can be created of 8 scenes in each.

## ENTERING PROGRAM MODE

Press the **PROGRAM** button for 3 seconds until an LED dot next to the label **PROG** blinks. This indicates that the user is in programming mode.

## 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 DMX-40B can save 240 scenes total.

### Action

- 1) Press and hold the **PROGRAM** button for 3 seconds.
- 2) Select a **SCANNER** (*fixture*) to program.
- 3) Compose a look by moving the **FADERS**. (Changes in fixture attribute such as colors and gobos.) Press **PAGE SELECT** to access Channels 9~16 on the faders.
- 4) To program another **SCANNER** press the **SCANNER** button you have just finished programming then select another **SCANNER** button to program.
- 5) Repeat steps 2 ~ 4 until you have your look.
- 6) Tap **MIDI/ADD** button to prepare to store.
- 7) Choose a **BANK** (01~30). Use the Up and Down arrow Bank buttons to change if necessary.
- 8) Select a **SCENES** button to store. All LED's will blink 3 times. The display will now display the bank and scene number that is stored.
- 9) Repeat steps 2 ~ 8 to record more scenes. ( Read Important notes on the right ->)
- 10) To exit program mode, hold the **PROGRAM** button for 3 seconds. The controller will default to a **BLACKOUT** when exiting the programmer.

### Notes

*Deselect **Blackout** if LED is lit.*

*A **SCANNER** button represents one lighting 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. When switching pages it will be necessary to move previously moved faders up then down to activate.*

*Pressing the same **Scanner** button again will hold the parameters changed for that fixture in the program scene.*

*There are 8 scenes available in every bank.*

## EDIT A SCENE

### Action

- 1) Press the **PROGRAM** button for 3 seconds.
- 2) Locate the scene in the program **BANK**. Use **BANK UP/DOWN** to navigate program banks.
- 3) Select the **SCENE** in the program **BANK** to edit.
- 4) Adjust **FADERS** to change the look.
- 5) Press the **MIDI/ADD** button then the **SCENE** button again previously selected for editing.

### Notes

*Deselect **Blackout** if LED is lit.*

***! Remember** the scene number on the controller that you will edit, otherwise, you could overwrite the contents of another scene.*

## SCENE COPY

### Action

- 1) Press the **PROGRAM** button for 3 seconds.
- 2) Locate the scene in the program **BANK**. Use **BANK UP/DOWN** to navigate program banks.
- 3) Select the **SCENE** in the program **BANK** to copy.
- 4) Locate the destination scene in the program **BANK**. Use **BANK UP/DOWN** to navigate program banks.
- 5) Press the **MIDI/ADD** button then the new **SCENE** button to copy to.

Notes 

## DELETE SCENE

### Action

- 1) Locate the scene in the program **BANK**. Use **BANK UP/DOWN** to navigate program banks.
- 2) Press and hold the **AUTO/DEL** button while pressing the **SCENE** you want to delete.

Notes 

*The action of deleting a scene is actually a value reset to 0 on all DMX channels available to the scene memory. The physical location of the scene memory remains.*

## DELETE ALL SCENES

### Action

- 1) Press and hold the **PROGRAM** button and the **BANK (▼)** while you turn the controller Off.

Notes 

*All scenes should be erased when the controller is turned back on.*

## BANK COPY

### Action

- 1) Press the **PROGRAM** button for 3 seconds.
- 2) Locate the program **BANK**. Use **BANK UP/DOWN** to navigate program banks.
- 3) Press and release the **MIDI/ADD** button.
- 4) Locate the destination program **BANK**. Use **BANK UP/DOWN** to navigate program banks.
- 5) Press the **MUSIC/BANK-COPY** button to complete copy.

Notes 

*The LCD display will blink to indicate a successful copy.*

## BANK DELETE

### Action

- 1) Press and hold the **PROGRAM** button for 3 seconds.
- 2) Locate the **BANK** to delete. Press the **AUTO/DEL** and **MUSIC/BANK-COPY** at the same time to delete the Bank.

Notes 

*The LED display will blink to indicate a successful delete.*

## 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 delete all chases from memory. See "Delete All Chases" for instructions.

### 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 for 3 seconds.
- 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/ADD** button to store. All LED's will flash 3 times.
- 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 for 3 seconds to save the chase.

Notes 

### COPY BANK INTO CHASE

#### Action

- 1) Press and hold the **PROGRAM** button for 3 seconds to enter programming mode.
- 2) Select the **BANK** to be copied using the **BANK UP/DOWN** buttons.
- 3) Press **MUSIC/BANK COPY** and **Midi/Add** buttons at the same time to copy.
- 4) Press and hold the **PROGRAM** button for 3 seconds to exit programming mode.

Notes 

## ADDING A STEP TO A CHASE

### Action

- 1) Press and hold the **PROGRAM** button for 3 seconds to enter programming mode.
- 2) Press the desired **CHASE** (1~6) button.
- 3) Press the **TAPSYNC/Display** and the display will display the scene and bank number. This displays the scene you will be adding (**STEP LED** must be on),
- 4) Use the **BANK UP/DOWN** buttons to scroll through the chase and arrive at the step number for which you would like to add or append a scene/step to.
- 5) Press **MIDI/ADD** button and one step number will be added to the previously displayed step number.
- 6) Press the **SCENE** button that corresponds to the scene to be copied.
- 7) Press **MIDI/ADD** button again to add the new step.
- 8) Press and hold the **PROGRAM** button for 3 seconds to exit programming mode.

Notes 

## DELETE A SCENE/STEP IN A CHASE

### Action

- 1) Press and hold the **PROGRAM** button for 3 seconds to enter programming mode.
- 2) Press the desired **CHASE** (1~6) button that contains the scene to be deleted.
- 3) Press the **TAPSYNC/DISPLAY** button to switch the LED 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.
- 6) Press and hold **PROGRAM** button for 3 seconds to exit.

Notes 

*Remember that we use scene and steps interchangeably.*

## DELETE A CHASE

### Action

- 1) Press and hold the **PROGRAM** button for 3 seconds to enter programming mode.
- 2) Press the **CHASE** button (1~6) to be deleted.
- 3) Press and hold the **AUTO DEL** button and the respective **CHASE** button then release to delete the chase. All LED's will blink 3 times.

Notes 

*Scenes will remain programmed on the controller. Only the chase is affected.*

## 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) Press and hold the **BANK DOWN** button and the **AUTO DEL** button while turning OFF the controller.

### Notes

## Playback (Scenes)

### MANUAL RUN SCENE

When power is first turned ON, the controller will be in manual scene mode.

### Action

- 1) Make sure neither **MUSIC TRIGGER** nor **AUTO TRIGGER** LED's on the LED display are on.
- 2) Select the program **BANK** that stores the scene you want to run manually by using the **BANK UP/DOWN**.
- 3) Press the **SCENE** button to run.

### Notes

*If you are in programming mode you can also press and hold the **PROGRAM** button until the **Program LED** goes off.*

### RUNNING IN SOUND-MODE

### Action

- 1) Press the **MUSIC/BANK-COPY** button until the **MUSIC TRIGGER** LED turns on.
- 2) Change **BANK** programs by using **BANK UP/DOWN** buttons if necessary.
- 3) Press the **MUSIC/BANK-COPY** to exit.

### Notes

*In the Sound mode, programs will be triggered by the sound using its built-in microphone. All scenes in a Bank will chase.*

### RUNNING IN AUTO-MODE

### Action

- 1) Press and hold the **AUTO DEL** button until the **AUTO TRIGGER** LED turns on.
- 2) Change **BANK** programs by using **BANK UP/DOWN** buttons if necessary.
- 3) You can adjust the time between steps by moving the **SPEED** fader and the duration of the step by moving the **FADE TIME** fader.
- 4) You can change Banks while in operation by using the **BANK UP/DOWN** buttons.

### Notes

*In the Auto mode, programs will be triggered by controllers fade and speed time as set on the faders. All scenes in a Bank will chase.*

**CAUTION!** *The fade setting should never be slower than the speed setting or the scene will never complete execution.*

## BLACKOUT

The **Blackout** button brings all lighting output to 0 or off (also called the home position of the unit).

## Playback (Chases)

### MANUAL RUN CHASES

This function allows the user to manually step through each individual step in a chase.

#### Action

- 1) Press and hold **PROGRAM** button for 3 seconds to enter programming mode.
- 2) Start a chase by pressing any one of the **CHASE** buttons.
- 3) Press the **TAPSYNC/DISPLAY** button to manually step through the chase.
- 4) Use the **BANK** buttons to scroll through the chases.
- 5) Press and hold the **PROGRAM** button for 3 seconds to exit programming mode.

#### Notes

### AUTO RUN CHASES

#### Action

- 1) Press any one of the **CHASE** buttons.
- 2) Press and release the **Auto / Del** button. The corresponding LED will blink.
- 3) Adjust the **SPEED** and **FADE** faders to your liking.
- 4) You can override the speed and fade time by tapping the **TAPSYNC/DISPLAY** button (three) times. The chase will now run on the interval time of the taps.

#### Notes

**CAUTION!** The fade setting should never be slower than the speed setting or the scene will never complete execution.

### MUSIC RUN CHASES

#### Action

- 1) Press any one of the **CHASE** buttons.
- 2) Press and release the **MUSIC/BANK COPY** buttons. The corresponding LED will blink in the display.
- 3) Your chase will now run to sound.

#### Notes

### RUNNING SEQUENTIAL CHASES

#### Action

- 1) Press either **AUTO DEL** or **MUSIC BANK COPY** buttons to select the trigger mode.
- 2) Press the **CHASE** button for each chase you wish to playback.
- 3) Adjust the Chase speed by changing the **SPEED** fader.

#### Notes

*Chases must already be programmed.*

*The chases will run in the order they are pressed*

## Midi Operation

The controller will only respond to MIDI commands on the MIDI channel when it 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/ADD** button until the third and fourth digits on the LED display blink.
- 2) Select the MIDI control channel (1~16) via the **BANK UP/DOWN** buttons to set.
- 3) Press and hold the **MIDI/ADD** button to store midi setup settings.

### Notes

*This is the Channel that the controller will receive MIDI note commands.*

MIDI NOTE	FUNCTION (TURN ON/OFF)
00 to 07	Scenes 1~8 in BANK 1
08 to 15	Scenes 1~8 in BANK 2
16 to 23	Scenes 1~8 in BANK 3
24 to 31	Scenes 1~8 in BANK 4
32 to 39	Scenes 1~8 in BANK 5
40 to 47	Scenes 1~8 in BANK 6
48 to 55	Scenes 1~8 in BANK 7
56 to 63	Scenes 1~8 in BANK 8
64 to 71	Scenes 1~8 in BANK 9
72 to 79	Scenes 1~8 in BANK 10
80 to 87	Scenes 1~8 in BANK 11
88 to 95	Scenes 1~8 in BANK 12
96 to 103	Scenes 1~8 in BANK 13
104 to 111	Scenes 1~8 in BANK 14
112 to 119	Scenes 1~8 in BANK 15
120	Chase 1
121	Chase 2
122	Chase 3
123	Chase 4
124	Chase 5
125	Chase 6
126	BLACKOUT

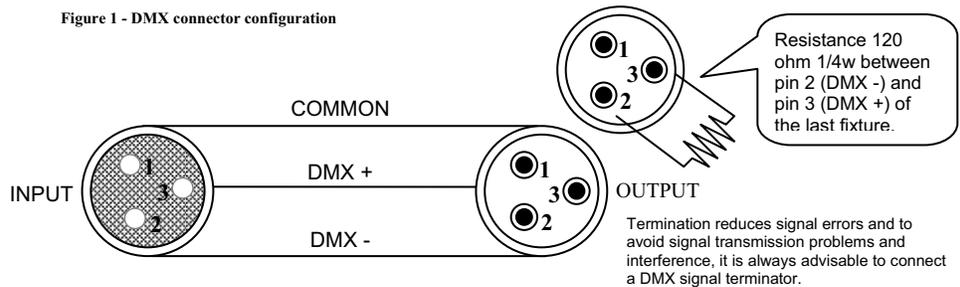
# APPENDIX

## 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.

DMX fixtures are designed to receive data through a serial Daisy Chain. A Daisy Chain connection is where the DATA OUT 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+). CHAUVET carries 3-pin DMX compliant cables, DMX-10 (33'), DMX-4.5 (15') and DMX-1.5 (5')

### FIXTURE LINKING



**Note!**

**If you use a controller with a 5 pin DMX output connector, you will need to use a 5 pin to 3 pin adapter. Chauvet Model No: DMX5M. The chart below details a proper cable conversion:**

#### 3 PIN TO 5 PIN CONVERSION CHART

CONDUCTOR	3 Pin Female (output)	5 Pin Male (Input)
GROUND/SHIELD	Pin 1	Pin 1
DATA ( - ) SIGNAL	Pin 2	Pin 2
DATA ( + ) SIGNAL	Pin 3	Pin 3
DO NOT USE		Do not use
DO NOT USE		Do not use

## Returns Procedure

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RA #). Products returned without an RA # will be refused. Call CHAUVET and request an RA # prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. CHAUVET reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

**Note:** If you are given an RA #, please include the following information on a piece of paper inside the box:

- 1) Your name
- 2) Your address
- 3) Your phone number
- 4) A brief description of the symptoms

## Claims

Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise. It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Any other claim for items such as missing component/part, damage not related to shipping, and concealed damage, must be made within seven (7) days of receiving merchandise.

## Troubleshooting

Please refer to the troubleshooting chart on page 21. If you still have a problem after trying those solutions, please contact CHAUVET Technical Support at (954) 929-1115.

## DMX Dipswitch Quick Reference Chart

DMX Address Quick Reference Chart																				
DMX DIP SWITCH SET 0=OFF 1=ON X=OFF or ON		Dip Switch Position																		
		#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1			
		#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1		
		#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1		
		#6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1		
#1	#2	#3	#4	#5																
0	0	0	0	0	32	64	96	128	160	192	224	256	288	320	352	384	416	448	480	
1	0	0	0	0	1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481
0	1	0	0	0	2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482
1	1	0	0	0	3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483
0	0	1	0	0	4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484
1	0	1	0	0	5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485
0	1	1	0	0	6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486
1	1	1	0	0	7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487
0	0	0	1	0	8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488
1	0	0	1	0	9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489
0	1	0	1	0	10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490
1	1	0	1	0	11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491
0	0	1	1	0	12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492
1	0	1	1	0	13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493
0	1	1	1	0	14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494
1	1	1	1	0	15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495
0	0	0	0	1	16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496
1	0	0	0	1	17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497
0	1	0	0	1	18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498
1	1	0	0	1	19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499
0	0	1	0	1	20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500
1	0	1	0	1	21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501
0	1	1	0	1	22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502
1	1	1	0	1	23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503
0	0	0	1	1	24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504
1	0	0	1	1	25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505
0	1	0	1	1	26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506
1	1	0	1	1	27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507
0	0	1	1	1	28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508
1	0	1	1	1	29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509
0	1	1	1	1	30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510
1	1	1	1	1	31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511

Dip Switch Position

DMX Address

## General Troubleshooting

Symptom	Solution(s)	Applies to			
		Lights	Foggers & Snow	Controllers	Dimmers & Chaser
Auto shut off	Check fan thermal switch reset	✓			
Beam is very dim or not bright	Clean optical system or replace lamp Check 220/110v switch for proper setting	✓			
Breaker/Fuse keeps blowing	Check total load placed on device				✓
Chase is too slow	Check users manual for speed adjustment	✓		✓	✓
Device has no power	Check for power on Mains. Check device's fuse. (internal and/or external)	✓		✓	✓
Fixture is not responding	Check DMX Dip switch settings for correct addressing Check DMX cables Check polarity switch settings	✓			
Fixture is on but there is no movement to the audio	Make sure you have the correct audio mode on the control switches. If audio provided via ¼" jack, make sure a live audio signal exists Adjust sound sensitivity knob	✓		✓	✓
Lamps cuts off sporadically	Possible bad lamp or fixture is overheating. Lamp may be at end of its life.	✓			
Light will not come on after power failure	Some discharge lamps require a cooling off period before the electronics in the fixture can kick start it again, wait 5 to 10 minutes before powering up	✓			
Loss of signal	Use only DMX cables Install terminator Note: Keep DMX cables separated from power cables or black lights.	✓	✓	✓	✓
Moves slow	Check 220/110v switch for proper setting	✓			
No flash	Re-install bulb, may have shifted in shipping	✓			
No laser output	Bounce mirror motor may have shifted during shipping, readjust	✓			
No light output	Check slip ring & brushes for contact Install bulb Call service technician	✓			
Relay will not work	Check reset switch Check cable connections				✓
Remote does not work	Make sure connector is firmly connected to device	✓	✓		
Stand alone mode	All Chauvet lighting fixtures featuring stand-alone functions do not require additional settings, simply power the fixture and it will automatically enter into this mode	✓			

## Technical Specifications

### WEIGHT & DIMENSIONS

Length.....	20.25 in (514 mm)
Width .....	3.5 in (89 mm)
Height .....	6.75 in (171 mm)
Weight .....	6 lbs (2.7 kg)

### POWER

Operating Range .....	DC 9V-12V 500mA max
Adapter .....	Provided

### THERMAL

Maximum ambient temperature.....	113° F (45°C)
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### CONTROL & PROGRAMMING

Data output .....	locking 3-pin XLR female socket
Data pin configuration .....	pin 1 shield, pin 2 (-), pin 3 (+)
Protocols.....	DMX-512 USITT

### ORDERING INFORMATION

DMX-40B Controller .....	DMX-40B
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### EC DECLARATION OF CONFORMITY

We declare that our products (lighting equipments) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

.....	EN55014-1: 1993, EN61000-3-2: 1995, EN61000-3-3:1995
.....	EN55014-2: 1997 CATEGORY II
.....	EN61000-4-2: 1995, EN61000-4-3: 1995, EN61000-4-4:1995
.....	EN61000-4-5: 1995, EN61000-4-6: 1995, EN61000-4-11: 1994
Harmonized Standard .....	EN60598-1: 1993
Safety of household and similar electrical appliances Part 1: General requirements	
Following the provisions of the Low Voltage Directive 73/23/EEC and 93/68/EEC.	

### EC DECLARATION OF CONFORMITY

We declare that our products (remote controller) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

.....	EN55015: 1993
.....	EN50082-1: 1997
.....	EN61000-3-2: 1995
.....	EN61000-3-3: 1995

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