

ObeY™ 70

User Manual

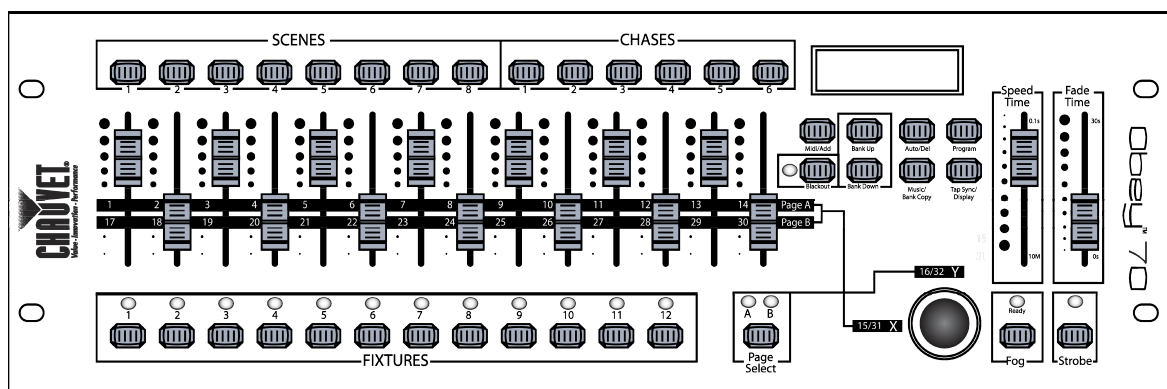


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1. BEFORE YOU BEGIN

What is included

- 1 x Obey™ 70
- 1 x 12 VDC, 500 mA External Power Supply
- 1 x Warranty Card
- 1 x User Manual

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.

Manual Conventions

CHAUVET® manuals use the following conventions to differentiate certain types of information from the regular text.

CONVENTION	MEANING
[10]	A DIP switch to be configured
<Menu>	A key to be pressed on the fixture's control panel
1~512	A range of values
50/60	A set of values of which only one can be chosen
<i>Settings</i>	A menu option not to be modified (for example, showing the operating mode/current status)
<i>MENU > Settings</i>	A sequence of menu options to be followed
ON	A value to be entered or selected

Icons

This manual uses the following icons to indicate information that requires special attention on the part of the user.

ICONS	MEANING
	This paragraph contains critical installation, configuration or operation information. Failure to comply with this information may render the fixture partially or completely inoperative, cause damage to the fixture or cause harm to the user.
	This paragraph contains important installation or configuration information. Failure to comply with this information may prevent the fixture from functioning correctly.
	This paragraph reminds you of useful, although not critical, information.

Safety Instructions



Please read these instructions carefully. It includes important information about the installation, usage and maintenance of this product.

- Please keep this User Manual 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 the 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 20 in (50 cm) from adjacent surfaces. Be sure that no ventilation slots are blocked.
- Always disconnect from power source before servicing or replacing fuse and be sure to replace with same fuse source.
- Secure fixture to fastening device using a safety chain.
- Maximum ambient temperature (Ta) is 104° F (40° C). Do not operate fixture at temperatures higher than this.
- In the event of a 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.
- Never connect the device to a dimmer pack.
- Make sure the power cord is never crimped or damaged.
- Never disconnect the power cord by pulling or tugging on the cord.
- Never carry the fixture directly from the cord. Always use the hanging/mounting bracket.
- Avoid direct eye exposure to the light source while it is on.

2. INTRODUCTION

Features

- Universal DMX-512 controller
- Controls up to 12 intelligent lights of up to 32 channels each
- 30 banks of 8 scenes, 240 scenes max
- 384 DMX channels of control
- 6 sets of chases containing 240 scenes
- Reversible sliders
- Re-assignable channels
- Sequential linking of chases
- Assignable joystick
- Fog & strobe control buttons
- Grab any fixture on the fly
- Beat activation, tap-sync and auto run
- Polarity selector
- 4 space 19" rack mount
- MIDI compatible

Product Description

The Obey™70 is a universal intelligent lighting controller. It allows the control of 12 fixtures composed of 32 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.

Programming Concept

This controller has several operation/playback modes.

Multiple scenes may also be programmed and arranged to playback in both banks and chases.

Layout of the Board Channels

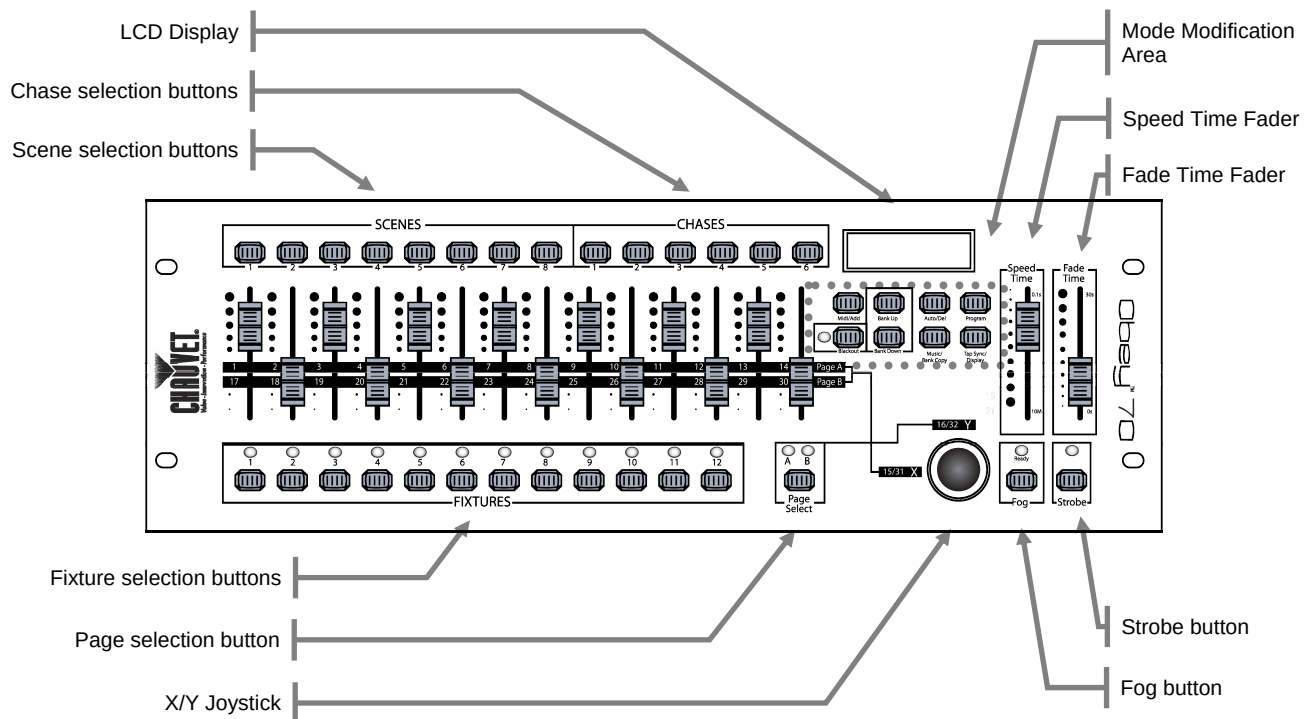
The Obey™ 70 can control up to 384 channels. These channels are arranged into 12 "groups", which are accessed using **<FIXTURES>**.

Each fixture contains 32 predetermined DMX channels. These 32 channels are broken down into 2 "groups", which are accessed using **<PAGE SELECT>**. This allows the 14 physical faders and 2 axis joystick to control between 1~16 and 17~32.

Layout of the Scenes

Up to 240 scenes may be saved in the internal memory of the Obey™ 70. These scenes are arranged into 30 groups, which are accessed using **<BANK UP>** and **<BANK DOWN>**. Each bank contains 8 scenes.

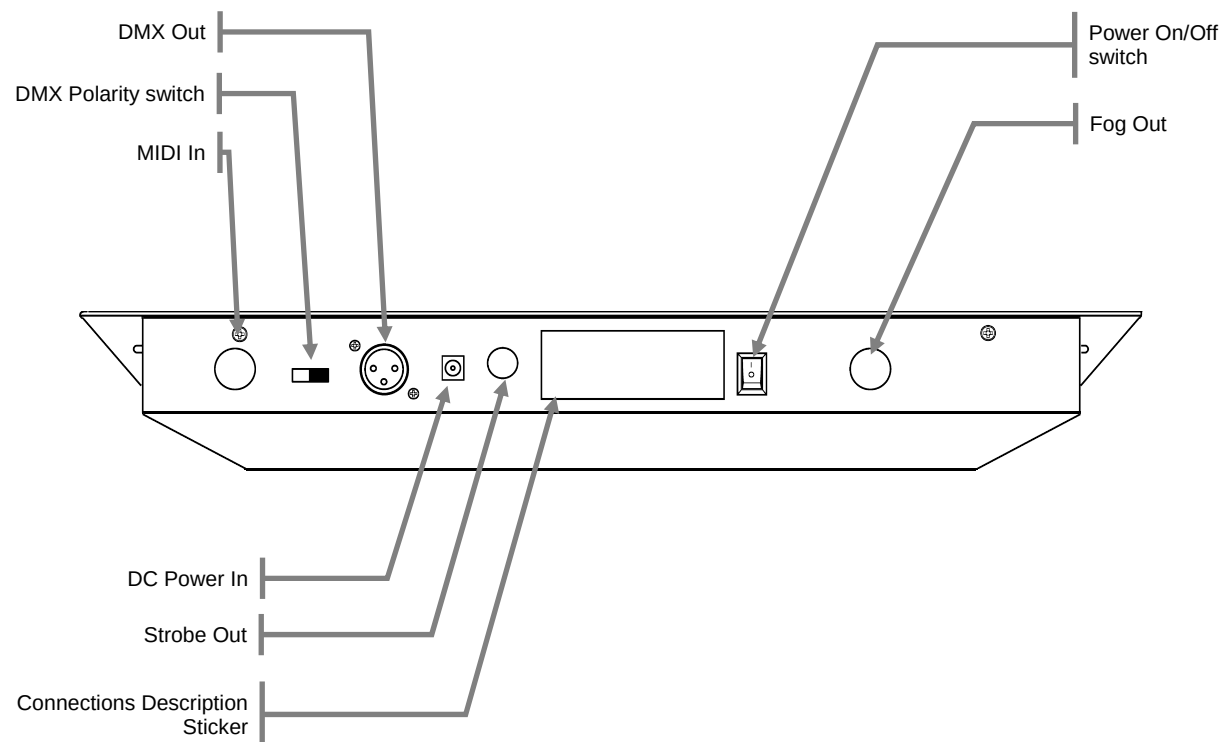
Product Overview



Control Descriptions

ITEM (S)	DESCRIPTION
LCD Display	Displays channel DMX/Percentage values, current operating mode, speed/fade time, bank up/down, and any other applicable setup/operation information
Chase Selection buttons	Direct chase selection (1~6)
Scene Selection buttons	Direct scene selection in relation to the current bank (1~30)
Fixture Selection buttons	For adjusting DMX values, Ch 1~14 can be adjusted immediately after pressing the respective fixture select button, Ch 17~30 after pressing the Page selection button
Page Selection button	Switch between channels 1~14 and channels 17~30
X/Y Joystick	Represents channels 15/16 (P1/T1) and 31/32 (P2/T2)
Mode Modification Area	Contains the following controls: MIDI/Add, Bank Up, Bank Down, Program, Blackout, Auto/Del, Tap Sync/Display
Speed Time Fader	Used to modify the speed time
Fade Time Fader	Used to modify the fade time
Strobe button	Activate the external strobe light(s)
Fog button	Activates the external fog machine(s)

Product Overview (back panel)



Connections Descriptions

BUTTON OR FADER	FUNCTION
DMX Out	Sends DMX control out to fixture(s)
DMX Polarity switch	May be used to change DMX polarity (hardware)
MIDI In	Use a MIDI controller for external triggering of banks, scenes, chases, and blackout
DC Power In	Main power input
Strobe Out	Mono ¼" strobe controller
Connections Description Sticker	Provides description of back panel controls
Power On/Off switch	Turns the controller power On/Off
Fog Out	5-pin DIN fog controller (works with most CHAUVET® fog machines)

3. SETUP

AC Power

This fixture requires an external power supply, which is included. The included power supply is rated for 100~240 VAC, 50/60 Hz, 500 mA max. Before powering on the unit, make sure the line voltage to which you are connecting it is within the range of accepted voltages.

To determine the power requirements for a particular fixture, see the label affixed to the back plate of the fixture or refer to the fixture's specifications chart. A fixture's listed current rating indicates its average current draw under normal conditions.



Always connect the fixture to a switched circuit. Never connect the fixture to a rheostat (variable resistor) or dimmer circuit, even if the rheostat or dimmer channel is used only as a 0 to 100% switch.

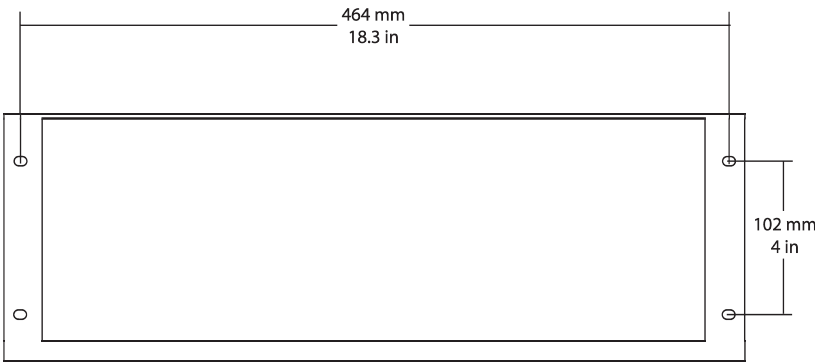
Mounting

Orientation

The Obey™ 70 may be mounted in any safe position.

Installation

Please see the drawing below, which shows the back of the controller. It details the dimensions for mounting. This will aid in placing the holes for installation.



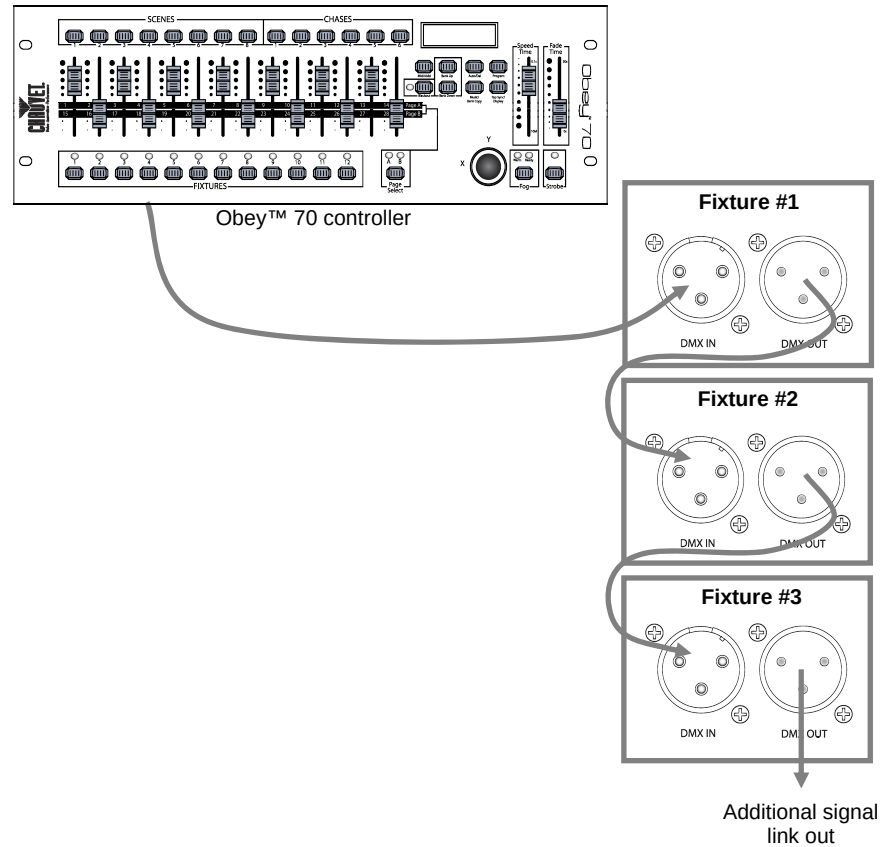
Fixture Addressing

The Obey™ 70 can control up to 12 separate fixtures. Each fixture must be set to predetermined DMX addresses. Please see the chart below for the DMX starting addresses of each of the twelve fixtures.

FIXTURE	ADDRESS	DIP SWITCH	FIXTURE	ADDRESS	DIP SWITCH	FIXTURE	ADDRESS	DIP SWITCH
1	1	1	5	129	1,8	9	257	1,9
2	33	1,6	6	161	1,6,8	10	289	1,6,9
3	65	1,7	7	193	1,7,8	11	321	1,7,9
4	97	1,6,7	8	225	1,6,7,8	12	353	1,6,7,9

Signal Output

In order to use this controller with multiple fixtures, you must daisy chain from the output of the Obey™ 70, using DMX cables to link from one fixture to another.



Physical Fader Assignment

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.

1. Press **<PROGRAM>** and **<TAP SYNC/DISPLAY>**. This will enter the physical fader assignment mode.
2. Select one of the fixtures: **<FIXTURE 1~12>** (this will be the fixture that you want to modify the channels for).
3. Move the **<SPEED>** fader to select the physical slider (control channel).
4. Move the **<FADE TIME>** fader to select the DMX channel.
5. Press **<MIDI/ADD>** to save the setting.
6. Repeat steps 3~5 until all of the faders have been assigned for the fixture.
7. Press **<PROGRAM>** and **<TAP SYNC/DISPLAY>** two times to exit physical fader assignment mode.



Reset the fader assignment back to the original, factory settings by performing a soft reset. Please see the section "Resetting the System" for detailed instructions on this procedure.



The joystick will be displayed as [SLIDERT1/SLIDERP1] for Page A, and [SLIDERT2/SLIDERP2] for Page B.



The joystick is pre-assigned to channels 15/16 (Page A) and 31/32 (Page B).



When moving channels, you must relocate the previously addressed channel to a new location. For example: when moving channel 12 to channel 1, channel 1 must be relocated to a new channel.

Joystick Assignment

The joystick is designed for moving head & scanning mirror fixtures.

1. Press **<PROGRAM>** and **<TAP SYNC/DISPLAY>**. This will enter the physical fader assignment mode.
2. Select one of the fixtures: **<FIXTURE 1~12>** (this will be the fixture that you want to modify the channels for).
3. Move the **<SPEED>** fader to select the pan control **[SLIDERP1/1]**.
4. Move the **<FADE TIME>** fader to select the DMX channel to assign it to.
5. Press **<MIDI/ADD>** to save the setting.
6. Repeat steps 3~5 for the tilt **[SLIDERT1/2]**.
7. Press **<PROGRAM>** and **<TAP SYNC/DISPLAY>** two times to exit physical fader assignment mode.



When assigning the joystick to a channel (for example, channel two), you must also relocate channel two to a new location.

Copying Physical Fader Assignment

This process will copy the physical fader assignment from one fixture into another fixture.

1. Press **<PROGRAM>** and **<TAP SYNC/DISPLAY>**. This will enter the physical fader assignment mode.
2. Press & hold the fixture button that contains the desired physical fader assignment.
3. While still holding the previous fixture button, press & hold the fixture that you want to copy into.
4. While still holding the two fixture buttons above, press & hold **<MIDI/ADD>**.
5. While still holding all three buttons down, release the fixture selected in step # 2 above.
6. While still holding down **<MIDI/ADD>**, release the fixture selected in step # 3 above.
7. Release **<MIDI/ADD>**.
8. All fixture LEDs will flash.
9. Press **<PROGRAM>** and **<TAP SYNC/DISPLAY>** two times to exit physical fader assignment mode.



This will not copy the fader-reverse setting(s).

Fader Reverse (0~255/255~0)

This function will allow you to reverse the DMX output of the physical fader(s). This may be useful for inverting the pan/tilt control. It may also be useful if you have 2 channels of control for the intensity of a fixture (strobe/dimmer) and always want one of them to be on, unless otherwise stated.

1. Press **<PROGRAM>** and **<TAP SYNC/DISPLAY>** two times. This will enter the fader reverse assignment mode.
2. Select one of the fixtures: **<FIXTURE 1~12>** (this will be the fixture that you want to modify the channels for).
3. Move the **<SPEED>** fader to select the physical slider (control channel).
4. Move the **<FADE TIME>** fader to activate/deactivate this function .
5. Press **<MIDI/ADD>** to save the setting.
6. Repeat steps 3~5 until all of the faders have been assigned for the fixture.
7. Press **<PROGRAM>** and **<TAP SYNC/DISPLAY>** one time to exit fader reverse assignment mode.

Resetting the System

Use this function to revert all settings and scenes back to the state they were in when the product left the factory.

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>**).
4. All LEDs will blink to indicate a successful reset.



This will erase all scenes, chases, and other settings!



This process may take up to 30 seconds to complete.

4. PROGRAMMING

Entering Program Mode

No programming may be done on the Obey™ 70 without first entering program mode. You will find references to this process in many other sections of this user manual.

Please see the steps below to enter this mode.

1. Turn on the controller.
2. Press and hold **<PROGRAM>** for three seconds.
3. When the LCD display shows [PROGRAM], you have entered program mode.



*Press and hold **PROGRAM** for three seconds to exit program mode.*

Exiting Program Mode

You will find references to this process in many other sections of this user manual.

Please see the steps below to exit this mode.

1. While currently in program mode, press and hold **<PROGRAM>** for three seconds.
2. When the LCD display no longer shows [PROGRAM], you have exited program mode.

Creating a Scene

Use this function to create a static look on stage.

Please see the steps below for instructions.

1. Turn on the controller.
2. Enter program mode.
3. Select one or more fixtures.
4. Using the 14 sliders and the joystick, modify the value of the desired channel(s).
5. When the desired look has been achieved, press **<MIDI/ADD>**.
6. Use **<BANK UP/DOWN>** to select a desired bank (30 possible) to save the scene to.
7. Once you have navigated to the desired bank, press the **<SCENE>** (1~8) to save the scene directly to.
8. All LEDs will flash to indicate that the scene has been saved.
9. Repeat steps 3~8 until you are finished programming all scenes.
10. Exit program mode.



You may select more than one fixture at a time. If you do so, you will not have separate control over each of them.



*Use **PAGE A/B** to switch between the 2 pages for the selected fixture.*



You may program multiple fixtures into the same scene!

Create a Chase

A chase is a series of scenes. Program the scenes before programming the chases. Please see the steps below for instructions on programming a chase.

1. Enter program mode.
2. Select the chase that will be programmed (1-6).
3. Call up the first scene for the chase by pressing the appropriate **<SCENE>** button. You may use **<BANK UP/DOWN>** to navigate through the different pages of the scenes.
4. Once the controller is outputting the correct scene to the lights, press **<MIDI/ADD>**.
5. All LEDs will flash when the scene is added to the chase.
6. Call up the second scene for the chase by pressing the appropriate **<SCENE>** button.
7. Once the controller is outputting the correct scene to the lights, press **<MIDI/ADD>**.
8. All LEDs will flash when the scene is added to the chase.
9. Continue through steps 6-8 until all of the scenes have been added to the chase.
10. Exit program mode.

Chase Modifications

Adding a Step to a Chase

This function will add a step after any step within a chase.

1. Enter program mode.
2. Activate the chase.
3. Using **<BANK UP/DOWN>**, scroll through the banks until you arrive at the bank that contains the new scene.
4. Press **<TAPSYNC/DISPLAY>**. The display will change to step display mode.
5. Using **<BANK UP/DOWN>**, scroll to the step that will appear before the new step.
6. Press **<MIDI/ADD>**. The current step on the display will increase by one.
7. Press the new scene: **<scene 1-8>**.
8. Press **<MIDI/ADD>**. All LEDs on the controller will flash.

Delete a Scene/Step in a Chase

1. Enter program mode.
2. Activate the chase.
3. Press **<TAPSYNC/DISPLAY>**. The display will change to step display mode.
4. Using **<BANK UP/DOWN>**, scroll to the step that you want to delete.
5. Press **<AUTO/DEL>**.
6. All LEDs on the controller will flash.

Copy a Bank into a Chase

This function copies an entire bank after any existing steps in a chase.

1. Enter program mode.
2. Activate the desired chase.
3. Using **<BANK UP/DOWN>**, scroll through the banks until you arrive at the bank that you want to copy into the chase.
4. Press **<MUSIC/BANK COPY>** and **<MIDI/ADD>** simultaneously.
5. All LEDs on the controller will flash.

5. PROGRAMMING MODIFICATIONS

Delete One Scene

Use this function to delete one of the scenes in the controller. Repeat this process for each scene that you need to delete.

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

Delete All Scenes

Use this function to delete all of the scenes in the controller.

1. Turn off the unit.
2. Press and hold **<BANK DOWN>** and **<PROGRAM>**.
3. Turn on power to the unit (while still holding **<BANK DOWN>** and **<PROGRAM>**).
4. When all LEDs blink, the function is successfully completed.

Delete a Chase

1. Enter program mode.
2. Activate the chase to be deleted: **<CHASE 1~6>**.
3. Press **<AUTO/DEL>** and **<CHASE 1~6>** simultaneously.
4. When all LEDs blink, the function is successfully completed.

Delete All Chases

1. Enter program mode.
2. Press **<AUTO/DEL>** and **<BANK DOWN>** simultaneously.
3. While still holding the buttons down, turn the controller OFF.

Delete a Bank of Scenes

1. Enter program mode.
2. Activate the **BANK** that you want to delete.
3. Press **<AUTO/DEL>** and the **<MUSIC/BANK COPY>** simultaneously.
4. When all LEDs blink, the function is successfully completed.

6. PLAYBACK

Scene Playback

Manual Scene Playback (Single)

This controller is capable of playing back a single scene at a time. The **<SPEED>** and **<FADE TIME>** faders will not function in this mode. Please see the instructions below for further explanation.

1. Set the controller in **[MANUAL]** playback mode. If **[AUTO]** or **[MUSIC]** is visible on the display, press the appropriate button(s) to disable the mode(s). When these modes are disabled, the controller will be in manual scene playback mode.
2. Using **<BANK UP/DOWN>**, navigate to the appropriate bank of the desired scene.
3. Activate the appropriate scene by pressing **<SCENE 1~8>**.
4. Activate another scene, if desired. This will disable any previously selected scene.

Auto Bank Playback

This controller is capable of playing back all 8 scenes on one of the 30 banks. These scenes will play back in sequential order. The **<SPEED>** and **<FADE TIME>** faders are used to control the transition between the individual scenes. Please see the instructions below for further explanation.

1. Press **<AUTO/DEL>** to set the controller in **[AUTO]** playback mode.
2. Using **<BANK UP/DOWN>**, navigate to the appropriate bank of scenes.
3. Use the **<SPEED>** and **<FADE TIME>** faders to adjust the scene transition.



The scenes will play in sequential order within the bank.



Only programmed scenes will play back. Empty scenes will be skipped during playback.

Music Bank Playback

This controller is capable of playing back all 8 scenes on one of the 30 banks. These scenes will play back in sequential order. The triggering from one scene to another will be synchronized to the beat of the music. Please see the instructions below for further explanation.

1. Press **<MUSIC/BANK COPY>** to set the controller in **[MUSIC]** playback mode.
2. Using **<BANK UP/DOWN>**, navigate to the appropriate bank of scenes.



The scenes will play in sequential order within the bank.



Only programmed scenes will play back. Empty scenes will be skipped during playback

Chase Playback

There are three different modes of playback for the chases in the Obey™ 70. Please see the sections below for detailed instructions on these modes.



You may activate multiple chases in this controller. They will play back in sequential order.

Manual Chase Playback

You may play back the individual scenes within a chase manually. Please see the instructions below for further explanation.

1. Enter program mode.
2. Activate the desired chase.
3. Press **<TAP SYNC/DISPLAY>**.
4. Use **<BANK UP/DOWN>** to scroll through the scenes within the chase. The current scene will be shown on the display as **[STEP ***]**.

Auto Chase Playback

You may control the playback of the chases in this controller by using the **<SPEED>** and **<FADE TIME>** faders. Please see the instructions below for further explanation.

1. Activate the desired chase by pressing **<CHASE 1-6>**.
2. Press **<AUTO/DEL>**.
3. Using the **<SPEED>** and **<FADE TIME>** faders, adjust the playback speed and transition between the individual scenes (steps).

Music Chase Playback

You may synchronize the playback of the chases in this controller to the beat of the music. Please see the instructions below for further explanation.

1. Activate the desired chase by pressing **<CHASE 1-6>**.
2. Press **<MUSIC/BANK COPY>**.

Playback Modifications

MIDI Operation

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



The controller is always in MIDI receive mode. It is not necessary for the display to read [MIDI] for the controller to respond to MIDI commands.

Setting the MIDI Channel

1. Press **<MIDI/ADD>**. The display should read [MIDI] and the current channel assignment.
2. Using **<BANK UP/DOWN>**, select the MIDI channel (1~16).
3. Press **<MIDI/ADD>** to save the setting.

MIDI Configuration (Response)

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

Tap Sync

This feature is another method of adjusting the playback speed. It functions in the same modes in which the **<SPEED>** fader is active. Please see the steps below for the operation.

1. Press **<TAP SYNC/DISPLAY>** three (3) times. The timing between pressing this button determines the speed.
2. Repeat, as necessary, until the time has been set to the desired speed.



It may be a good idea to synchronize pressing this button three times along with the beat of the music (bpm). This will allow the lights to synchronize with the music.

Fog Control

The Obey™ 70 has a dedicated fog button that will work with compatible CHAUVET® fog machines. This button works with the dedicated 5-pin connector that is located on the back panel of the controller.



When the fog LED is on, it indicates that the fog machine has reached the maximum temperature. When the LED is not on, the fog machine may still function, but it will not operate for maximum rated time, as it will begin below the maximum temperature.

Strobe Control

The Obey™ 70 has a dedicated strobe button that will work with compatible CHAUVET® products. This button works with the dedicated 5-pin connector that is located on the back panel of the controller.



The LED indicator for the strobe button will flash at the same rate as the strobe light(s).

7. APPENDIX

DMX Primer

There are 512 channels in a DMX connection. Channels may be assigned in any manner. A fixture capable of receiving DMX 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+).

General Troubleshooting

SYMPTOM	POSSIBLE CAUSE(S)	POSSIBLE ACTION(S)
Breaker/Fuse keeps blowing	• Excessive circuit load • Short circuit along the power wires	• Check total load placed on the electrical circuit. • Check for a short in the electrical wiring (internal and/or external).
Device does not power up	• No power • Loose power cord	• Check for power on Mains. • Check power cord
Fixture is not responding to DMX	• Wrong DMX addressing • Damaged DMX cables • Wrong polarity settings on the controller • Loose DMX cables • Faulty DMX interface • Faulty Main PCB	• Check Control Panel and unit addressing • Check DMX cables • Check polarity switch settings on the controller • Check cable connections • Replace DMX input • Replace Main PCB
Loss of signal	• Non DMX cables • Bouncing signals • Long cable / Low level signal • Too many fixtures • Interference from AC wires	• Use only DMX compatible cables • Install terminator as suggested. • Install amplifier right after fixture with strong signal. • Install an optically coupled DMX splitter after unit #32. • Keep DMX cables separated from power cables or black lights.



If you still have a problem after trying the above solutions, please contact CHAUVET® Technical Support.

Fixture Linking

You will need a serial data link to run light shows of one or more fixtures using a DMX controller or to run synchronized shows on two or more fixtures set to a master/slave operating mode. The combined number of channels required by all the fixtures on a serial data link determines the number of fixtures the data link can support.



Fixtures on a serial data link must be daisy chained in one single line. To comply with the EIA-485 standard, no more than 32 fixtures should be connected on one data link. Connecting more than 32 fixtures on one serial data link without the use of a DMX optically-isolated splitter may result in deterioration of the digital DMX signal.

*Maximum recommended serial data link distance: 500 m (1640 ft)
Maximum recommended number of fixtures on a serial data link: 32*

Data Cabling

To link fixtures together you must obtain data cables. You can purchase CHAUVET® certified DMX cables directly from a dealer/distributor or construct your own cable. If you choose to create your own cable please use data-grade cables that can carry a high quality signal and are less prone to electromagnetic interference.

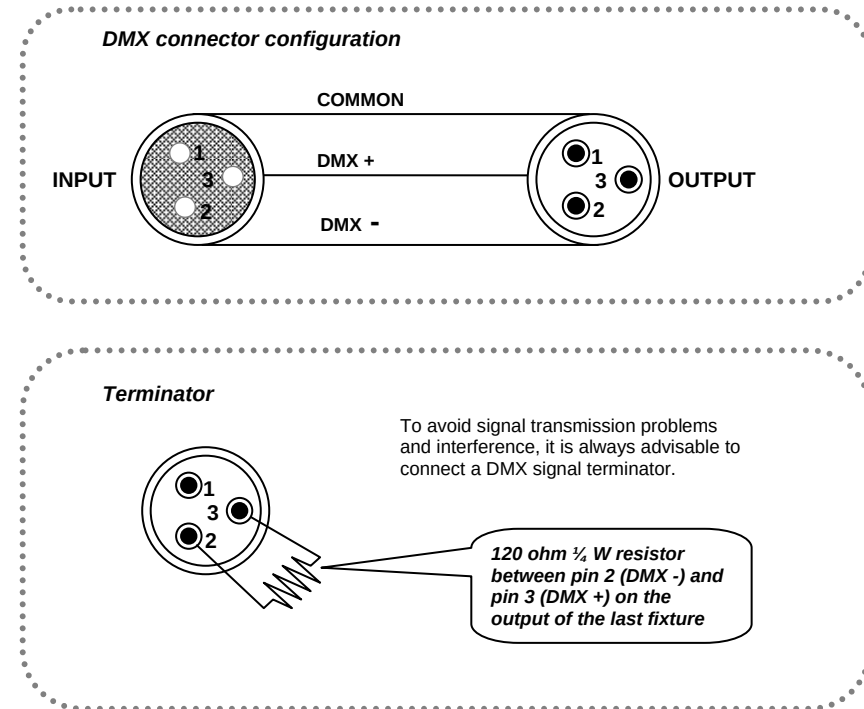
DMX Data Cable

Use a Belden® 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Standard microphone cables cannot transmit DMX data reliably over long distances. The cable must have the following characteristics:

Type:	shielded, 2-conductor twisted pair
Maximum capacitance between conductors:	30 pF/ft
Maximum capacitance between conductor and shield:	55 pF/ft
Maximum resistance:	20 ohms/1000 ft
Nominal impedance:	100 ~ 140 ohms

Cable Connectors

Cabling must have a male XLR connector on one end and a female XLR connector on the other end.



Do not allow contact between the common and the fixture's chassis ground. Grounding the common can cause a ground loop, and your fixture may perform erratically. Test cables with an ohm meter to verify correct polarity and to make sure the pins are not grounded or shorted to the shield or each other.

Setting the Starting Address

This DMX mode enables the use of a universal DMX controller device. Each fixture requires a start address from 1~512. A fixture requiring one or more channels for control begins to read the data on the channel indicated by the start address. For example, a fixture that uses six DMX channels and was addressed to start on DMX channel 100, would read data from channels: 100, 101, 102, 103, 104, and 105. Choose start addresses so that the channels used do not overlap, and note the start address selected for future reference.

If this is your first time addressing a fixture using the DMX control protocol, we suggest jumping to the "Appendix" section and reading the heading "DMX Primer". It contains very useful information that will help you understand its use.

3-Pin to 5-Pin Conversion Chart

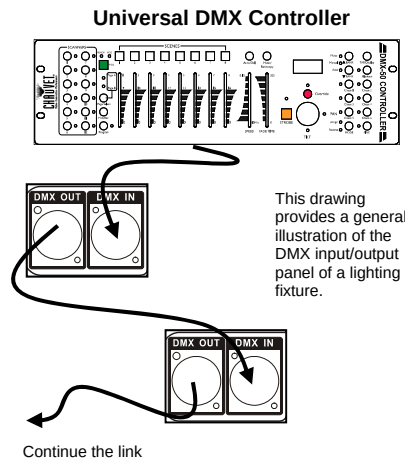


If you use a controller with a 5-pin DMX output connector, you will need to use a 5-pin to 3-pin adapter. The chart below details a proper cable conversion:

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
Not used		Pin 4
Not used		Pin 5

Setting up a DMX Serial Data Link

1. Connect the (male) 3-pin connector side of the DMX cable to the output (female) 3-pin connector of the controller.
2. Connect the end of the cable coming from the controller which will have a (female) 3-pin connector to the input connector of the next fixture consisting of a (male) 3-pin connector.
3. Then, proceed to connect from the output as stated above to the input of the following fixture and so on.



General Maintenance

To maintain optimum performance and minimize wear, fixtures should be cleaned frequently. Usage and environment are contributing factors in determining frequency. As a general rule, fixtures should be cleaned at least twice a month. Dust build up reduces light output performance and can cause overheating. This can lead to reduced lamp life and increased mechanical wear. Be sure to power off fixture before conducting maintenance.

- Unplug fixture from power.
- Use a vacuum or air compressor and a soft brush to remove dust collected on external vents.
- Clean all lenses when the fixture is cold with a mild solution of glass cleaner or Isopropyl Alcohol and a soft lint free cotton cloth or lens tissue.
- Apply solution to the cloth or tissue and drag dirt and grime to the outside of the lens.
- Gently polish optical surfaces until they are free of haze and lint.



Always dry the parts carefully after cleaning them.



Never spin a fan using compressed air.

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 Merchandize Authorization Number (RMA #). Products returned without the RMA # will be refused. Call CHAUVET® and request an RMA # 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 pack fixture properly; any shipping damage resulting from inadequate packaging is the customer's responsibility. As a suggestion, proper UPS packing or double-boxing is always a safe method to use. CHAUVET® reserves the right to use its own discretion to repair or replace product(s).



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

- 1) ***Your name***
- 2) ***Your address***
- 3) ***Your phone number***
- 4) ***The RMA #***
- 5) ***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.

TECHNICAL SPECIFICATIONS

WEIGHT & DIMENSIONS

Length..... 19 in (483 mm)
Width..... 7 in (178 mm)
Height..... 2.8 in (71 mm)
Weight..... 7.3 lbs (3.3 kg)

POWER

Auto-ranging external power supply 100~240 VAC, 50/60 Hz
Power consumption @ 120 V <1 W (500 mA) max, 0.2 A inrush
Power consumption @ 230 V <1 W (500 mA) max, 0.2 A inrush

INDOOR/OUTDOOR

Rating..... For indoor use only

THERMAL

Maximum ambient temperature 104° F (40° C)

CONTROL & PROGRAMMING

Data output..... locking 3-pin XLR female socket
Data pin configuration pin 1 shield, pin 2 (-), pin 3 (+)
Protocols DMX-512 USITT
Total DMX control channels 384

ORDERING INFORMATION

Obey™ 70..... OBEY70

WARRANTY INFORMATION

Warranty 2-year limited warranty

CONTACT Us

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