

## DMX Operator

## Trouble Shooting

Listed below are a few common problems the user may encounter, with solutions.

### Unit doesn't respond when I move the faders

- Make sure address is correct.
- Make sure speed is adjusted, if available, for faster movement. Not all Fixtures have a speed adjustment.
- If total of XLR cable is more than 90 feet make sure it is terminated properly.

### Scenes don't playback after I record them

- Make sure to press MIDI/RECORD BUTTON, before pressing SCENE BUTTON  
LED's should blink after pressing each SCENE BUTTON
- Make sure you are in the correct Bank that has scenes recorded.

### Scenes don't playback correctly like I recorded them

- Is the Fade Time to long for Speed selected?
- Make sure you are in the correct Bank that has scenes recorded.
- If total of XLR cable is more than 90 feet make sure it is terminated properly.

### Chases don't playback after I record them

- Make sure to press MIDI/RECORD BUTTON, after pressing SCENE BUTTON LED's should blink after pressing MIDI/RECORD BUTTON.
- Make sure you are in the correct Chase that has steps recorded.
- If in Auto Mode, is It selected in Display? Did you adjust Speed after selecting Auto?
- Is Fade Time to long for Speed Selected?
- If total of XLR cable is more than 90 feet make sure it is terminated properly.

## DMX Operator

## Specifications

### DMX Operator

DC Input:	9V - 12VDC, 500mA Min.
Weight:	5 lbs./ 2.25 Kgs.
Dimensions:	5.25" (L) x 19" (W) x 2.5" (H) 133.35 x 482.6 x 63.5mm
Warranty:	2 Year (730 days)

Please Note: Specifications and improvements in the design of this unit and this manual are subject to change without any prior written notice.

# FOS

technologies

## FOS DMX OPERATOR



## User Manual

Please read this manual before operating fixture.



## DMX Operator

## Features

- Control up to 192 DMX Channels
- Control up to 12 Separate DMX intelligent lights with up to 16 DMX channels per fixture
- Record up to 6 chases with separate fade times and step speeds
- 8 individual faders
- MIDI controllable
- 3-Pin DMX Connection
- Built-In Microphone

## DMX Operator

## Safety Precautions

- To reduce the risk of electrical shock or fire, do not expose this unit rain or moisture
- Do not spill water or other liquids into or on to your unit.
- Do not attempt to operate this unit if the power supply has been frayed or broken.
- Never operate this unit when it's cover is removed.
- Never plug this unit in to a dimmer pack
- Always be sure to mount this unit in an area that will allow proper ventilation. Allow about 6" (15cm) between this device and a wall.
- Do not attempt to operate this controller, if it becomes damaged.
- This unit is intended for indoor use only, use of this product outdoors voids all warranties.
- During long periods of non-use, disconnect the unit's main power.
- Always mount this unit in safe and stable matter.
- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to the point they exit from the unit.
- Heat -The controller should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- The controller should be serviced by qualified service personnel when:
  - A. The power-supply cord or the plug has been damaged.
  - B. Objects have fallen, or liquid has been spilled into the controller.
  - C. The controller has been exposed to rain or water.
  - D. The controller does not appear to operate normally or exhibits a marked change in performance.
  - E. The controller has fallen and/or subjected to extreme handling.

## FIRMWARE UPDATE:

Follow these simple instructions to update controller firmware.

1. Power OFF the controller.
2. Connect a compatible FAT 16 or FAT 32 formatted USB drive to a computer that has downloaded the newest DMX Operator firmware.  
Open the USB drive on the computer and create a folder named "DMX\_OPERATOR".  
Add the downloaded firmware update file to the "DMX\_OPERATOR" folder.
3. Properly eject the USB drive from the computer .
4. Insert the USB drive into the rear USB interface on the controller.
5. Press and hold the FIXTURE 1, FIXTURE 2 BUTTONS (1) and SCENE 3 BUTTON (2) and while pressing these buttons, power ON the controller.
6. After about 3 seconds, the LED display should show "UPFR". When this is displayed, release the FIXTURE 1, FIXTURE 2 BUTTONS (1) and SCENE 3 BUTTON (2).
7. After releasing both the FIXTURE BUTTONS (1) and SCENE 3 BUTTON (2), press any other button on the controller to upload the new firmware file to the DMX Operator.

## DMX Operator

## MIDI Operation

To Activate MIDI operation:

1. Press and hold down the MIDI/REC BUTTON (7)for three seconds, the last two digits of the LCD DISPLAY (3)will BLINK to indicate MIDI Mode.
2. Use the UP AND DOWN BUTTONS (4)to select the desired MIDI Channel 1 TO 16 you want to activate.
3. Press and hold down the MIDI/REC BUTTON (7)for three seconds,to exit this function.

### MIDI CHANNEL SETTING

BANK (Octave)	NOTE NUMBER	FUNCTION
BANK 1	00 TO 07	1 to 8 of Bank 1 on or off
BANK 2	08 TO 15	1 to 8 of Bank 1 on or off
BANK 3	16 TO 23	1 to 8 of Bank 1 on or off
BANK 4	24 TO 31	1 to 8 of Bank 1 on or off
BANK 5	32 TO 39	1 to 8 of Bank 1 on or off
BANK 6	40 TO 47	1 to 8 of Bank 6 on or off
BANK 7	48 TO 55	1 to 8 of Bank 7 on or off
BANK 8	56 TO 63	1 to 8 of Bank 8 on or off
BANK 9	64 TO 71	1 to 8 of Bank 9 on or off
BANK 10	72 TO 79	1 to 8 of Bank10 on or off
BANK 11	80 TO 87	1 to 8 of Bank11 on or off
BANK 12	88 TO 95	1 to 8 of Bank12 on or off
BANK 13	96 TO 103	1 to 8 of Bank13 on or off
BANK 14	104 TO 111	1 to 8 of Bank14 on or off
BANK 15	112 TO 119	1 to 8 of Bank14 on or off
CHASES	120 TO 125	1 to 6 Chases
BLACK OUT	126	BLACKOUT

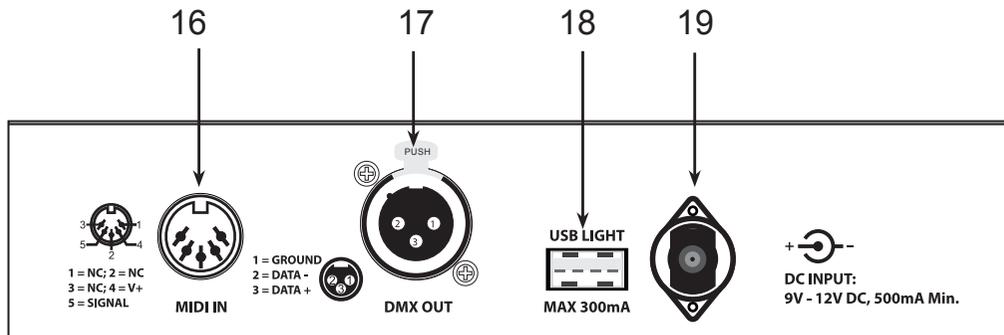
DMX OPERATOR only receives MIDI notes and you may have to transpose your keyboard to find the proper notes.



9. AUDIO / BANK COPY- Used to trigger sound activation in Chase mode or to copy a bank of scenes from one to another in Program Mode.
10. BLACKOUT - Disables or enables all channel outputs.
11. TAP SYNC / DISPLAY - In Auto Chase mode used to change rate of chase. Also used to change LCD Display in Manual Chase.
12. FADE TIME SLIDER -Used to adjust the FADE TIME. Fade Time is the amount of time it takes the DMX Operator to completely change from one scene to another.  
For example; if the fade time slider is set to 0 (zero) a scene change will be instant. If the slider is set to '30s' it will take the DMX Operator 30 seconds to complete the change from one scene to the next.
13. SPEEDSLIDER - Used to adjust the rate of chase speed in Auto Mode.
14. PAGE SELECT -Used to switch between PAGE A (1-8) & PAGE B (9-16) channel banks.
15. FADERS (1-8) -Used to adjust the channel/values from 0% to 100%.

## DMX Operator

## Rear Connections



16. MIDI IN - Receives MIDI data.
17. DMX OUT - Used to send DMX signal to fixtures or Packs.
18. USB INTERFACE - This USB INTERFACE has 3 uses:
  - Connect a USB LED lamp, with MAX output current of 500mA (Light Not Included).
  - Connect a USB stick (not included) and backup all controller settings (chases/scenes/other settings). You are able to backup 12 files (fixtures 1-12). Please see page 16 for backup instructions.
  - Contact a USB stick (not included) to upload new controller firmware.
 NOTE: Please contact ADJ customer support for more details.
19. DC INPUT - Accepts a DC 9~12V, 300 mA minimum, power supply.

## DMX Operator

## Playback Scenes & Chases

### MANUAL RUN SCENES:

1. When power is first turned on, the unit is in Manual Scene Mode.
2. Make sure AUTO & AUDIO BUTTON LED'S (8 & 9) are off.
3. Select the desired BANK BUTTON (4) using the UP and DOWN BANK BUTTONS (4) that store the scenes you wish to run.
4. Press the SCENE BUTTON (2) to run the scene you selected.

### MANUAL RUN CHASES:

- This function will allow you to manually step through all scenes in any Chase.
1. Press the PROGRAM BUTTON (6) for three seconds to activate Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous fast blinking dot next to 'PROG.'
  2. Execute a chase by selecting a CHASE BUTTON 1 TO 6 (5).
  5. Press the TAP SYNC BUTTON (11)
  6. Use the BANK BUTTONS (4) to scroll through the chase.

**Note:** LCD DISPLAY will show the number of the step in the Chase not the Scene bank/ number.

### AUTO RUN SCENES:

This function will run a bank of programmed scenes in a sequential loop.

1. Press the AUTO/DEL BUTTON (8) to activate the Auto Mode. A flashing light in the LCD DISPLAY (3) will indicate Auto Mode.
2. Use the UP and DOWN BANK BUTTONS (4) to select a bank of scenes to run.
3. After selecting the bank of scenes you want run, you can use the SPEED (13) and FADE (12) faders to adjust the scene chase.

**Note:** You can change banks, to run different scene sequences, at any time by pressing the UP and DOWN BANK BUTTONS (4)

**Note:** When Adjusting Fade time never make it slower than the Speed setting or your scene will not be completed before a new step is sent.

### AUTO RUN CHASES:

1. Select your desired chase by pressing any or all of the six CHASE BUTTONS (5).
2. Press and release the AUTO/DEL BUTTON (8).
3. The corresponding LED will flash in the LCD DISPLAY (3) indicating Auto mode is engaged.
4. Adjust the SPEED (13) and FADE (12) times to your desired settings.
5. The chase will now run according to your set speed and fade time.

**Note:** You can override the speed by tapping the TAP SYNC /DISPLAY BUTTON (11) three times, the chase would then run according to the time interval of your taps.

**Note:** when Adjusting fade time never make it slower than the Speed setting or your scenes will not be completed before a new step is sent.

**Note:** If you want to include all the Chases press the AUTO/DEL BUTTON (8) before selecting Chase.

## EDITING CHASES

### INSERT A STEP:

1. Press the PROGRAM BUTTON (6) for three seconds to activate Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous flashing light next to "PROG".
2. Select the CHASE BUTTON 1 TO 6 (5) you wish to add a step to.
3. Press and release the TAP SYNC/DISPLAY BUTTON (11), and the LCD DISPLAY will now show the step you are now in.
4. After selecting the TAP SYNC/DISPLAY BUTTON (11) use the UP and DOWN BUTTONS to manually scroll to the STEP you wish to insert a step after.
5. Press MIDI/REC BUTTON (7) the LCD DISPLAY will show one step number higher.
6. Press the Scene Button you want to insert.
6. Press MIDI/REC BUTTON (7) again to insert new step.
7. Press and release the TAP SYNC/DISPLAY BUTTON (11) to return to normal operation.

## DMX Operator

## Editing

### DELETE A STEP:

1. Press the PROGRAM BUTTON (6) for three seconds to activate Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous flashing light next to "PROG".
2. Select the CHASE BUTTON 1 TO 6 (5) that contains the step you would like to delete.
3. Press and release the TAP SYNC/DISPLAY BUTTON (11)
4. After selecting the TAP SYNC/DISPLAY BUTTON (11) use the UP and DOWN BUTTONS to manually scroll to the step you wish to delete.
5. When you have reached the step you wish to delete, press and release the AUTO/DEL BUTTON (8).

### DELETE A COMPLETE CHASE:

1. Press the PROGRAM BUTTON (6) for three seconds to activate Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous flashing light next to "PROG".
2. Press and hold down the AUTO/DEL BUTTON (8)
3. While holding down the AUTO/DEL BUTTON (8) press the CHASE BUTTON 1 TO 6 that you want to delete, twice. The chase should be deleted.

### DELETE ALL CHASES:

This function will allow you to clear all chase memory (delete all chases).

1. Press and hold down the AUTO/DEL (8) & BANK DOWN BUTTONS (4).
2. While holding down the AUTO/DEL (8) & BANK DOWN BUTTONS (4) disconnect the power.
3. Holding down the AUTO/DEL (8) & BANK DOWN BUTTONS (4) reconnect the power hold for 3 seconds LED's blink all chase memory should be erased.

## DMX Operator

## DMX Addressing

### ADDRESSING FIXTURES

In order to have individual control of each fixture with the DMX Operator, the fixture addresses should be addressed as follows.

- Fixture Button # 1 starts at 1
- Fixture Button # 2 starts at 17
- Fixture Button # 3 starts at 33
- Fixture Button # 4 starts at 49
- Fixture Button # 5 starts at 65
- Fixture Button # 6 starts at 81
- Fixture Button # 7 starts at 97
- Fixture Button # 8 starts at 113
- Fixture Button # 9 starts at 129
- Fixture Button # 10 starts at 145
- Fixture Button # 11 starts at 161
- Fixture Button # 12 starts at 177

## DMX Operator

## Programming Scenes

1. PRESS AND HOLD PROGRAM BUTTON DOWN (6) for three (3) seconds to activate program mode. The LCD DISPLAY (3) will indicate the controller is in program mode by displaying a continuous fast blinking light next to 'PROG'.
2. Select a fixture to program by pressing any or all FIXTURE BUTTONS 1 TO 12 (1).
3. Adjust the faders to the desired fixture settings (i.e. Color, Gobo, Pan, Tilt, Speed, etc.), by adjusting the fader values from 0-255. Use the PAGE A, B BUTTON (14) if your fixture has more than eight channels. When switching from Page A to B, you have to move faders to activate channels.
4. Once the desired fixture settings have been made, press the selected FIXTURE BUTTON (1) to stop the adjustment of that fixture. Press another FIXTURE BUTTON (1) to select another fixture to adjust. Make adjustments to multiple fixtures at the same time by selecting multiple FIXTURE BUTTONS (1) at a time.
5. Repeat steps 2 and 3 until all the fixture settings are complete.
6. When the entire scene is set, press and release the MIDI / REC BUTTON (7).
8. Press a SCENE BUTTON 1-8 (2) to store this scene. ALL LEDS BLINK 3 TIMES and the LCD will display the bank and scene where the scene was stored.
9. Repeat steps 2-8 to record the first 8 scenes.

You can copy the settings from one fixture button to another in case you want to add more lights to your show. Just press and hold the fixture button you want to copy then press the fixture button you want to copy to.

10. Use the UP and DOWN BANK BUTTONS (4) to record more banks of scenes. There are a total of 30 banks you can store up to 8 scenes per a bank for a total of 240 scenes.

11. To exit Program Mode press and hold the PROGRAM BUTTON (6) for three seconds. When exiting Program Mode the Blackout LED is on, to de-activate blackout press the BLACKOUT BUTTON (10).

## DMX Operator

## Editing Scenes

### SCENE COPY:

This function allows you to copy the settings of one scene to another.

1. Press the PROGRAM BUTTON (6) for three seconds to activate the Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous fast blinking dot next to "PROG".
2. Use the UP and DOWN BANK BUTTONS (4) to locate the bank / scene you wish to copy.
3. Press the SCENE BUTTON (2) that contains the scene you want to copy.
4. Use the UP and DOWN BANK BUTTONS (4) to select the bank you want to copy the scene to.
5. Press the MIDI / REC BUTTON (7) followed by the SCENE BUTTON (2) you wish to copy to.

### SCENE EDITING:

This function allows you to make changes in a scene after it has been programmed.

1. Press the PROGRAM BUTTON (6) for three seconds to activate Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous fast blinking dot next to "PROG".
2. Use the UP AND DOWN BANK BUTTONS (4) to select the bank / scene that you wish to edit.
3. Select the scene you want to edit by pressing its SCENE BUTTON (2).
4. Use the FADERS (15) to make your desired adjustments.
5. Once you've made your changes, press the MIDI / REC BUTTON (7) followed by the SCENE BUTTON (2) that corresponds to the scene you are editing which will store the edited scene into memory.

Note: Be sure to select the same scene selected in step 4, otherwise you may accidentally record over an existing scene.

### RESET ALL SCENES:

This function will erase all scenes in all Banks. (ALL Channels of all scenes are reset to 0 output.)

1. Press and hold down the PROGRAM button (6)
2. While holding down the PROGRAM BUTTON (6) press and hold the BANK DOWN BUTTON (4).
3. Disconnect the power from the controller and release the buttons.
4. Reconnect the power to the controller, and all scenes should be erased.

## DMX Operator

## Editing Scenes

### COPY BANK OF SCENES:

This function will copy the settings of one bank to another.

1. Press the PROGRAM BUTTON (6) for three seconds to activate Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous fast blinking dot next to "PROG".
2. Select the BANK BUTTON (4) you want to copy
3. Press and release the MIDI/REC BUTTON (7)
4. Select the BANK BUTTON (4) you wish to record to.
5. Press AUDIO/BANK COPY BUTTON (9), and the LCD DISPLAY (3) will flash briefly to indicate the function has been completed.

### DELETE BANK OF SCENES:

1. Press the PROGRAM BUTTON (6) for three seconds to activate Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous fast blinking dot next to "PROG".
2. Select the BANK BUTTON (4) you want to delete
3. Press and hold the AUTO/DEL BUTTON (8).
4. While holding down the AUTO/DEL BUTTON (8) press and hold the AUDIO/BANK COPY BUTTON (9) at the same time.
5. Release both buttons at the same time, and the LCD DISPLAY (3) should flash momentarily to indicate the function has been completed.

### DELETE SCENE:

This function will reset all DMX Channels in a single SCENE back to 0.

1. While pressing and holding AUTO/DEL BUTTON (8), Press and release the SCENE BUTTON (2) 1-8 you want to delete.

## DMX Operator

## Programming Chases/ Editing

### PROGRAMMING CHASES:

**NOTE: YOU MUST PROGRAM SCENES BEFORE YOU CAN PROGRAM CHASES.**

1. Press the PROGRAM BUTTON (6) for three seconds to activate Program Mode. The LCD DISPLAY (3) will indicate Program Mode by displaying a continuous fast blinking dot next to "PROG".
2. Select any CHASE BUTTON 1 TO 6 (5) to program.
3. Select a desired SCENE BUTTON (2) from any bank that has been previously recorded.
4. Press the MIDI/REC BUTTON (7) and all LED's will blink 3 times
5. Repeat steps 3 & 4 as many times as you want. You may store up to 240 steps into one chase.
6. To exit the Program Mode, press the PROGRAM BUTTON (6) for three seconds. The LCD DISPLAY (3) will indicate Blackout Mode by displaying a continuous fast blinking dot next to "Blackout". You may now playback the Recorded Chase. (See pages 15-16)