Owner's Manual

LED COMMANDER 16/2

STAIRVILLE

Content

Introduction

Thank you for purchasing our LED Commander 16/2. Enjoy your new equipment and make sure to read this manual carefully before operation! Keep this manual with the unit for future reference.
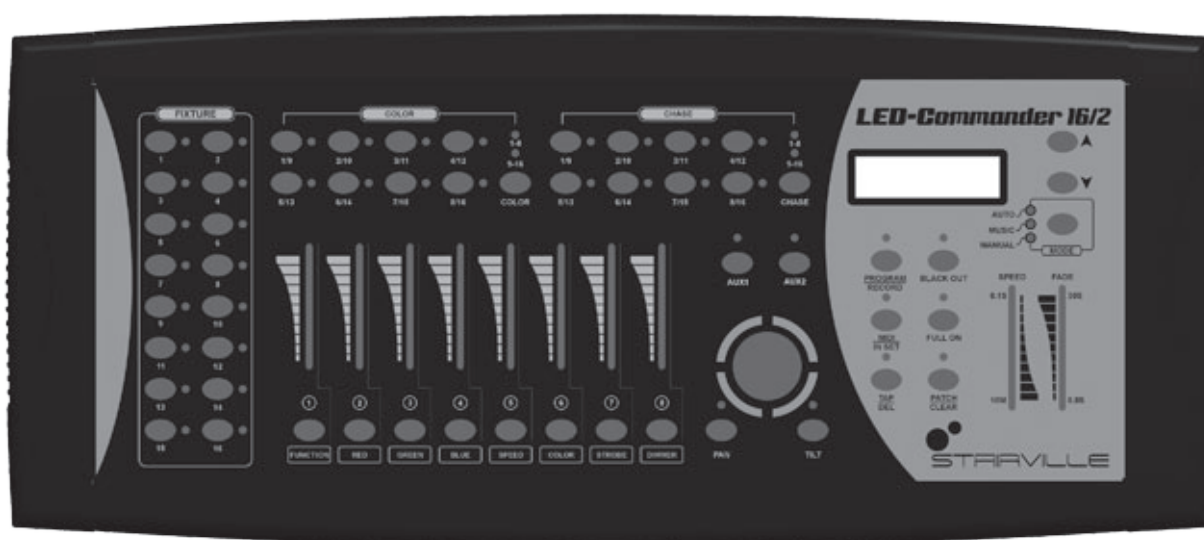
Technical Specification

Power Input	DC 9-12 V, 500 mA min.
DMX Input	3 pin male XLR
DMX Output	3 pin female XLR
MIDI Signal	5 pin standard interface
Audio Input	By built-in microphone or line in
Dimensions	482 x 175 x 75 mm
Weight (approx.)	3.5 kg

Our products are subject to a process of continual further development. Therefore modifications to the technical features remain subject to change without further notice.

Maintenance and care

- Never submerse the device in water or any other liquid. Don't let any liquid get into the housing. This would damage the unit and cause a short circuit.
- Before cleaning the device you must disconnect it from the mains. Clean the surface of the device only with a slightly damp cloth. Never use petrol, solvents or any aggressive cleaners! These could damage the surface of the unit's housing!

Notes on safety

For your own safety you should read through this chapter *at first completely*!

Intended use

This unit is intended to be used to control DMX lightning equipment in the context of this manual. Never use it in any other way. Otherwise you risk your life by electric shock and warranty will become void.

⚠ *Risk of electrical shocks!*

- Only use the mains adaptor supplied with the unit to connect the device to a properly wired and earthed mains power socket providing a mains voltage of 230 V ~ /50 Hz.
- Do not operate the device if the power adaptor, its cord or the mains plug are damaged.
- Never submerse the device in water. Wipe it with a slightly moistened cloth only.
- Do not expose the device to rain and never use it in a damp or wet environment.
- Make sure that the power adaptor never becomes wet or moist during use.
- Under no circumstances may you open the device housing. Should you do so your safety would not be assured and the warranty will become void. There are no operational components whatsoever inside, only really high voltage that can give you a deadly shock!
- Do not place objects containing fluids, e.g. flower vases or beer bottles, on or near the device. Should any liquid be spilled on the unit, DISCONNECT the power supply to the unit immediately.
- Notice regarding disconnection from mains-power:
  To completely disconnect the device from mains power, you must disconnect the adaptor from the power socket. For this reason the device should be placed in a position where unobstructed access to the power socket is assured at all times, so that in an emergency you will be able to immediately pull out the adaptor. To eliminate the risk of fire you should completely disconnect the adaptor from the power socket when the device is not going to be used for a long time, for example, during holidays.
- Always grasp the power adaptor itself. Do not pull on the cord and never touch the power adaptor with wet hands as this could result in a short circuit or an electrical shock. Do not place the device, speakers or anything else on the adaptor cord and make sure that it does not become clamped. Never tie knots in the adaptor cord and do not bind it together with other cables. Lay the adaptor cord so that no one can step on or stumble over it. A damaged power adaptor can cause a fire or an electrical shock. Check the power adaptor and its cord from time to time. Should it become damaged contact our customer service department to have it replaced.
- NEVER use the unit under the following conditions:
  In places subject to excessive humidity.
  In places subject to vibrations or bumps.
  In places with a temperature of over 45 °C/113 °F or less than 2 °C/35.6 °F.
- Protect the unit from excessive dryness or humidity (ideal conditions are between 35% and 80%).

⚠ *Risk of fire!*

- Never leave the device unattended during operation.
- Never cover the ventilation slots of the device while it is on. Do not place the device in locations that are subject to direct sunlight. If you do, it may overheat and become irreparably damaged.
- Never operate the LED commander in the vicinity of heat sources such as cookers, heating elements or other heat producing installations.
- Do not place open fire sources, such as candles, on the device.
- Before a storm and/or a thunderstorm with a risk of lightning, please disconnect the device from the electrical power source.

⚠ *Risk of personal injury!*

- Keep children away from the power adaptor and the device. Children frequently underestimate the dangers of electrical devices. Also keep the packaging material out of reach of children - risk of suffocation!
- Provide a stable location for the device.
- Do not operate the device if it has sustained a fall or is damaged. Have the device checked or, if necessary, repaired by qualified technicians. STOP using the unit immediately In the event of serious operation problems and either contact your local dealer for a check or contact us directly.
- NEVER try to repair the unit yourself. Repairs by unqualified people could cause damage or faulty operation. Contact your nearest dealer.

Features

▶ **Easy to use**

▶ **Controls 16 RGB fixtures**

▶ **Adjustable speed control**

▶ **Adjustable fade time**

▶ **Each channel is free patchable**

▶ **Power supply: DC 9-12 V 500 mA**

▶ **16 groups of fixtures**

▶ **All functions and faders patchable**

▶ **16 scenes**

▶ **16 chases**

▶ **Bright LCD display**

▶ **Auto program**

▶ **Music control**

▶ **19" rack mounting**

▶ **2000 steps programmable in 16 chases**

▶ **Total DMX channels: 512:**
  10 individual DMX channels per fixture
  160 individual DMX channels in total

▶ **DMX 512: XLR 3 pole**

▶ **Individual RGB channel faders**

▶ **Fixture dimmer fader set**

▶ **Record function to record colours and chases**

▶ **Speed & fade faders for chase control**

▶ **Equipped with 2 auxiliary channels to connect your fog machine or strobe**

**NOTE:** Knowledge of DMX is required to fully utilize this unit.

Controller Front
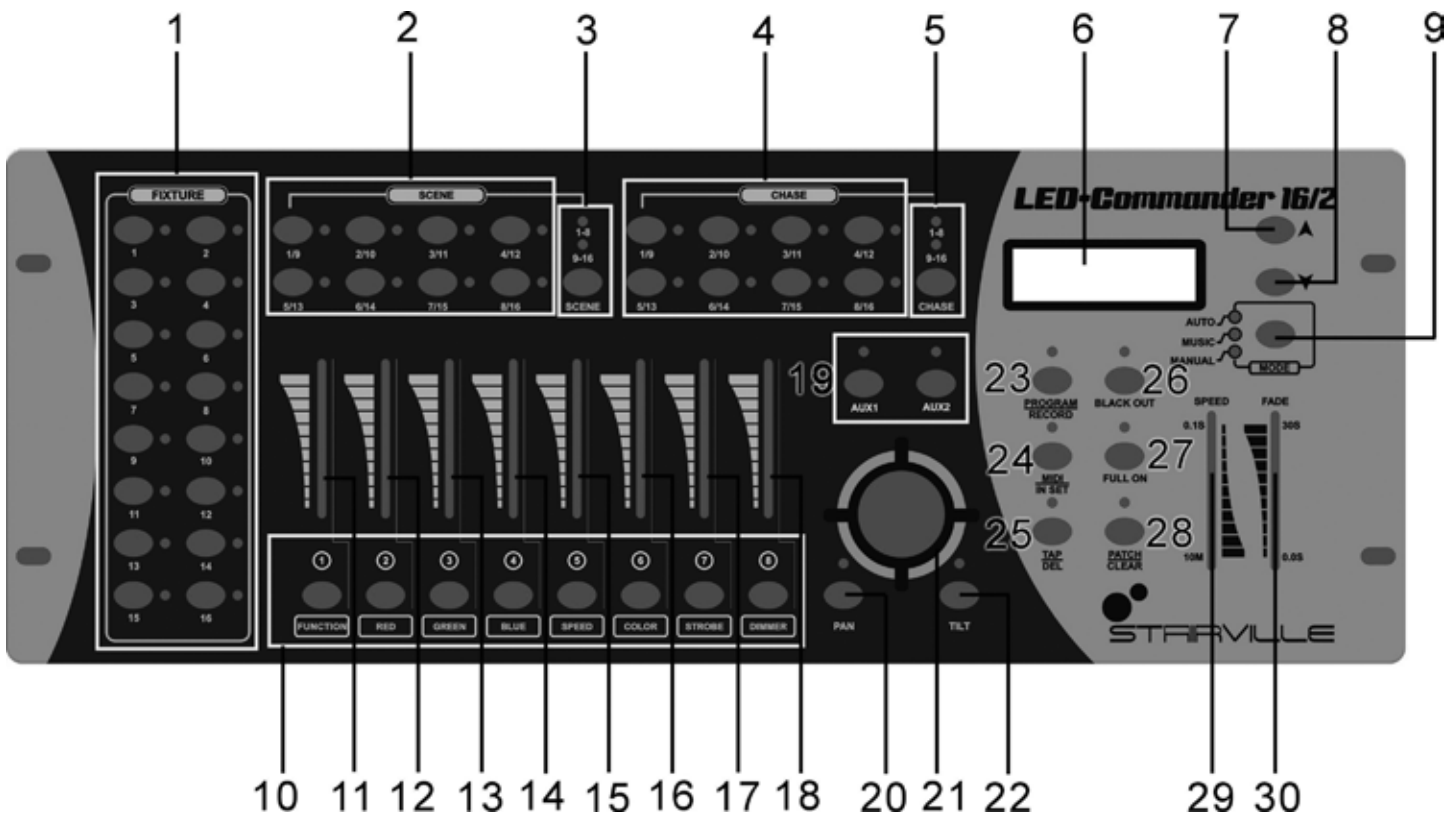
1) **FIXTURE buttons and LED indicators 1-16:** Use Fixture button 1-16 to select a fixture.

2) **SCENE buttons and LED indicators 1-8:** Push a scene button to activate a scene.

3) **SCENE Page button + Page 1/2 LED indicators:** When the SCENE 1-8 indicator is lit, scenes 1-8 are active. When the SCENE 9-16 indicator is lit, scenes 9-16 are active.

4) **CHASE buttons and LED indicators 1-8:** Push a chase button to activate a chase.

5) **CHASE Page button + Page 1/2 LED indicators:** When the CHASE 1-8 indicator is lit, chases 1-8, are active. When the CHASE 9-16 indicator is lit, chases 9-16 are active.

6) **LCD Display**

7) **⋏ button (up)**

8) **⋎ button (down)**

9) **MODE button**

10) **Flash buttons 1-8**

11) **FUNCTION Fade:** Use the fader to manually set the function of the fixture.

12) **Red Fader:** Use the fader to manually set the intensity of the colour red.

13) **Green Fader:** Use the fader to manually set the intensity of the colour green.

14) **Blue Fader:** Use the fader to manually set the intensity of the colour blue.

15) **Speed Fader**

16) **Colour Fader**

17) **Strobe Fader**

18) **Dimmer Fader**

19) **AUX Buttons 1 and 2**

20) **PAN Button**

21) **Joystick:** use the joystick to control the PAN/TILT channels of the fixture

22) **TILT Button**

23) PROGRAM/RECORD button: Use this button to enter Record Mode.

24) MIDI/IN set Button

25) TAP/DEL button

26) BLACK OUT button: Press this button to cut all output.

27) FULL ON button: When pressing this button, all channel value will output as 255, unless patching the PAN/TILT channel.

28) PATCH/CLEAR button: Patch/Clear the FADER output

29) SPEED Fader: Use the Speed fader to manually set the chase speed during playback.

30) FADE Fader: Use the Fade Time fader to manually set the Fade Time during playback.

Controller Rear Panel

31 32 33 34 35 36 37 38 39
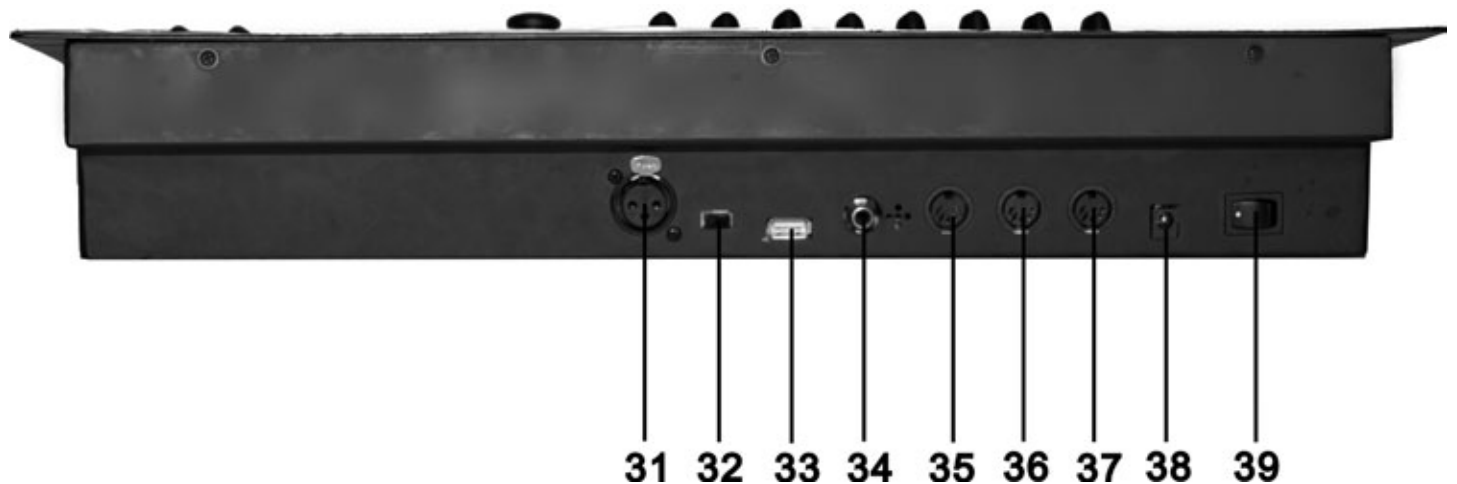
31) DMX OUT

32) DMX Polarity Switch

33) USB Light

34) Audio Input: This jack accepts a line level audio input signal ranged from 100 mV to 1Vpp.

35) MIDI Out: MIDI output port for connection to a sequencer or MIDI device.

36) MIDI Thru: MIDI thru port for connection to a sequencer or MIDI device.

37) MIDI In: MIDI input port for connection to a sequencer or MIDI device.

38) DC power: DC 9-12 V 500 mA

39) ON/OFF

Installation

Remove all packing materials from the LED Commander. Check that all foam and plastic padding is removed. Connect all cables.

Always disconnect from electric mains power supply before cleaning or servicing. Damages caused by non-observance are not subject to warranty.

Before plugging the unit in, always make sure that the power supply matches the product specification voltage.

Operation

When power is turned on, the controller starts self testing automatically, the LCD Display indicating the self testing progress. After it is finished, the fixture pilot on the rear board is on, which means that you can start to operate the controller.

Channel Assignment

1) Press and hold the PATCH/CLEAR button (28) for 3 seconds. The Patch LED will light up red.
2) Press the fixture button (1) as desired. The Fixture LED will light up blue. You can choose from 16 different fixtures. Choose one of them.
3) Choose channel range with the SPEED fader (29).
   Example: 1, 21, 41, 61, etc.
   Range 21: Start at 21 and stop at 40.
4) Choose a DMX channel with the FADE fader (30).
5) Press and select the flash button (10) as desired.
6) Repeat step 2-5 to set all the dimmers.

Example: If the LCD shows:
```
Patch  DMX:021
FIX02-M  FUN
```

It means channel 21 of the DMX will patch the FUNCTION FADER of Fixture 02.

Attention: When choosing the PAN/TILT mode, keep holding the PAN/TILT button pressed, it will set as inversion.

Dimmer Channel set

1) Press and hold the PATCH/CLEAR button (28) for 3 seconds. The Patch indicator LED will light up red.
2) Press the fixture button (1) you desire. The Fixture LED will light up blue. You can choose from 16 different fixtures.
3) Press and hold the dimmer flash button from the buttons group (10) for 3 seconds, the LCD then will show:
```
Fixture01  dimmer
     Set ok
```
.
   That means that the dimmer fader of fixture 01 can control the channel which will be set as follow steps 4) - 6).
   Notice: Holding the Dimmer flash button pressed will again clear all settings.
4) Choose channel range with the SPEED fader (29).
   Example: 1, 21, 41, 61, etc.
   Range 21: Start at 21 and stop at 40.
5) Choose a DMX channel with the FADE fader (30).
6) Press and hold one flash button from the buttons group (10) for 3 seconds to select the corresponding channel.
   Example: Press and hold the RED flash button in the buttons group (10). Then the LCD will show:
```
Fixture01 Red
Set dimmer ok
```

   That means that the RED channel of fixture 01 can be controlled by fixture 01 dimmer fader.
Repeat the step 4) - 6) to set all the channels of fixture 01.

Notice: The fixture which was set before will be displayed as "**-M**" on the LCD.

Example: If the LCD shows:
```
Patch  DMX:002
FIX01-M  RED
```
, "**-M**" here means the dimmer fader of fixture 01 can control the max. value of the RED (Ch2).

Factory Reset

1) First turn off the device.
2) Now press and hold the PROGRAM/RECORD button (23) + TAP/DEL button (25) + PATCH/CLEAR button (28).
3) Now switch on the device.
4) After 2 seconds The display will show:
```
Reset default
Please wait...
```
5) After the factory reset, the fixture is auto patched:

Fixture 1	Fixture 2	Fixture 3	....	Fixture 16
FUN CH1	FUN CH11	FUN CH21		FUN CH151
Red CH2	Red CH12	Red CH22		Red CH152

Fixture 1	Fixture 2	Fixture 3	....	Fixture 16
Green CH3	Green CH13	Green CH23		Green CH153
Blue CH4	Blue CH14	Blue CH24		Blue CH154
SPEED CH5	SPEED CH15	SPEED CH25		SPEED CH155
COLOR CH6	COLOR CH16	COLOR CH26		COLOR CH156
STROBE CH7	STROBE CH17	STROBE CH27		STROBE CH157
No Function CH8	No Function CH18	No Function CH28		No Function CH158
PAN CH9	PAN CH19	PAN CH29		PAN CH159
TILT CH10	TILT CH20	TILT CH30		TILT CH160

Unpatch Channels

1) Press and hold the Patch/Clear button (28) for 3 seconds. The Patch LED will light up red.
2) Deselect the fixture. No LEDs should be lit.
3) Use the Speed and Fade faders (29, 30). to select the DMX channel you want to unpatch.
4) Press the flash button corresponding to the channel name to unpatch the channel.

Example:
If you want to unpatch a certain DMX channel, first deselect all fixture buttons. Then use the Speed and Fade faders (29, 30), until the display shows:

```
FIX01-M RED -M
Patch   DMX:002
```

Then press the flash button Red (10).

The display will now show:
```
Patch DMX:002
NO Assign
```

Enter Program Mode

Press and hold the PROGRAM/RECORD button for 3 seconds. The LED next to button will light up green

Exit Program Mode

Press and hold the PROGRAM/RECORD button for 3 seconds. The LED next to button will dim.

Record a Scene

1) Press and hold the PROGRAM/RECORD button (23) for 3 seconds to enter program mode.
2) Select the fixture you want to program by pressing the desired fixture button (1).
3) Set the faders to the desired values.
4) Set the proper page by pressing the SCENE page button (3). You can choose SCENE 1-8 or SCENE 9-16.
5) Press the PROGRAM/RECORD button (23) and then press the desired scene button you want to record.
   All LEDs will flash.
6) Press and hold the PROGRAM/RECORD button (23) for 3 seconds to exit program mode.
The existing scenes will be overwritten.

Play a Scene

1) Deselect all fixtures. Press the PATCH/CLEAR (28) button to clear all the fader output.
2) Select the proper SCENE page by pressing the SCENE Page button.
3) To select the desired scene press the corresponding SCENE button.
4) Scenes can be stored on 2 pages. Each page contains 8 scenes.
Multiple scenes can be mixed together. Scenes will react to the fade fader (30). Be sure to use the page button (3). As an overview you are immediately able to view which scenes are still active on which page. The LEDs, of those scenes or chases that are still active, are on.

Delete a Scene / Overwrite a Scene

1) Press and hold the PROGRAM/RECORD button (23) for 3 seconds to enter record mode.
2) Select the fixture you want to program by pressing the desired Fixture button.

3) Set the faders to the desired values.
4) Set the proper SCENE page by pressing the scene page button (3). You can choose scene 1-8 or scene 9-16.
5) Press the PROGRAM/RECORD button (23) and then press the desired scene button you want to overwrite. All LEDs will flash.
6) Press and hold the PROGRAM/RECORD button (23) for 3 seconds to exit program mode.

Patch more than one channel to AUX

1) Press and hold the PATCH/CLEAR button (28) for 3 seconds. The Patch LED will light up red.
2) Use the speed and fade faders (29, 30) to select the DMX channel you want to patch.
3) Assign the DMX Channel by pressing the AUX1 or AUX2 button (19).
4) Now select the next DMX channel and patch the AUX button (19) again.
Repeat steps 2 and 3 as desired.
AUX channels will fade when the fade time is set on the FADE fader (30)
The speed fader (29) will have no effect on the AUX channels.

Patch more than one channel to Fixture faders

1) Press and hold the PATCH/CLEAR button (28) for 3 seconds. The Patch LED will light up red.
2) Use the speed and fade faders (29, 30) to select the DMX channel you want to patch.
3) Assign the DMX channel by pressing the channel flash button (10).
4) Now select the next DMX channel and push the same flash button to also assign this channel to that FADER. Repeat steps 2 and 3 as desired.

Change the name of the FADER

1) First turn off the device.
2) Now press and hold the PROGRAM/RECORD button (23) + DIMMER button (18) +. PATCH/CLEAR button (28)
3) Now switch on the device.
4) After 2 seconds the display will show: Please selected Attribute button
5) Choose the FADER that you want to change the name of, corresponding to the FLASH button.
6) Stir PAN rocker to modify the position of the name. Stir TILT rocker to change the characters.
7) Repeat step 5-6 can modify the other FADER's name.
8) Press the PROGRAM/RECORD button (23) to save changes.
9) Turn off the device, then switch it on again.

MIDI function

1) Press and hold the MIDI/IN SET button (24) for 3 seconds to enter Midi mode.
2) Use the ⌃ button and ⌄ button to set the MIDI channel. You can choose CH 1-16.
3) Press and hold the MIDI/IN SET button (24) for 3 seconds to exit Midi mode.
The MIDI function can be used to link two LED Commanders together or use a MIDI keyboard to control the playback of the LED Commander.

NOTE NUMBER	FUNCTION	FUNCTION
0-15	SCENE1-16	Turn on or off Scenes 1-16
16-31	CHASE1-16	Turn on or off Chases 1-16
32	MANUAL	Run mode by Manual
33	MUSIC	Run mode by Music
34	AUTO	Run mode by Auto
35	AUX1	Turn on or off AUX1
36	AUX2	Turn on or off AUX2
37	UP	For manual run mode
38	DOWN	For manual run mode
39	TAP	For auto run mode
.....	.....	.....
126	BLACK OUT	BLACK OUT

AUX function

In patch mode, the AUX button (19) can be patched to the DMX channels.

In program and playback mode, press the AUX button (19) to override the programmed AUX setting.

When you want to return to the programmed setting, press the MIDI button (19).

The AUX button setting can be programmed into the steps of the chases.

Speed, Fade function

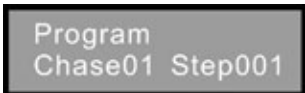The speed and fade time of each step of the chase can be set separately.

If you want to override the programmed speed or fade time in playback mode, you can use the SPEED and FADE faders (29, 30) to do so.

If you want to return to the programmed speed and fade time, after you have manually overridden the speed and fade time, just press the RECORD button (23) to do so.

Record a Chase

1) Enter record mode by holding the PROGRAM/RECORD button (23) pressed for 3 seconds.
2) Select the proper chase page by pressing the chase page button (5).
3) Select the desired chase by pressing CHASE button 1-8 (4).
4) Select the desired fixture by pressing FIXTURE 1-16 (1).
5) Slide the faders to the desired values.
6) Press the PROGRAM/RECORD button (23). All LEDs will flash 3 times, indicating your operation has been successful.
7) The display will show: Program Chase01 Step001 , meaning step 1 in your chase has been recorded.
8) For further steps repeat steps 5, 6 and 7, until you have completed all the desired steps in your entire chase.
9) Exit Record Mode.
More than 1 fixture can be programmed/selected when creating steps in chases.

Play a Chase

1) Deselect all fixtures. Press PATCH/CLEAR button (28) to clear all fader output.
2) Select your desired chase by pressing the CHASE button (4).

Delete a Chase

1) Deselect all fixtures, scenes and chases.
2) Enter record mode by pressing the PROGRAM/RECORD button (23) for 3 seconds
3) Select the proper chase page by pressing the chase page button (5).
4) Press and hold the TAP/DEL button (25). Now press the corresponding CHASE button (4), that you want to delete.
5) Exit Record Mode by pressing the PROGRAM/RECORD button (23).

Add an extra Step to an existing Chase

1) Enter record mode by holding the Record button (23) pressed for 3 seconds.
2) Select the chase you want to add a step to.
3 Press MIDI/IN SET button (24), LED indicators blink. Use the ⋏ and ⋎ buttons to scroll through the chase. The display will show the current step.
4) Select the fixture you want to program by pressing the desired FIXTURE button (1).
5) Slide the faders to the desired values.
6) Press the PROGRAM/RECORD button (23) to save a new step. All LEDs will flash 3 times, indicating your operation has been successful. The new step will be added after the selected one.
7) If you want to add additional steps repeat steps 4, 5 and 6, until you have added all the desired steps in your entire chase.
8) Exit Record Mode by pressing the PROGRAM/RECORD button (23). A total of 2000 steps can be programmed in up to 16 chases. But if one chase already consumes e.g. 1990 steps, only 10 steps are left for all other chases to be programmed.

Delete a Step from an existing Chase

1) Enter Record Mode by pressing the Record button (23).
2) Select the chase from which you want to delete a step.
3) Press MIDI/IN SET button (24), LED indicators blink. Use the ⋏ (7) and ⌄ buttons (8) to scroll through the chase and select the step you want to delete.
4) Push the TAP/DEL button (25) to delete the step. All LEDs will flash 3 times, indicating the step has been successfully deleted.
5) Continue this procedure (steps 2, 3 and 4) if you want to delete multiple steps.

If you are finished deleting the steps, press the PROGRAM/RECORD button (23) to exit Record Mode.

Auto / Music /Manual Mode

Auto

1) Press the MODE button (9) until the LED next to "AUTO" lights up red.
2) You can control the speed and fade time by adjusting the SPEED and FADE fader (29, 30).
3) Now press ⋏/⌄ buttons (7/8) to change the operation cycle times of the currently selected chase (1-200).

Music

1) Press the MODE button (9) until the LED next to "MUSIC" lights up green.
2) Now press the ⋏/⌄ buttons (7/8) to change the sound sensitivity (0-100%).

Fade time is available in Music Mode.

Manual

1) Press the MODE button (9) until the LED next to "MANUAL" lights up yellow.
2) Use the ⋏/⌄ buttons (7/8) to manually go through the chase steps.

Fade Time (30) is available in Manual mode.

Update firmware

1) Connect USB flash drives to controller (latest firmware should be copied to the USB flash drives. You can get the latest firmware from your supplier).
2) Switch off the device.
3) Now press and hold the PROGRAM/RECORD button (23), the ⌄ button (8), as well as the MODE button (9).
4) Switch on the device.
5) After 2 seconds the display will show :"Press any button/ Update firmware".
6) Now press any button to update the firmware, the display will show :"Update…..   /   ".
7) When the display shows: "Update succeeded/Please reboot" turn off the device and switch it on again. The firmware update succeeded.

Data backup and data load

1) Connect an USB flash drive to the controller.
2) Press and hold the MODE button (9), the ⋏ button (7) for 2 seconds. The display will show: "Press Fixture / key save file".
3) Press the fixture button (9) to select the fixtures you want to backup. Then the LCD will show the progress of backup. (If the indicator of fixture button is lit, that mean this fixture has been backuped before and there is data of it in the USB flash drive.)
4) After the backup is finished, all backup data are stocked in the 'led-commander 16-2' file on USB flash drives.

Data load:

1) Copy the data that should be loaded into the controller to an USB flash drives. Connect that USB flash drive to the controller.
2) Press and hold the MODE button (9) and the ⌄ button (8) for 2 seconds. The display will show: "Press Fixture   / key loader file". (If the indicator of fixture is lit, that mean there was data for this fixture in the USB flash drives.)
3) Press the fixture button (9) to select the fixture you want to load. Then the LCD will show the progress of loading.
4) After loading was successful, the LCD will be shown as before data loading.

Disposal

Never throw the device into the regular household waste at the end of its useful life. This product is subject to the European Directive 2002/96/EC.

- Dispose of the device through an approved disposal centre or at your community waste facility.
- Observe the current existing regulations. In case of doubt contact your disposal facility.
- The packaging is certified via a dual system. Take all packaging materials to an environmentally friendly disposal facility in compliance with the local regulations.