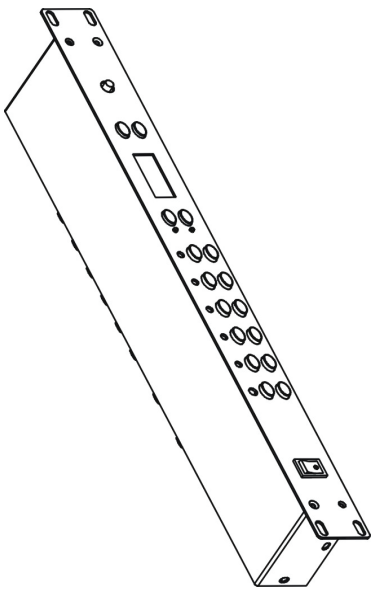


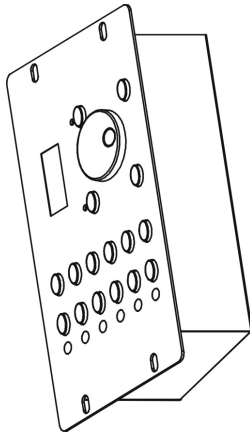


**Technical Specification**

Power Input .....	DC 9V-12V 800mA
DMX Output .....	3 pin female XLR (LED-OP I ) RJ-45 socket (LED-OP II)
Dimensions.....	482x78x44mm (LED-OP I ) 225x125x75mm (LED-OP II)
Weight.....	2.0 kg (LED-OP I ) 1.8kg (LED-OP II)



**LED-OPERATOR I**



**LED-OPERATOR II**

**User Guide**

**Innovation, Quality, Performance**

*Please read these instructions carefully before use*

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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.

EN55103-1:199601-2; EN55103-2:1996;  
EN61000-3-2:2000+A2:2005;  
EN61000-3-3:1995+A1:2001+A2:2005.

&

### Harmonized Standard

EN 60598-1: 2004  
IEC 60598-1:2003+ corrigendum 2004  
Part 1:General requirements and test

Following the provisions of the low voltage directive 73/23/EEC and 93/68/EEC

## 6.11. DMX CONFIG

- 1 Enter menu mode.
- 2 Turn jog wheel until "11. DMX CONFIG" is shown on the LCD, press **ENTER/WAIT TIME** button to enter.
- 3 LCD display "CONFIG [RGBD/S]", "RGBD/S" blinking, press **UP/DOWN** button or turn jog wheel choose "[RGBD]" or "[RGBW]" or "[RGB]".
- 4 Once select, press **ENTER/HOLD TIME** button to store and exit to main menu.

### Attention:

**[RGBD/S]** mode is used to control the lightings that channel 1 is RED, channel 2 is GREEN, channel 3 is BLUE and channel 4 is Dimmer/strobe.

**[RGBD]** mode is used to control the lightings that channel 1 is RED, channel 2 is GREEN, channel 3 is BLUE and channel 4 is Dimmer

**[RGBW]** mode is used to control the lightings that channel 1 is RED, channel 2 is GREEN, channel 3 is BLUE and channel 4 is WHITE

**[RGB]** mode is used to control the lightings that channel 1 is RED, channel 2 is GREEN and channel 3 is BLUE

## 1 Features

- 7 DMX 512 output channel, the one "DMX OUT" output all 24 channels, the other six channels (DMX OUT1-DMX OUT6) output 4 channels (RED, GREEN, BLUE, DIMMER) each.
- 1 DMX 512 input (DMX IN OR DMX THROUGH), it can receive 24 channels DMX signals which begin with the address set, then it can output the 24 signals as 6 groups, each group has 4 channels, namely, the four channels which DMX OUT1 output are 1-4CH input, the DMX OUT2 output are 5-8CH input, ....., the DMX OUT6 output are 21-24CH input.
- Use DC9-12V external power adapter.
- Build-in clock, can set 21 timings to turn on/off the operator automatically, 3 timings a day, periods as a week. It's ideal for the condition which without control such as environment lights, outdoor lights, etc.
- 24 chases can run in different period of times as set. Each chase includes at most 30 scenes.
- Quickly and easy program color/fade/macro effect for each scene.
- 255 colors to choose.
- The length of fade can be set up to 30 minutes.
- 24 build-in macro, the fade time and wait time are adjustable.
- 6 color LEDs to indicate output effects, convenient for the condition that can't see the light effect or program without light.
- 8×2 LCD for easy navigation.
- Jog wheel design for shortcut select.
- Data can be transmitted between two controllers.
- LED-OPERATOR I is suitable for 1U rack assembly.

**NOTE:** A knowledge of MIDI and DMX is required to fully utilize this unit.

## 2 General Instructions

Please read the user manual carefully, as it includes important information regarding details of operation, maintenance, and technical data. Keep this manual with the unit for future consult.

### WARNINGS !

- Do not make any inflammable liquids, water or metal objects enter the unit.
- Should any liquid be spilled on the unit, DISCONNECT the power supply to the unit immediately.
- STOP using the unit immediately In the event of serious operation problems or either contact your local dealer for a check or contact us directly.
- DO NOT open the unit--there are no user serviceable parts inside.
- NEVER try to repair the unit yourself. Repairs by unqualified people could cause damage or faulty operation. Contact your nearest dealer.

### CAUTIONS !

- This unit is NOT intended for home use.
- After having removed the packaging check that the unit is NOT damaged in any way. If in doubt, DON'T use it and contact an authorized dealer.
- Packaging material (plastic bags, polystyrene foam, nails, etc.) MUST NOT be left within children's reach, as it can be dangerous.
- This unit must only be operated by adults. DO NOT allow children to tamper or play with it.
- 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
  - Protect the unit from excessive dryness or humidity (ideal conditions are between 35% and 80%).
- DO NOT dismantle or modify the unit.

**NOTE:** DMX is single-line communication protocol, the operator can receive the whole data only when you send message after the receiver set to receive mode.

## 6.10. DATA RECEIVE

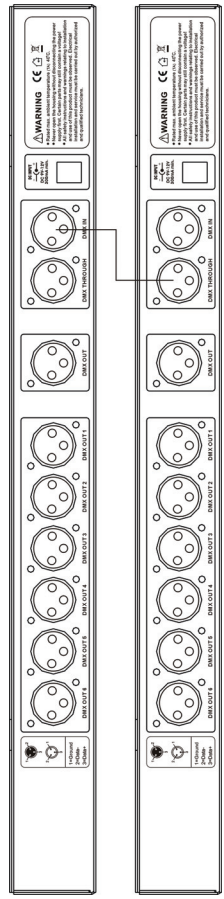


- 1 Enter menu mode.
- 2 Turn jog wheel until "10. DATA/RECEIVE" shown on the LCD, press **ENTER/WAIT TIME** button to enter.
- 3 LCD display "RECEIVE/NO", "NO" blinking, press **ENTER/WAIT TIME** button to exit to main menu without any action, or use jog wheel to choose "YES" and press **ENTER/WAIT TIME** to receive data, LCD display the schedule, display "RECEIVE/END" indicating receive succeed and a second later exit to main menu automatically.

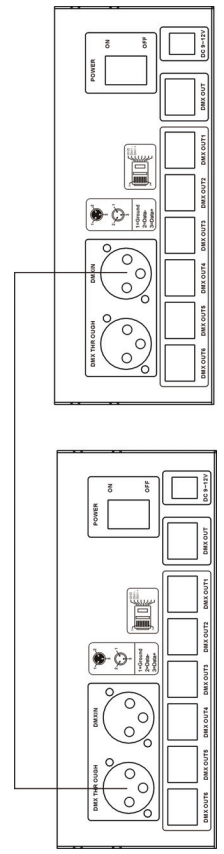
**NOTE:** Be careful when you receive message, for it may miss old data. The schedule can change only when there have data to receive, or it will in receive mode for ever. If there isn't any data to receive, please restart the unit to exit.

Please connect the units to transfer message as following photos:

### LED-OPERATOR I

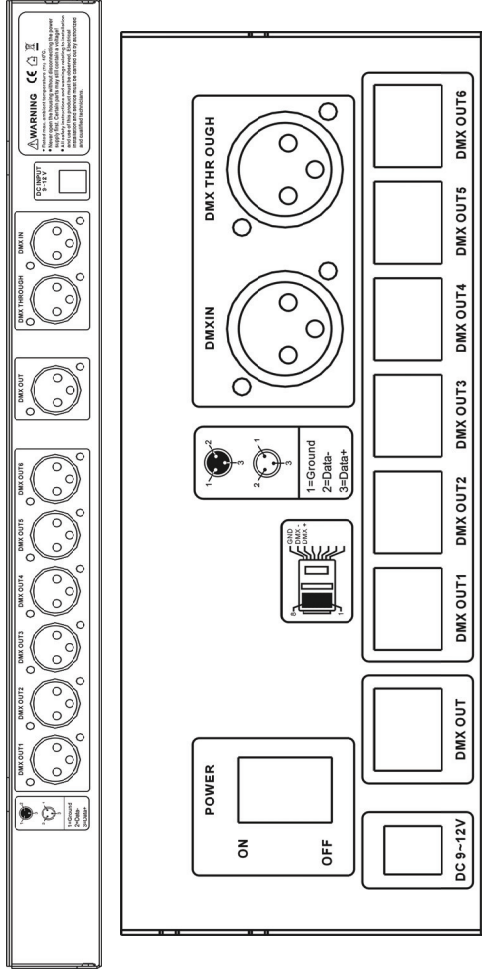


### LED-OPERATOR II





### 3.2. Rear View



- POWER Turn On/Off the power
- POWER IN DC 9-12V
- DMX THROUGH Output the input signal directly
- DMX IN DMX input
- DMX OUT Output 1-24CH DMX signal
- DMX OUT 1-6 6 groups DMX output, 4 channels each group

### 4 Display Information

The meanings of LCD display:

Display	Meanings
CHASE [xx]	CHASE 01-24
Cxx SNxx	CHASE 01-24 SENCE 01-30
Cxx SNxx	Wait time of the SCENE is 5.0s
WT: 5.00S	
C xx SNxx	Fade time of the SCENE is 3.0s
FT: 3.00s	
COLOR [xxx]	255 built-in colors.

### 6.6. ERASE MEMORY

- 1 Enter menu mode.
- 2 Turn jog wheel until "6. ERASE/MEMORY" shown on the LCD, press **ENTER/WAIT TIME** button to enter.

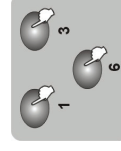
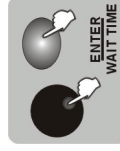


- 3 LCD display "ERASE? [NO]" and "NO" blinking, turn jog wheel to choose "YES" and press **ENTER/WAIT TIME** button to erase all memory, LCD display "PLEASE/WAIT...", 2 seconds later all LEDs blink for 3 times indicating manipulate succeed and exit to main menu automatically.



### 6.7. LOCK KEYBOARD

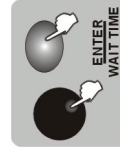
- 1 Enter menu mode.
- 2 Turn jog wheel until "7. LOCK/KEYBOARD" shown on the LCD, press **ENTER/WAIT TIME** button to enter.
- 3 LCD display "LOCK/DISABLE" and "DISABLE" blinking, turn jog wheel to choose "DISABLE" (lock disable) or "ENABLE" (lock enable). Press **ENTER/WAIT TIME** button to store and exit to main menu, all LEDs blink for 3 times.



**NOTE:** The keyboard will lock automatically when power on the unit if you set "LOCK KEYBOARD" to "ENABLE", LCD display lock icon, and all the buttons are noneffective, you can press number button **1**, **3** and **6** at the same time until the unlock icon display on the LCD to unlock the keyboard. Everytime you want to lock the keyboard, hold **ENTER/WAIT TIME** button for 2 seconds, LCD display unlock icon, at this time, press number button **1**, **3** and **6** at the same time to lock it.

### 6.8. DMX ADDRESS

- 1 Enter menu mode.
- 2 Turn jog wheel until "8. DMX/ ADDRESS" shown on the LCD, press **ENTER/WAIT TIME** button to enter.
- 3 LCD display "ADDRESS[001]", "001" blinking, turn jog wheel to set DMX address from 001 to 512.







12 Move cursor until "CLOCK/[OFF]" shown on the LCD, press **ENTER/WAIT TIME** button and "OFF" blinking, turn jog wheel to set timing able (ON) or disable (OFF).

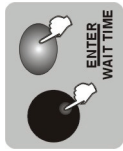


13 Move cursor until "STORE/ SUN1 SET" shown on the LCD, press **ENTER/WAIT TIME** button, two LEDs blink for 3 times, LCD display "CLOCK/ SUN: 1" indicate end setting.

14 Repeat steps 3-14 to set other timings.

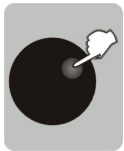
**NOTE:** Never set the same timing!

#### 6.4. DELETE CHASE



1 Enter menu mode.

2 Turn jog wheel until "4. DELETE/CHASE" shown on the LCD, press **ENTER/WAIT TIME** button to enter.



3 LCD display "DELETE/ CHASE 02", "02" blinking, turn jog wheel to select the chase you want to delete.



4 Press **ENTER/WAIT TIME** button.



5 LCD display "DELETE?[NO]" and "NO" blinking, turn jog wheel to choose "YES", press **ENTER/WAIT TIME** button to delete, then it exit to the last menu.

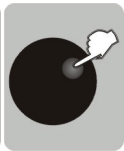
6 Repeat steps 3-5 to delete other chases.

#### 6.5. CHASE BY TIME



1 Enter menu mode.

2 Turn jog wheel until "5. CHASE/ BY TIME" shown on the LCD, press **ENTER/WAIT TIME** button to enter.



3 LCD display "RUN TIME/ BY CHASE" and "BY CHASE" blinking, turn jog wheel to choose "BY CHASE" (run macro by the fade time and wait set in manual mode) or "BY SCENE" (run chase by the fade time and wait time set in program mode).



4 Press **ENTER/WAIT TIME** button to save and exit to main menu.

FADE	It will cost 9 seconds to finish the FADE
SP:9.00S	
MACRO [xx]	MACRO 01-24
MACRO	Fade time of the macro is 3.0s
FT: 3.00S	
MACRO	Wait time of the macro is 3.0s
WT:3.00S	
COLOR/FADE/MACRO	Brightness of COLOR,FADE or MACRO
DIM:190	
C02 SN06	CHASE 2 SCENE 6 store succeed
STORE OK	
CHASE	The SCENEs of this CHASE are up to 30, and you can not store any more
FULL	
C02 SN21	Run CHASE 2 automatically
AUTO	
C02 SN01	Run CHASE 2 manually
MANUAL	
C02 SN03	Run timing 1 of monday
MON-T1	

#### 5 Operation Guide

Turn on power, the operator enter the last state, or enter time run mode if it's in the timing you set.

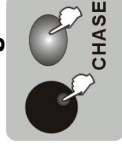
#### 5.1. Controller using

Hold **PROGRAM/RECORD** button for 3 seconds, the LED on **PROGRAM/RECORDE** blinking indicating Program in active.



#### 5.2. Program CHASE

1 **Select CHASE:** Enter Program mode. Press **CHASE** button, LCD show "Chase / [01]", turn jog wheel to select CHASE number that you wish saving CHASE.



- 2 **Select SCENE:** After selecting a CHASE, press **SCENE** button, LCD show "Cxx SN01" if there is no scene in the CHASE. Turn jog wheel to select SCENE number that you wish saving SCENE. (If the scene has been stored, the blinking direct LEDs direct the lightings you selected)
- 3 **Set SCENE:** After selecting a SCENE, you should set FADE TIME and WAITE TIMER for it.



A. **Set Fade Time:** press **MENU/FADE TIME** button, LCD show "Cxx SNxx/FT: x.xxS", default display is the value you set last time. Turn jog wheel to adjust the fade time (0S-90M, preset time is 3.0s).

B. **Set Wait Time:** press **ENTER/WAIT TIME** button, LCD show "Cxx SNxx/WT: x.xxS", default display is the value you set last time. Turn jog wheel to adjust the wait time (0S-90M, preset time is 0.1s).

**Attention:** These fade time and wait time will active only when you set "CHASE BY TIME" to "RUN TIME BY SCENE" in menu mode (refer to chapter 5.5) and the CHASE run in auto mode or timing mode (refer to chapter 4.3).

#### 4 Program SCENE:

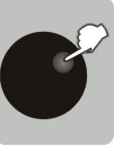
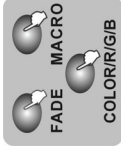
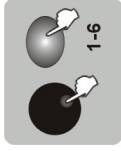
A. **select lightings:** Press number button **1-6** to choose conceivable fixtures, the LEDs corresponding to the fixtures that you chose will run as output, and others will blinking. (If there isn't any output before, you have to program the COLOR, FADE or MACRO, or it don't output though the LEDs are white.)

#### B. Program SENCE:

a) **COLOR:** Press **COLOR/R/G/B** button, then turn the jog wheel to select a build-in color by setting its value from 1 to 255. Press **PROGRAM/RECORD** to store the color as a SCENE.

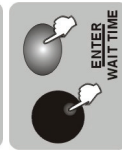
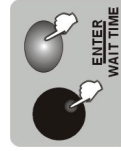
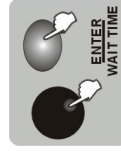
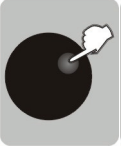
b) **FADE:** Press **FADE** button, then turn the jog wheel to adjust the fade speed (0S-90M). Press **PROGRAM/RECORD** to store it as a SCENE.

c) **MACRO:** Press **MACRO** button, you can select one of the 30 MACROs as a SCENE, after selecting a macro, you can also press **MENU/FADE TIME** and **ENTER/WAIT TIME** button to adjust its fade time and wait time. Once select, press **PROGRAM/RECORD** to store.



### 6.3. SET CLOCK

- 1 Enter menu mode.
- 2 Turn jog wheel until "3. SET/CLOCK" shown on the LCD, press **ENTER/WAIT TIME** button to enter.
- 3 Turn jog wheel until "CLOCK / SET: SUN" shown on the LCD and "SUN" blinking indicate to set week (SUN\MON\TUE \ WED\ THU\FRI\ SAT).
- 4 Press **ENTER/WAIT TIME** button to save.
- 5 LCD display "CLOCK / SUN: 1", turn jog wheel to set timing number, you can set 3 timings each day.



6 Press **ENTER/WAIT TIME** button to store.

7 LCD display "ON: SUN /18:30:05", press **ENTER/WAIT TIME** button to move cursor and turn jog wheel to change hour "18", minute "30" and second "05", press **ENTER/WAIT TIME** to store on timing.

8 LCD display "OFF: SUN /20:45:10", press **ENTER/WAIT TIME** button to move cursor and turn jog wheel to change hour "20", minute "45" and second "10", press **ENTER/WAIT TIME** to store off timing.

(Timing is in a week cycle, if the off time is set before on time, then it will run from the on time to the off time of the next week.)

9 Press **ENTER/WAIT TIME** button to save.

10 Move cursor until "CHASE[02]" shown on the LCD, press **ENTER/WAIT TIME** button and "02" blinking, turn jog wheel to select chase number.

11 Press **ENTER/WAIT TIME** to save.





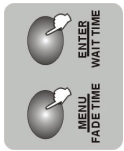
4 Turn jog wheel, move cursor to "07", press **ENTER/WAIT TIME** button, "07" blinking, turn jog wheel to change month, press press **ENTER/WAIT TIME** button again to save.



5 Turn jog wheel, move cursor to "06", press **ENTER/WAIT TIME** button, "06" blinking, turn jog wheel to change day, press **ENTER/WAIT TIME** button again to save.



6 Turn jog wheel until "STORE /DATA SET" shown on the LCD, press **ENTER/WAIT TIME** to save and exit, or press **MENU/FADE TIME** button to exit to main menu without any change.



## 6.2. SET TIME



1 Enter menu mode.



2 Turn jog wheel until "2. SET / TIME" shown on the LCD, press **ENTER/WAIT TIME** button to enter.



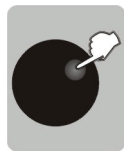
3 LCD display "TIME /10:12:15", cursor under "10", press **ENTER/WAIT TIME** button, "10" blinking, turn jog wheel to change hour, press **ENTER/WAIT TIME** button again to save.



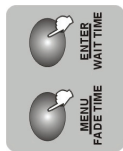
4 Turn jog wheel, move cursor to "12", press **ENTER/WAIT TIME** button, "12" blinking, turn jog wheel to change minute, press **ENTER/WAIT TIME** button again to save.



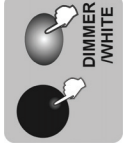
5 Turn jog wheel, move cursor to "15", press **ENTER/WAIT TIME** button, "15" blinking, turn jog wheel to change second, press **ENTER/WAIT TIME** button again to save.



6 Turn jog wheel until "STORE /TIME SET" shown on the LCD, press **ENTER/WAIT TIME** to save and exit, or press **MENU/FADE TIME** button to exit to main menu without any change.



**Attention:** Once you run a CHASE, each step will run by the SCENE time, you'd better set the MACRO time shorter than the SENCE time, or it will run only part of the MCRO and then enter the next SCENE. (For example: set fade time to 3s and wait time to 4s for a SCENE, and set its MACRO fade time to 6s, wait time to 8s, once you run this CHASE, it will run only first half of the MACRO.)



C. **Set dimmer:** When you program a SCENE (COLOR, FADE or MACRO), you can adjust the lightness of the lightings that selected. Press **DIMMER/WHITE** button, LCD show "Cxx SNxx/DIM xxx", turn jog wheel to adjust dimmer, the direct LEDs will light/blink as the output. You'd better set it to open or full on (default), or the lightings will be off though the direct LEDs are white.



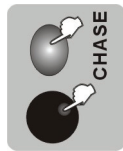
5 Each time press **PROGRAM/RECORD** button to store SCENE, BLACKOUT/STAND ALONG and PROGRAM/RECORD direct LEDs will blinking for 3 times indicating operation succeed.LCD display "Cxx SNxx/ STORE OK" and add a SCENE automatically. You can save up to 24 CHASEs, each CHASE up to 30 SCENES.



6 Hold **PROGRAM/RECORD** for 3 seconds to exit program mode, the direct LED goes out.

## 5.3. Running CHASE

1 Turn on the operator, it enter last running mode or timing mode directly.  
2 There are three running modes: Auto Mode, Manual Mode and Timing Mode.



A. **Auto Mode:** Press **CHASE** button, turn jog wheel to select CHASE, it will run automatically and LCD display "Cxx SNxx/AUTO".



B. **Manual Mode:** Press **CHASE** button, turn jog wheel to select CHASE and then press **SCENE** button to enter manual mode, LCD display "Cxx SNxx / MANUAL", turn jog wheel to run each SCENE manually.

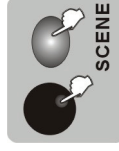
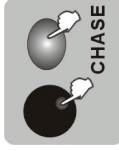
C. **Timing Mode:** Set clock time as chapter **5.3 SET CLOCK**, the operator will run the CHASE appointed as set, and the LCD display

"Cxx SNxx / xxx-Tx".

- 3 Press **BLACK OUT/STAND ALONE** button any time, the fixtures enter BLACK OUT mode and stop output immediately.

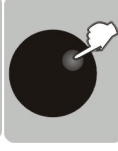
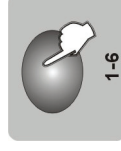
#### 5.4. Select SCENE in CHASE

- 1 Press **CHASE** button, turn jog wheel to select CHASE number, LCD display "Cxx SNxx / AUTO".
- 2 Press **SCENE** button, the operator output SCENE 1, turn jog wheel to select SCENE number, LCD display "Cxx SNxx/MANUAL".



#### 5.5. Manual Mode

- 1 Press one of the **COLOR/R/G/B**, **FADE**, **MACRO** button to enter manual mode.
- 2 Press number button **1-6** to select lightings conceivable. The direct LEDs will run as output, other direct LEDs will blinking.
- 3 Turn jog wheel to adjust the output:
  - COLOR:** Turn jog wheel to choose one of 255 build-in colors.
  - FADE:** Turn jog wheel to adjust fade speed (0S-90M).
  - MACRO:** Turn jog wheel to select one of the 24 MACROS, you can also press **MENU/FADE TIME** and **ENTER/WAIT TIME** to adjust their fade time (0S-90M) and wait time (0S-90M).
- 4 In COLOR, FADE or MACRO mode, you can press **DIMMER/WHITE** button to adjust the lightness of the lights that selected.



#### 5.6. STAND ALONE Mode

- 1 Hold **BLACK OUT/STAND ALONE** for 3 seconds to enter STAND BY mode, LCD display "STAND / ALONE", the direct LED blinking, six output channels stop output and lightings run in Master/Slave mode.



- 2 Press **BLACK OUT/STAND ALONE** button again to exit.

#### 6 MENU setting

##### A Enter menu



Hold **MENU/FADE TIME** for 3 seconds to enter main menu.

##### B Exit menu



Press **MENU/FADE TIME** until exit menu mode.

The main menu includes following 10 settings:

1. SET DATE
2. SET TIME
3. SET CLOCK
4. DELETE CHASE
5. CHASE BY TIME
6. ERASE MEMORY
7. LOCK KEYBOARD
8. DMX ADDRESS
9. DATA TRANSMIT
10. DATA RECEIVE
11. DMX CONFIG

#### 6.1. SET DATE

- 1 Enter menu mode.
- 2 Turn jog wheel until "1. SET/ DATE" is shown on the LCD, press **ENTER/WAIT TIME** button to enter.
- 3 LCD display "DATE SUN /08-07-06", cursor under "08", press **ENTER/WAIT TIME** button, "08" blinking, turn jog wheel to change year, press **ENTER/WAIT TIME** button again to save.

