

# IL-2420II



## User Guide

*Please read these instructions carefully before use*

# CONTENTS

1. Features.....	3
2. General Instructions.....	4
3. Overview.....	5
3.1. Front View .....	5
3.2 Rear View .....	8
4. Operation Guide .....	8
4.1 Programming Mode .....	8
4.2 Setting a scene.....	9
4.3 Program a Scene with Movement .....	10
4.4 Program a Scene .....	11
4.5 Copy a Scene .....	12
4.6 Delete a Scene .....	13
4.7 Bank copying .....	14
4.8 Program a Chase.....	15
4.9 Program all the Scenes in a Bank .....	17
4.10 Program a step.....	18
4.11 Insert Steps into a Chase.....	19
4.12 Delete Steps from Program .....	21
4.13 Delete a CHASE .....	22
4.14 Program a Preset.....	23
4.15 Preset Editing .....	24
4.16 Program a Fixture Group.....	26
4.17 FIXTURE GROUP Editing .....	27
4.18 Program a Center .....	28
4.19 Center Editing.....	29
4.20 Program an Override.....	31
4.21 Override Editing .....	32
4.22 Program a CUE.....	34
4.23 CUE Editing .....	35
4.24 Delete a CUE.....	36
4.25 Store a Blackout Scene. ....	36
5. Setting Menu.....	37

5.1 Create a new Fixture Profile .....	39
5.2 Modify a Fixture Profile.....	40
5.3 Delete a Fixture Profile.....	41
5.4 Patch a Fixture .....	42
5.5 Reverse channel setup.....	43
5.6 Fade mode setup .....	44
5.7 Blackout mode select .....	45
5.8 Midi channel select .....	45
5.9 Chase run by inside/outside time.....	46
5.10 Auto remote address .....	46
5.11 Read SD card .....	47
5.12 Write SD card .....	49
5.13 Modify Password.....	50
5.14 Enable Password.....	51
5.15 Erase all memory .....	52
5.16 Audio input range adjust .....	52
5.17 Channel value display mode .....	53
6. Function Mode .....	53
6.1 Running scene.....	53
6.2 Run Program.....	56
6.3 Running CUE .....	58
6.4 Over control.....	58
7. Fog Machine operation.....	59
8. Strobe light operation.....	59
9. Super Password .....	62
10. Update the software with SD card.....	62
11. PROFILE Create notice .....	63

## 1. Features

- 2 x DMX Outputs
- 484 DMX Channels in total, including 481Ch. for DMX fog, 482Ch. for future use, 483-484Ch. for DMX strobe
- Fixture Library ( for built-in ACME lighting fixtures; Other brand fixtures can be set manually but Max. with 50 fixtures )
- Built-in 10 MOVEMENTS - Can adjust PAN/TILT Position、PAN/TILT Range、 Fade time or Wait time、 LOOP
- 60 Programmable Chases, each chase can have 200 scenes max.
- 1200 Programmable Scenes ( 60 banks x 20 scenes )
- 400 Programmable Presets ( 20 presets, each preset has 10 colors and 10 gobos )
- Control 20 DMX light fixtures, and each fixture up to 24 Channels
- Operate 20 Fixture groups simultaneously
- 24 faders for controlling 24 DMX channels
- 60 x CUEs (Combined many chases together and operate the chases one by one.)
- 20 x override – Can assign one (or more than one) of the fixtures to perform special function, like follow spot, during the operation. 20 overrides can be set in the controller
- 20 x Center - Can set each fixture's central position of the movement; you can set up to 20 centre positions.
- Remote DMX Addressing ONLY FOR ACME LIGHTS
- Stand By mode set - 1. For Pan/ Tilt home position 2. For PAN/TILT CENTER Position 3. PRESET Position.
- Can use jog wheel to adjust the audio sensitivity (LCD display will indicate the value )
- Can set Password to boost the controller
- Lock/Unlock memory/ Need password to clear all memory
- Standard MIDI facility
- Lighting Library and software downloaded available
- DMX fog machine control ( 481 Ch. )
- Both DMX ( 483 & 484 ) and analog strobe control available ( Via LCD display, people can adjust the speed of analog strobe )
- 2 remote Easy Controller ( CA-8 )
- Gooseneck USB LAMP

**NOTE:** Some basic 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 !

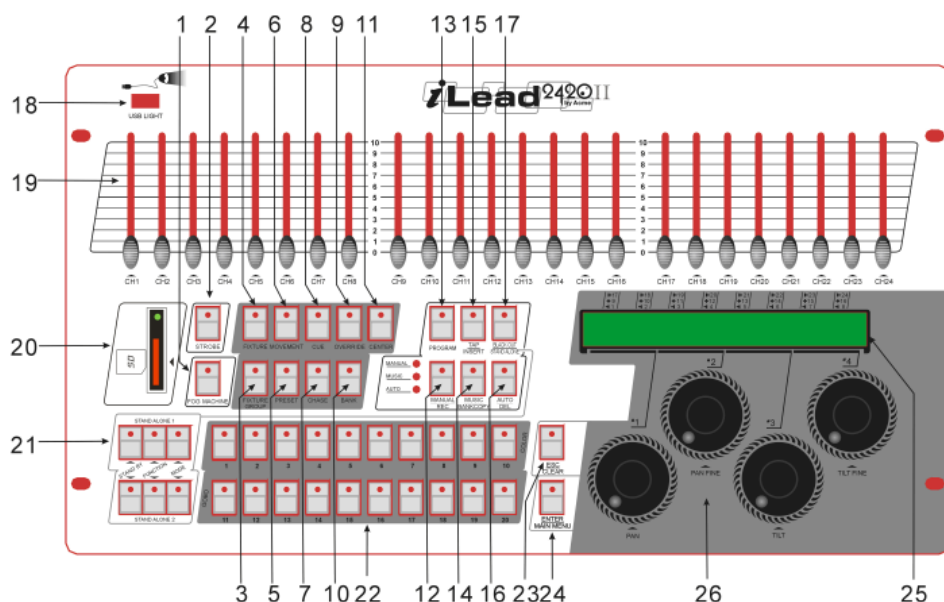
- ◆ DO NOT make any inflammable liquids, water or metal objects enter the unit.
- ◆ Should any liquid be spilled on the unit, DISCONNECT the power supply to the unit immediately.
- ◆ STOP using the unit immediately In the event of serious operation problems and either contact your local dealer for a 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 F.Protect the unit from excessive dryness or humidity (ideal conditions are between 35% and 80%).
- ◆ DO NOT dismantle or modify the unit.

## 3. Overview

### 3.1. Front View



- |                         |  |
|-------------------------|--|
| 1. Fog Machine Button   | Activates Fog Machine.   |
| 2. STROBE Button        | Trigger strobe.  |
| 3. Fixture Group Button | Select /set one or more fixtures group   |
| 4. Fixture Button       | Select one or more fixtures  |
| 5. Preset Button        | Select/set the color & gobo preset.  |
| 6. movement Button      | Select/set the pan & tilt movement   |
| 7. Chase Button         | Run Chase and save Scene to Chase  |
| 8. Cue Button           | Save several Chases together and make them run at the same time  |
| 9. Bank Button          | Press the Bank buttons to load or stored your scenes. There are a maximum of 1200 programmable scenes. |
| 10. Override Button     | Override the fixture/ fixtures when the show is running.   |

- |  |   |
|--|---|
| 11. Center Button                        | Select/set the pan & tilt center.   |
| 12. Manual/Rec Button                    | Used to control manual operation or to record programs.                                     |
| 13. Program Button                       | Activates Program mode.   |
| 14. Music/Bank Copy Button               | Activates Music mode or to copy a bank of scenes.   |
| 15. Tap/Insert Button                    | Used to create a standard beat or insert a scene to chase.                                  |
| 16. Auto/Del Button                      | Activates Auto mode or to delete scenes or chases.  |
| 17. Blackout/ Stand Alone Button         | Select Blackout/Stand Alone two modes.  |
| 18. USB Light                            | Connect to USB Light  |
| 19. Faders                               | These faders are used to control the intensity.   |
| 20. SD card                              | SD card port can be used to upgrade software, copy data and introduce to light bank         |
| 21. Stand alone                          | Extra easy controllers Incorporated for Master/Slave immediate. pre-programmed light shows. |
| 22. Multi function number buttons (1-20) |   |

	Function buttons	The descriptions of the Function buttons
1	Fixture	Select 20 units of Fixtures Pls refer to the following table for Fixture addresses
2	Fixture Group	Set or select 20 Fixture Groups
3	Movement	(only 1-10) Select or operate 10 Movements
4	Preset	20 groups of fixtures can be set or selected by Jog wheel PAN .10 color Preset(1-10) and 10 GOBO Preset(11-20) each group
5	Cue	Set, select or operate 60 Cues
6	Chase	Set, select or operate 60 Chases
7	Override	Set and select 20 Overrides
8	Bank	60 banks( each bank with 20scenes) can be set and selected

		by Jog wheel <b>#1</b>
9	center	Set, select and operate 20 Centers
10	Number 1-20 button	<ol style="list-style-type: none"> <li>1-10 (10 stand for 0) Number for setting and inputting password</li> <li>1-10 10 MOVEMENT can be selected.</li> <li>1-10 can be used to select 10 groups of COLOR PRESET; 11-20 can be used to select another 10 groups of GOBO PRESET.</li> <li>1-20 can be used to select 20 CUE/PAGE、CHASE/PAGE、SCENE/BANK、OVERRIDE、CENTER、FIXTURE.</li> </ol>

**Fixture number channel list**

<b>Fixtures number buttons</b>	<b>Fixture DMX channels</b>	<b>Fixtures number buttons</b>	<b>Fixture DMX channels</b>
1	1-24	11	241-264
2	25-48	12	265-288
3	49-72	13	289-312
4	73-96	14	313-336
5	97-120	15	337-360
6	121-144	16	361-384
7	145-168	17	385-408
8	169-192	18	409-432
9	193-216	19	432-456
10	217-240	20	457-480

23. ESC/CLEAR Button

Back to last menu/delete all the output when program

24. Enter/main menu Button

Confirm or enter next menu or enter main menu

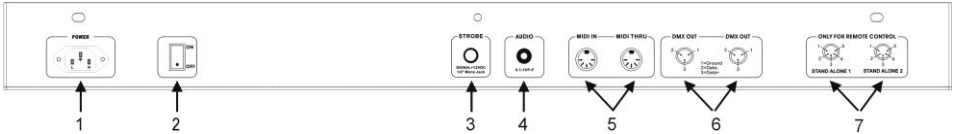
25. LCD Display

Show the current activity or programming state.

26. Jog wheel

Used to adjust the chase speed within the range of 0.1 second to 5 minutes.

### 3.2 Rear View



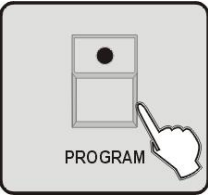
- |                                |  |
|--------------------------------|--|
| 1. <b>Power in</b>             | <b>AC100-240V 50/60Hz.</b>   |
| 2. <b>Power Switch</b>         | This switch turns On/Off the power.  |
| 3. <b>STROBE</b>               | Trigger non-DMX strobe. Signal +12V DC.  |
| 4. <b>AUDIO</b>                | 0.1V~1Vp-p.  |
| 5. <b>MIDI IN or MIDI THRU</b> | Receives MIDI data.  |
| 6. <b>DMX Out</b>              | Two connectors sends DMX signals to DMX fixtures, use 3 pin XLR plug cable to link the fixture together.   |
| 7. <b>STAND ALONE</b>          | The connectors are used only in master/slave mode, using 5 pin XLR cable microphone jack of the first fixture, you will find that the remote control on the first unit will control all the other units for Stand by, Function and Mode. |

### 4. Operation Guide

#### IL2420 Operating Steps Instructions

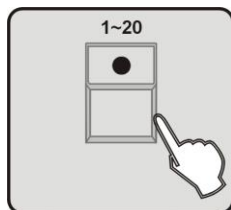
When power is turned on, the controller starts self testing automatically, the LCD Display indicating the self testing progress. After it is finished, the fixture pilot on the rear board is on, which means that you can start to operate the controller.

#### 4.1 Programming Mode

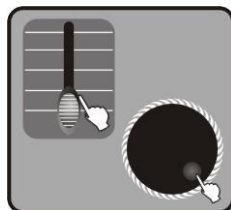


Press **PROGRAM** button for 3 seconds, the LED above this button lights flickers indicating Program in active.

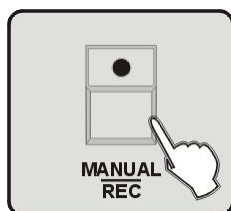
## 4.2 Setting a scene



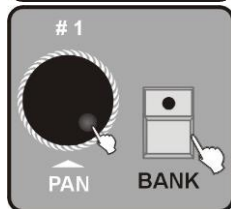
1. Enter Program mode.
2. Press the button **1~20** to select Fixture, you can select several fixtures at a time by tapping of these buttons.



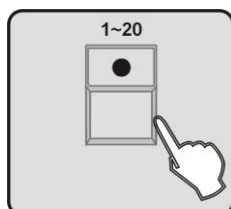
3. Slide **Faders 1-24** or use the **CENTER** or **PRESET** or **SCENE** have saved to change the output of each channel. You can also use the jog wheel **#1** , **#2** to control the PAN、PAN FINE or use the jog wheel **#3** , **#4** to control TILT、TILT FINE.



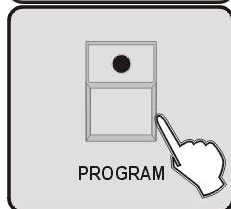
4. Once the scene is satisfactory, press **MANUAL/REC** button to program this scene into memory. At this moment, the LEDs on **CUE**、**OVERRIDE**、**CENTER**、**FIXTURE GROUP**、**PRESET**、**CHASE**、**BANK**、**BLACKOUT** button flicker at the same time.



5. Press **BANK** use the Jog wheel **#1** to select the BANK number to save the scene.



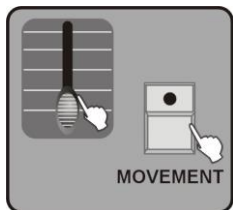
6. Press the number button **1~20** to select the Scene number going to be saved, all LEDs and the Segment Display will flicker three times briefly indicating this operation, then the LCD will show the bank and the scene number of the programmed scene.



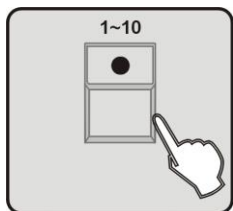
7. Repeat steps 2-6 to program other scenes.
8. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this selection.

### 4.3 Program a Scene with Movement

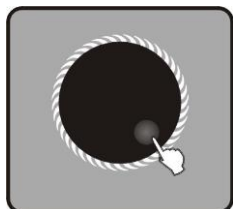
1. Enter Program mode.
2. Press the button **[1-20]** to select Fixture, you can select several fixtures at a time by tapping of these buttons.



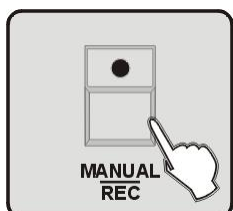
3. Move **Faders 1-24** or use the **CENTER**、**PRESET**、**SCENE** have saved to change the output of each channel , press **MOVEMENT** button.



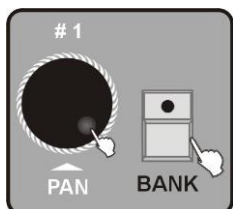
4. Press the button **[1-10]** to select one MOVEMENT in ten, the selected FIXTURE will run the MOVEMENT.



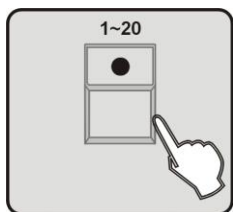
5. If it is necessary to adjust MOVEMENT parameter, use Jog wheel **#2** to select the adjusting MOVEMENT parameter options(position & range & fade time or wait time & loop), use Jog wheel **#3**、**#4** to adjust parameter values.



6. Repeat Steps 2 – 5to select MOVEMENT for other FIXTURE.
7. Press **MANUAL/REC** to store into memory, all the LEDs on **CUE**、**OVERRIDE**、**CENTER**、**FIXTURE GROUP**、**PRESET**、**CHASE**、**BANK**、**BLACKOUT** flicker to indicate this operation.

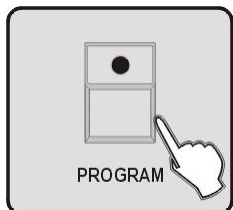


8. Press **BANK** use Jog wheel **#1** to select the BANK number to store the scene.



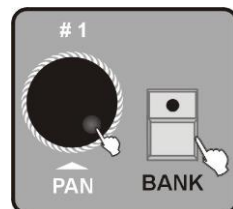
9. Press the number button **1~20** to select the Scene number going to be saved, all LEDs and the Segment Display will flicker for three times briefly indicating this operation, then the LCD will show the bank and the scene number of the programmed scene.

10. Repeat steps 2-9 to program other SCENEs with MOVEMENT



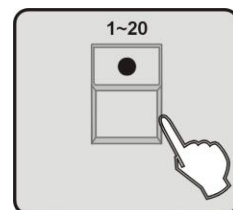
11. If you don't intend to continue your programming, press and hold down the **PROGRAM** button for three seconds to exit Program mode, the LED goes out indicating this selection.

#### 4.4 Program a Scene

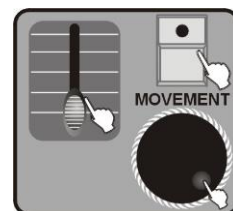


1. Enter Program mode.

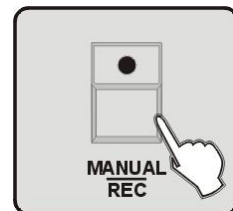
2. Press the button **BANK**, to turn on its fader control, which is indicated by the lit LED, use Jog wheel **#1** to select the bank number to edit the scene.



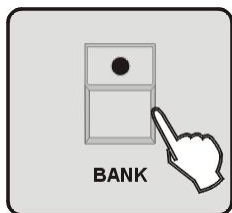
3. Press the number button **1~20** to open the scene you are going to edit.



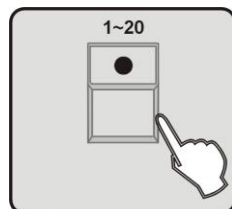
4. Move **Faders 1-24** or use the **CENTER**、**PRESET**、**SCENE** have saved to change the output of each channel, you can also use the Jog wheel **#1**、**#2** to adjust **PAN**、**PAN FINE**, or use Jog wheel **#3**、**#4** to adjust **TILT**、**TILT FINE** or press **MOVEMENT** to add **MOVEMENT** function.



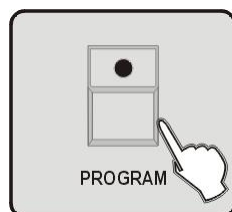
5. Press **MANUAL/REC** to store, LEDs on **CUE**、**OVERRIDE**、**CENTER**、**FIXTURE GROUP**、**PRESET**、**CHASE**、**BANK**、**BLACKOUT** flicker at the same time.



6. Press the button **BANK**.



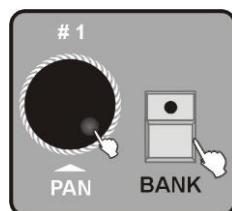
7. Press the number button **1~20** to store the edited scene which will cover the former scenes, all LEDs and the Segment Display will flicker for three times briefly indicating this operation, then the LCD will show the bank and the scene number of the programmed scene.



8. Press the button **PROGRAM** for three second, to exit Program mode, the LED goes out indicating this selection.

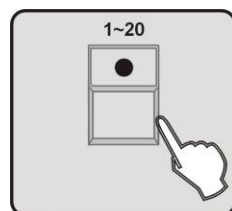
**Hints:** If you select different scenes at step 3 and 6, the editing scene would cover the scene at step 6.

#### 4.5 Copy a Scene

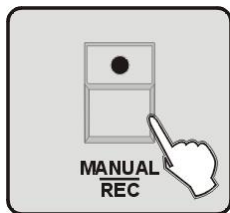


1. Enter Program mode.

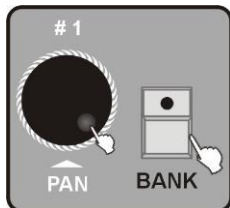
2. Press the button **BANK**, to turn on its fader control, which is indicated by the lit LED., use Jog wheel **#1** to select the bank number to edit the scene.



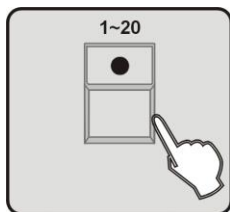
3. Press the number button **1~20** to open the scene you are going to copy.



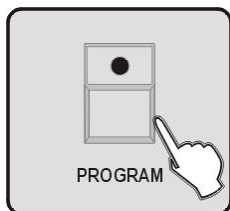
4. Press **MANUAL/REC** to store, LEDs on **CUE**, **OVERRIDE**, **CENTER**, **FIXTURE GROUP**, **PRESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.



5. Press **BANK** Then use the Jog wheel **#1** to select the BANK number to copy the scene.

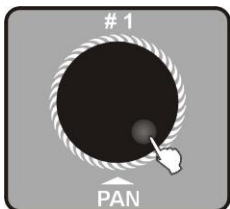


6. Press the number button **1~20**, then copy the Scene to the right position. All LEDs and the Segment Display will flicker for three times briefly indicating this operation, then the LCD will show the bank and the scene number of the programmed scene.

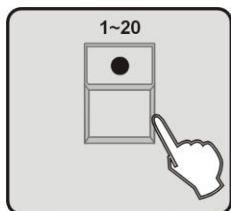


7. If you don't intend to continue your programming, press and hold down the **PROGRAM** button for three seconds to exit Program mode, the LED goes out indicating this selection.

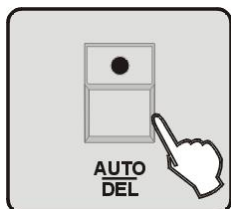
#### 4.6 Delete a Scene



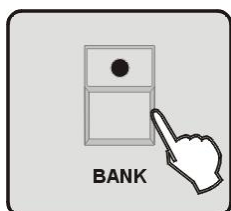
1. Enter Program mode.
2. Use the Jog wheel **#1** to select the Bank number of the being deleted scene.



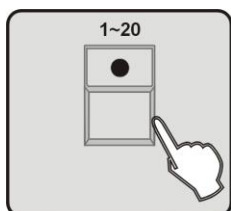
3. Press the number button **1~20** to select the scene you are going to delete.



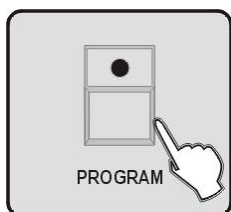
4. Press the button **AUTO/DEL**



5. Press the button **BANK**

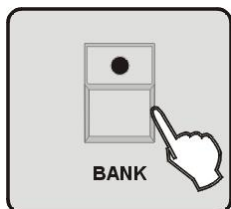


6. Then press the number button **1~20**, the scene will be deleted, all LEDs and the Segment Display will flicker for three times briefly indicating this operation, then the LCD will show the bank and the scene number of the deleted scene.

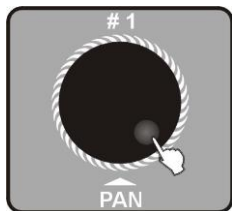


7. If you don't intend to continue your programming, press and hold down the **PROGRAM** button for three seconds to exit Program mode, the LED goes out indicating this selection

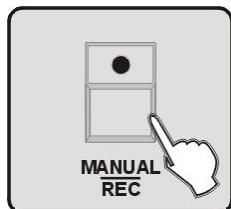
#### 4.7 Bank copying



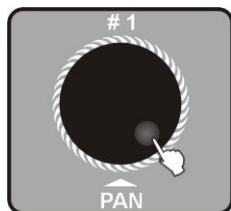
1. Enter Program mode.
2. Press **BANK** button



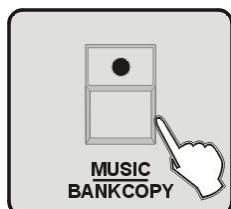
3. Use the Jog wheel **#1** to select the Bank number of the being copied scene.



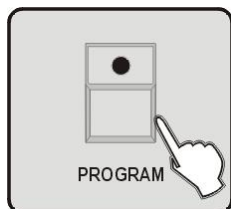
4. Press the button **MANUAL/REC**, LEDs on **CUE**, **OVERRIDE**, **CENTER**, **FIXTURE GROUP**, **PRESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.



5. Then turn the Jog wheel **#1** to select the bank number to copy to.



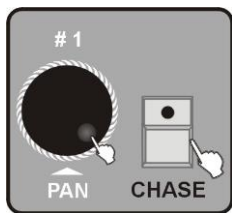
6. Press the button **MUSIC/BANK COPY**, all LEDs and the Segment Display will flicker for three times briefly indicating this operation, then the LCD will show the number of the being copied bank and the bank is being copied to and the scene number of the programmed scene.



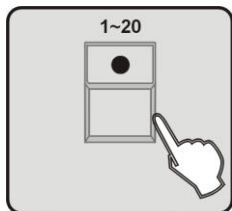
7. Press the button **PROGRAM** for three seconds to exit Program mode, the LED goes out indicating this selection

## 4.8 Program a Chase

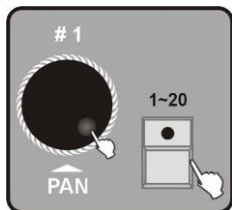
**Note:** The chase should be programmed after the scene is set. Each chase can have 200 scenes max.



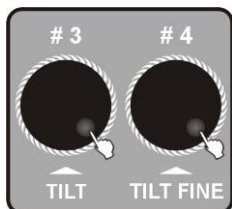
1. Enter Program mode.
2. Press the button **CHASE**, LEDs on **CHASE** will be all lit. Use jog wheel **#1** to select the page number of the chase.



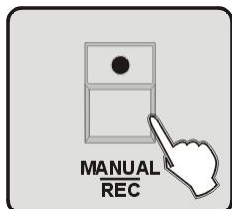
3. Press the number button **1~20** to select the chase number, the LEDs on **BANK** button will be all lit, the LCD will show the number and parameter of CHASE、BANK、SCENE、STEP、FADE、WAIT.



4. Use the Jog wheel **#1** to transfer to other Banks, then press the number button **1~20** to select the scene to store the Chase.

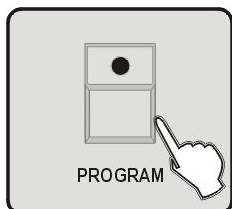


5. Use the Jog wheel **#3** to adjust the FADE TIME of present chase, the Jog wheel **#4** to adjust the WAIT TIME of the present chase. If you do not make any adjustments, the system will remember the last FADE TIME or WAIT TIME.



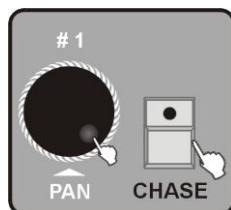
6. Press the button **MANUAL/REC**, all the LEDs will flicker for three times briefly indicating the store succeed.

7. Repeat Step 4-6, each chase can have 200 scenes max.

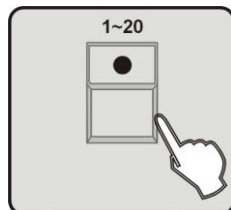


8. Press the button **PROGRAM** for three seconds to exit Program mode, the LED goes out indicating this selection.

## 4.9 Program all the Scenes in a Bank



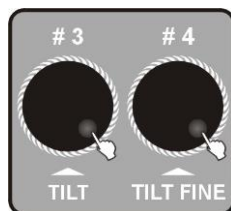
1. Enter Program mode.
2. Press the button **CHASE** use jog wheel **#1** to select the page number, choose the programming chase.



3. Press the number button **1~20** to select the Chase number, LEDs on the **BANK** button will be all lit, the LCD will show the number and parameter of the CHASE、BANK、SCENE、STEP、FADE、WAIT.



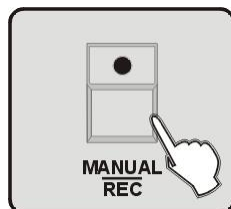
4. Use the Jog wheel **#1** to select the Bank number of the programmed Chase.



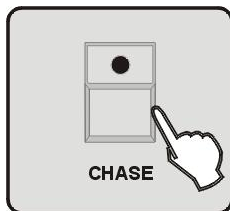
5. Use the Jog wheel **#3**、**#4** to adjust the FADE TIME and WAIT TIME which are going to be added to the single Chase. If you do not make any adjustments, the system will remember the last FADE TIME or WAIT TIME.



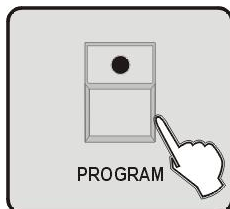
6. Press the button **MUSIC/BANKCOPY**



7. Press the button **MANUAL/REC**, all LEDs flicker for 3 times, all the programmed scenes in the Bank will join the Chase.
8. Repeat Step 3-7 can join 200 scenes max to the chase.

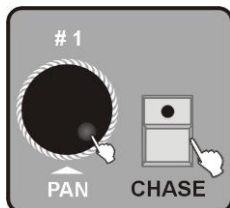


9. Finally press the button **CHASE** to store the chase then exit the programming state.

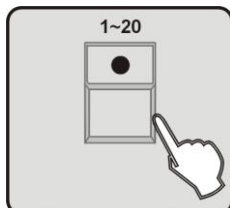


10. Press the button **PROGRAM** for three seconds to exit Program mode, the LED goes out indicating this selection.

#### 4.10 Program a step



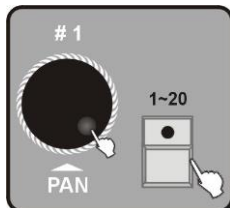
1. Enter Program mode.
2. Press the button **CHASE** use jog wheel **#1** to select the page number of the chase to select the program.



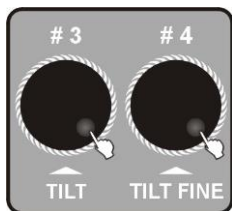
3. Press the number button **1~20** to select the Chase number, LEDs on the **BANK** button will be all lit, the LCD will show the number and parameter of the CHASE、BANK、SCENE、STEP、FADE、WAIT.



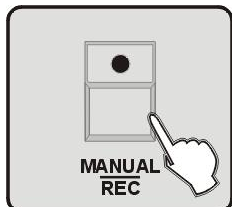
4. Use Jog wheel **#2** to view the steps, the strobe display [002] indicate programmable step number



5. Use jog wheel **#1** to select the bank number of the scene, press number button **1~20** to open.

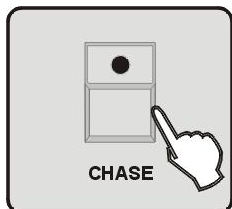


6. Use the Jog wheel **#3**, **#4** to adjust the FADE TIME and WAIT TIME which are going to be added to the single Chase. If you do not make any adjustments, the system will remember the last FADE TIME or WAIT TIME.

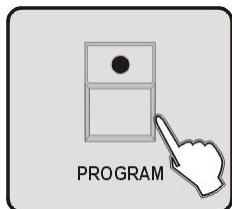


7. Press the button **MANUAL/REC** all LEDs flicker for 3 times to indicate that you have successfully programmed a step.

8. Repeat steps 2-3 to select other steps.

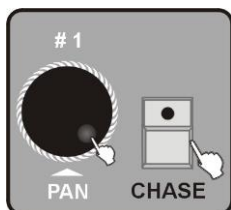


9. Press the button **CHASE** to store and exit the programming state.



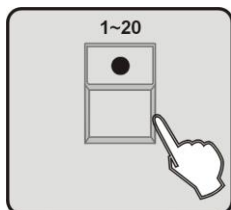
10. Press the button **PROGRAM** for 3 seconds to exit Program mode, the LED goes out indicating this operation.

#### 4.11 Insert Steps into a Chase



1. Enter Program mode.

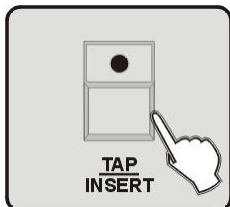
2. Press the button **CHASE** use jog wheel **#1** to select the page number, choose the programming chase.



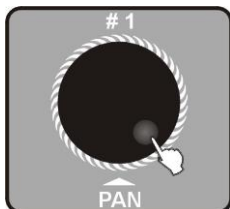
3. Press the button **1-20** to select the chase number.



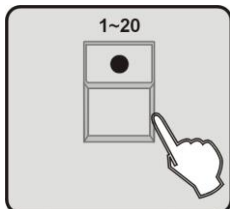
4. Use the Jog wheel **#2** to select the position of inserted steps.



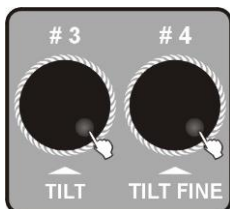
5. Press the button **TAP/INSERT** to insert a step following the present position.



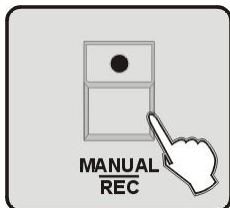
6. Use the Jog wheel **#1** to select the Bank number of the inserted scene.



7. Press the number button **1~20** to select the scene to be inserted.

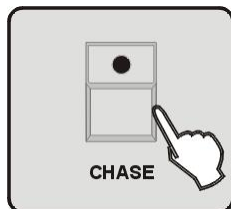


8. Use the Jog wheel **#3**、**#4** to adjust the CHASE FADE TIME and WAIT TIME. If you do not make any adjustments, the system will remember the last FADE TIME or WAIT TIME.

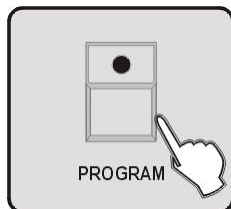


9. Press the button **MANUAL/REC** all LEDs flicker for 3 times to indicate that you have successfully inserted a step into a chase.

10. Repeat steps 5-9, you can insert 200 scenes to each chase.

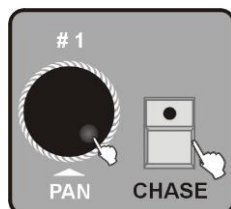


11. Press the button **CHASE** to store the chase and exit the chase programming state.

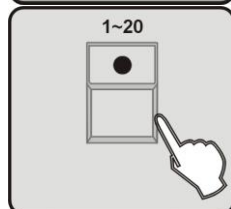


12. Press the button **PROGRAM** for 3 seconds to exit Program mode, the LED goes out indicating this operation.

#### 4.12 Delete Steps from Program



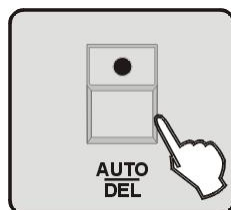
1. Enter Program mode.  
2. Press the button **CHASE** use jog wheel **#1** to select the page number, choose the programming chase.



3. Press the number button **1~20** to select the chase number to delete from.

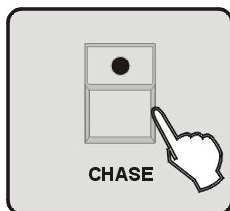


4. Use Jog wheel **#2** to select the scene location you want to delete.

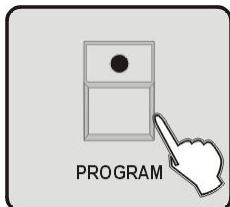


5. Press **AUTO/DEL** all LEDs flicker for 3 times to indicate that you have successfully deleted the scene.

6. Repeat steps 4-5 to delete more scenes from the chase.

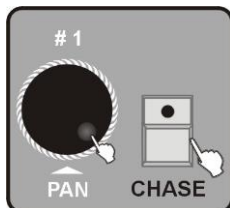


7. Press the button **CHASE** to store the operation and exit from the present programming state.

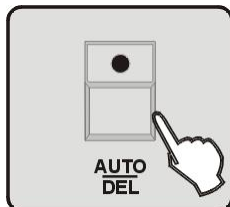


8. Press the button **PROGRAM** for 3 seconds to exit Program mode, the LED goes out indicating this operation.

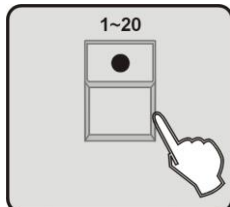
#### 4.13 Delete a CHASE



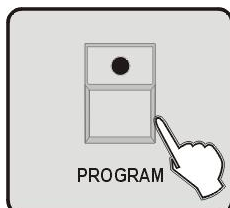
1. Enter Program mode.
2. Press the button **CHASE**, use jog wheel **#1** to select the page number, choose the programming chase.



3. Press the button **AUTO/DEL**.



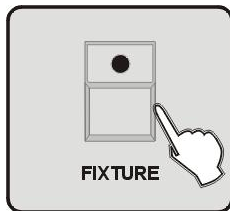
4. Press the number button **1~20** to select the chase to be deleted, all LEDs flicker for 3 times to indicate that you have successfully delete the chase.



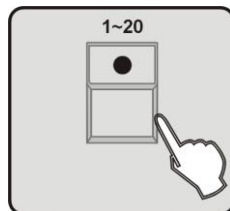
5. Repeat the steps 2-4 to delete more chases.

6. Press the button **PROGRAM** for 3 seconds to exit Program mode, the LED goes out indicating this operation.

## 4.14 Program a Preset



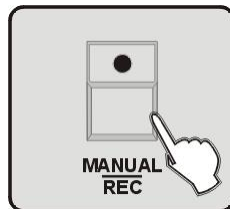
1. Enter Program mode.
2. Press the button **FIXTURE**



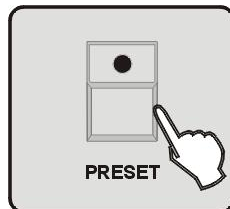
3. Press the button **1-20** to select the concerned fixture of preset programming.



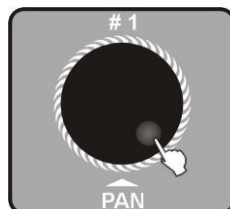
4. Move the **FADERS1-24** to change COLOR/GOBO channel values (The codes of the channel feature of ARRT CODE are "C" and "G" in the fixtures bank)output for the convenience to check other channels but the channel output will not be stored in the preset.



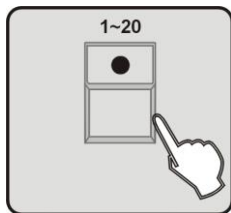
5. Press the button **MANUAL/REC** at this moment all LEDs on buttons **CUE**, **OVERRIDE**, **CENTER**, **FIXTURE GROUP**, **PRESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.



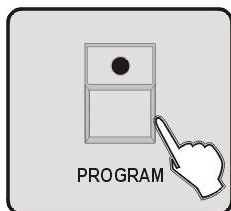
6. Press the button **PRESET**



7. Use Jog wheel **#1** to select the preset group number 1-20.



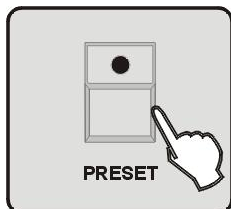
8. Press one of the number button **1-10** to store a COLOR preset or Press one of the number button **11-20** to store a GOBO preset, all LEDs flicker for 3 times to indicate that you have successfully store a Preset.



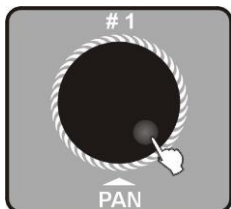
9. Repeat Steps 2-8 to program more Presets.

10. Press the button **PROGRAM** for 3 seconds to exit Program mode, the LED goes out indicating this operation.

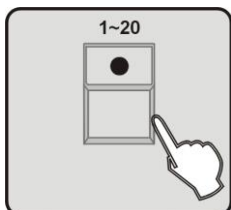
#### 4.15 Preset Editing



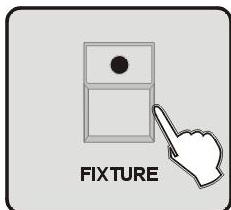
1. Enter Program mode.
2. Press **PRESET** Button to select programming Preset state.



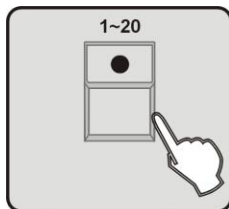
3. Roll the Jog wheel **#1** to select Preset groups 1-20.



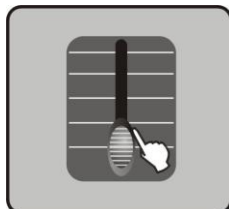
4. Press the number button **1-20** to open the to be edited Preset.



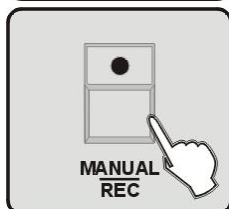
5. Press **FIXTURE** button.



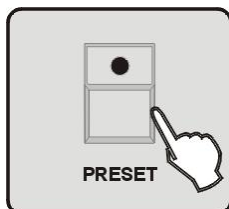
6. Press the number button **1~20** to select the concerned fixtures to program Preset.



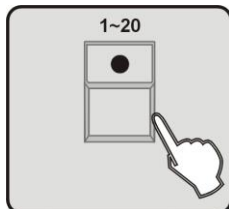
7. Move **FADER 1-24** to change COLOR/GOBO channel values (The codes of the channel feature of ARRT CODE are “C” and “G” in the fixtures bank) output for the convenience to check other channels but the channel output will not be stored in the preset.



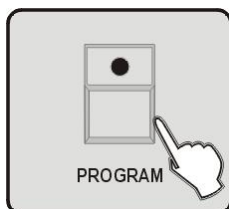
8. Press **MANUAL/REC** button , at this moment, all LEDs on **CUE**, **OVERVERRIDE**, **CENTER**, **FIXTURE GROUP**, **PRESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.



9. Press **PRESET** Button.



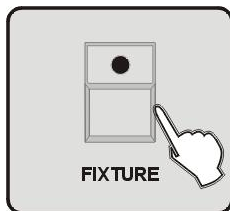
10. Press number button **1~20** to select the opened Preset, all LEDs flicker for 3 times to indicate that you have successfully edited the Preset.



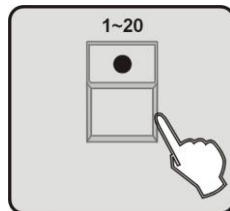
11. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

**NOTE:** If you press different buttons in step 4 and 10, the preset in step 4 will cover the one in step 10.

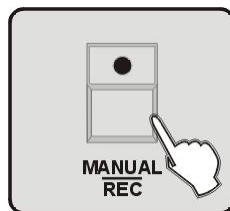
## 4.16 Program a Fixture Group



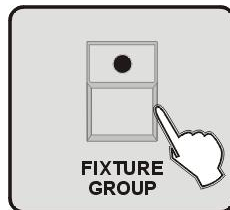
1. Enter Program mode.
2. Press **FIXTURE** button.



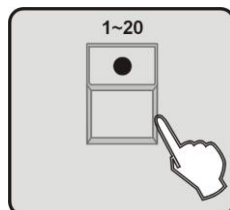
3. Press the number button **1~20** to select one or more fixtures to make the fixture group.



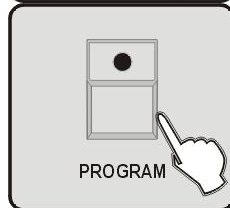
4. Press **MANUAL/REC** button, at this moment, all LEDs on **CUE**, **OVERVERRIDE**, **CENTER**, **FIXTURE GROUP**, **PRESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.



5. Press **FIXTURE GROUP** button.

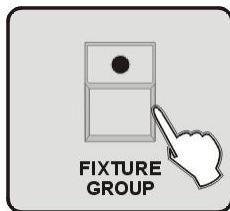


6. Press the number button **1~20** to select the number of the fixture group for store, all LEDs flicker for 3 times
7. Repeat steps 2-6 to edit more fixture groups.

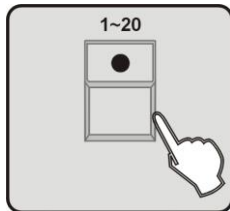


8. Press **PROGRAM** button 3 seconds to exit Program mode, the LED goes out indicating this operation.

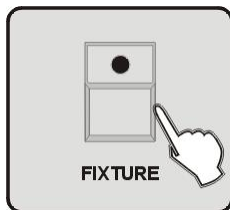
## 4.17 FIXTURE GROUP Editing



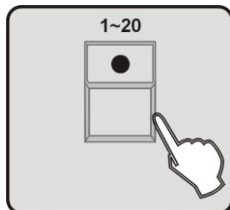
1. Enter Program mode.
2. Press **FIXTURE GROUP** button.



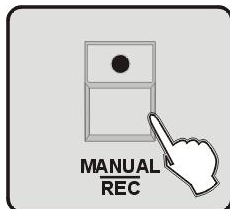
3. Press the number button **1~20** to select the fixture group number to be edited.



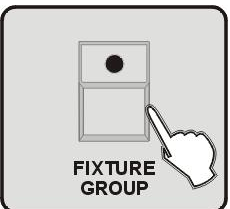
4. Press **FIXTURE** button.



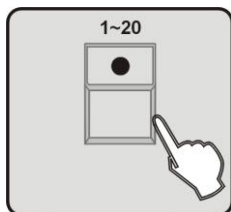
5. Press the number button **1~20** to select one or more fixtures to make the fixture group.



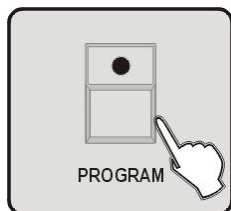
6. Press **MANUAL/REC** button, at this moment, all LEDs on **CUE**, **OVERRIDE**, **CENTER**, **FIXTURE GROUP**, **PRESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.



7. Press **FIXTURE GROUP** button.



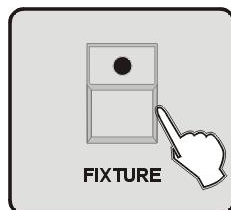
8. Press the number button **1~20** to select the fixture group number you selected in step 2, all LEDs flicker for 3 times



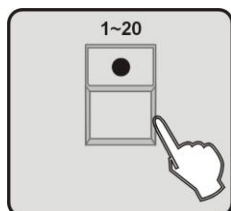
9. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

**NOTE:** If you press different buttons in step 3 and 7, the fixture group you selected in step 4 will cover the one in step 7.

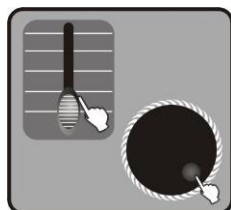
#### 4.18 Program a Center



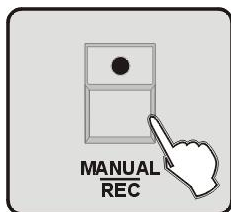
1. Enter Program mode.
2. Press **FIXTURE** button.



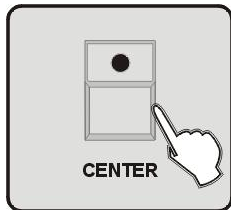
3. Press the number button **1~20** to select the concerned fixtures to be programmed.



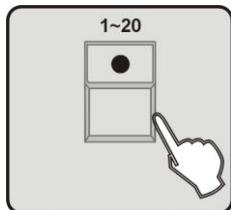
4. Move **FADERS1-24** and use Jog wheel **#3**, **#4** to change the center position of PAN、TILT where you desired. (The codes of the channel feature of ARRT CODE are “P”、“PF”、“T”、“TF” in the fixtures bank) for the convenience to check other channels, there would be some output of the channels, but the channel output will not be stored in the center.



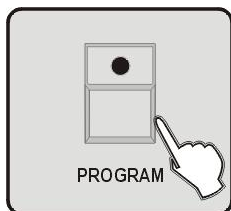
5. Press **MANUAL/REC** button, at this moment, all LEDs on **CUE**, **VERRIDE**, **CENTER**, **FIXTURE GROUP**, **PRESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.



6. Press **CENTER** button.



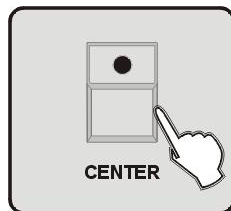
7. Press the number button **1~20** to select the location to store the Center all LEDs flicker for 3 times to indicate that you have successfully stored a Center position.



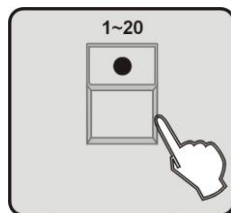
8. Repeat steps 2-7 to program more Center positions.

9. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

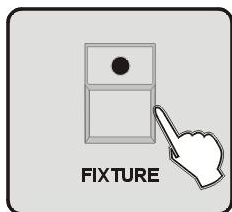
#### 4.19 Center Editing



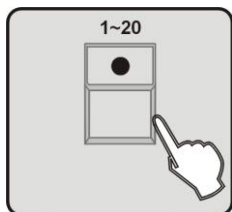
1. Enter Program mode.
2. Press **CENTER** button.



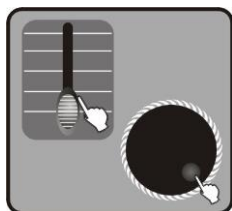
3. Press the number button **1~20** to select the edited Center position number.



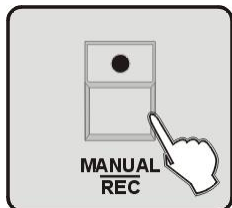
4. Press **FIXTURE** button.



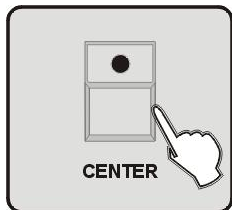
5. Press the number button **1-20** to select the concerned fixtures to be programmed.



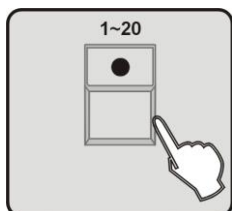
6. Move **FADERS1-24** and use Jog wheel **#3**, **#4** to change the center position of PAN、TILT where you desired. (The codes of the channel feature of ARRT CODE are "P"、"PF"、"T"、"TF" in the fixtures bank) for the convenience to check other channels, there would be some output of the channels, but the channel output will not be stored in the center.



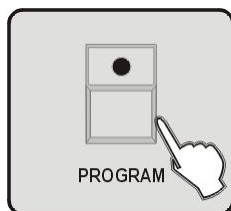
7. Press **MANUAL/REC** button, at this moment, all LEDs on **CUE**、**OVERRIDE**、**CENTER**、**FIXTURE GROUP**、**PRESET**、**CHASE**、**BANK**、**BLACKOUT** flicker at the same time.



8. Press **CENTER** button.



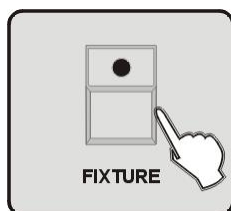
9. Press the number button **1-20** to select the location to store the Center, all LEDs flicker for 3 times to indicate that you have successfully edited a Center position.



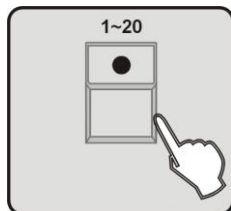
10. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

**NOTE:** If you press different buttons in step 3 and 9, the center position you set in step 3 will cover the one in step 9.

## 4.20 Program an Override



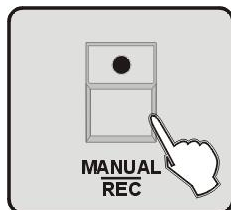
1. Enter Program mode.
2. Press **FIXTURE** button.



3. Press the number button **1~20** to select the concerned fixtures to be programmed.



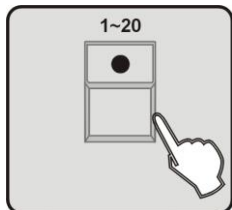
4. Use **FADERS1-24** and 4 Jog wheels to adjust the selected fixture to your desired effect.



5. Press **MANUAL/REC** Button, at this moment, all LEDs on **CUE**, **OVERVERRIDE**, **CENTER**, **FIXTURE GROUP**, **PRESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.

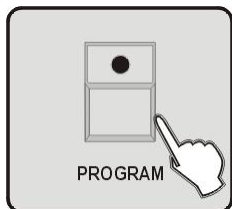


6. Press **OVERRIDE** button.



7. Press the number button **1~20** to select the to be stored Override number, all LEDs flicker for 3 times to indicate that you have successfully preset an Override effect.

8. Repeat steps 2-7 to program other Override effects.



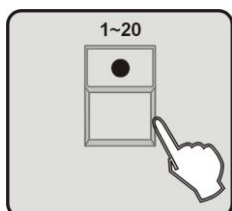
9. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

#### 4.21 Override Editing

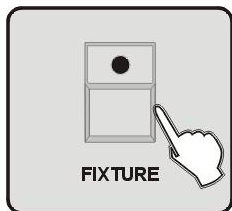


1. Enter Program mode.

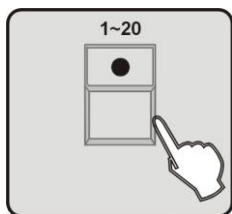
2. Press **OVERRIDE** button.



3. Press number Button **1~20** to select the Override number to be edited.



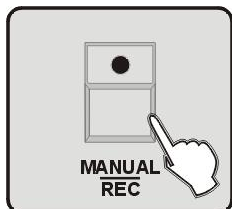
4. Press **FIXTURE** button.



5. Press the number button **1~20** to select the concerned fixtures to be edited with Override.



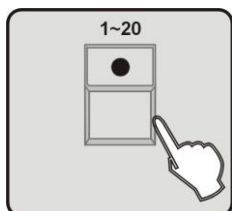
6. Use **FADERS1-24** and 4 Jog wheels to adjust the selected fixture to your desired effect.



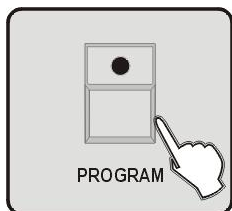
7. Press **MANUAL/REC** button, at this moment, all LEDs on **CUE**, **VERRIDE**, **CENTER**, **FIXTURE GROUP**, **RESET**, **CHASE**, **BANK**, **BLACKOUT** flicker at the same time.



8. Press **VERRIDE** button.



9. Press the number button **1~20** to select the Override number you chose in step 2, all LEDs flicker for 3 times to indicate that you have successfully edited an Override effect.

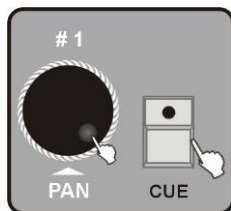


10. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

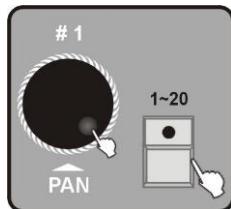
**Note:** If you press different buttons in step 3 and 9, the Override you set in step 3 will cover

the one in step 9.

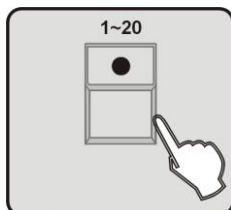
## 4.22 Program a CUE



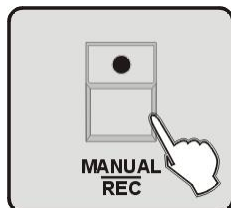
1. Enter Program mode.
2. Press **CUE** button use jog wheel **#1** to select the page number.



3. Press the number button **1~20** to select the to be stored CUE number, at this moment, all LEDs on CHASE are lit and all LEDs on the number button which have saved CHASE will flicker. Turn jog wheel **#1** should change the page number.

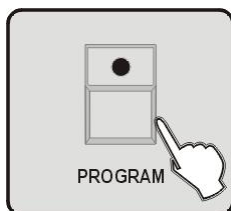


4. Press the number button **1~20** to select the Chase number which is to be stored to CUE, the LEDs on the chosen number buttons will be lit.



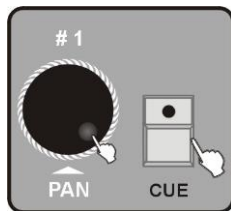
5. Press **MANUAL/REC** button, all LEDs flicker for 3 times to indicate that you have successfully stored a CUE.

6. Repeat steps 4-6 to store more CUEs.



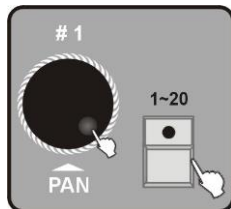
7. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

## 4.23 CUE Editing

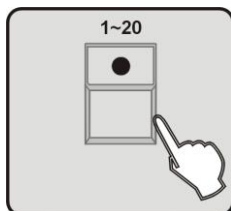


1. Enter Program mode.

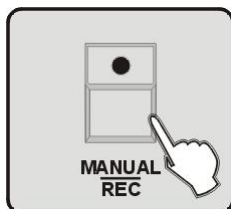
2. Press **CUE** button, use jog wheel **#1** to select the page number.



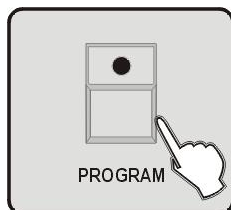
3. Press the number button **1~20**, to select the to be edited CUE number, at this moment, all LEDs on CHASE are lit and all LEDs on the number button which have saved CHASE will flicker. Turn jog wheel **#1** should change the page number.



4. Press the number button to edit the Chase in CUE.

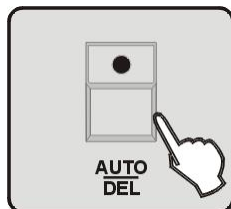


5. Press **MANUAL/REC** button, all LEDs flicker for 3 times to indicate that you have successfully edited a CUE.

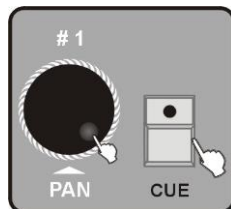


6. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

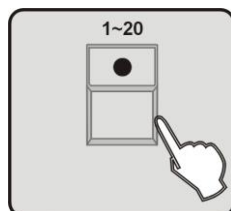
#### 4.24 Delete a CUE



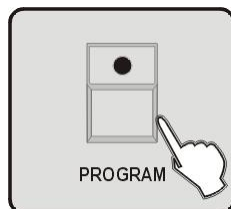
1. Enter Program mode.
2. Press and hold **AUTO/DEL** button.



3. Press **CUE** use jog wheel **#1** to select the page number.



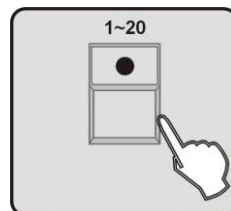
4. Then press the number button **1~20**, all LEDs flicker for 3 times to indicate that you have successfully deleted a CUE.



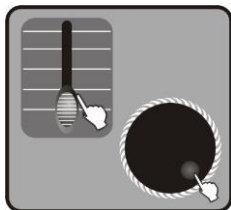
5. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

#### 4.25 Store a Blackout Scene.

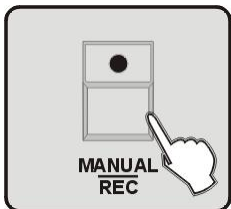
Blackout Scene is a special scene of Blackout mode set in By Black Scene.



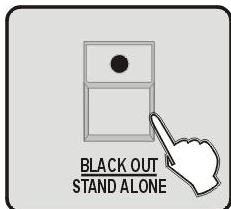
1. Enter Program mode.
2. Press the number button **1~20** to select one or more fixtures.



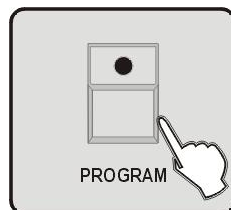
3. Move **FADERS1-24** to vary the channel outputs or use Jog wheel **#1** 、 **#2** to adjust PAN and PAN FINE or use Jog wheel **#3** , **#4** to adjust TILT、 TILT FINE.



4. Once the effect is adjusted, press **MANUAL/REC** button to store, at this moment, all LEDs on **CUE**、 **OVERRIDE**、 **CENTER**、 **FIXTURE GROUP**、 **PRESET**、 **CHASE**、 **BANK**、 **BLACKOUT** flicker at the same time.



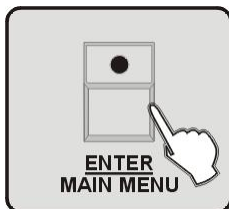
5. Press **BLACK OUT/STAND ALONE** button, all LEDs flicker for 3 times to indicate that you have successfully stored a Black Scene.



6. Press **PROGRAM** button for 3 seconds to exit Program mode, the LED goes out indicating this operation.

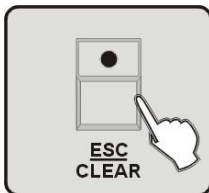
## 5. Setting Menu

### Entering the Menu



1. Enter Program mode.
2. Press **ENTER/MAIN MENU** Button, to enter LCD screen main menu.

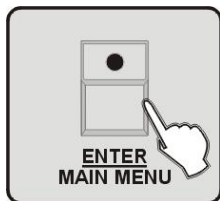
## Exiting from the Menu



Press **ESC/CLEAR** button to exit from the last menu until exit from the Menu totally.

The main Menu including the following 17 settings:

1. Create a new Fixture Profile
2. Modify a Fixture Profile
3. Delete a Fixture Profile
4. Patch a Fixture
5. Reverse channel setup
6. Fade mode setup
7. Blackout mode select
8. .Midi channel select
9. Chase run by inside/outside time
10. Auto remote address
11. Read SD card
12. Write SD card
13. Modify Password
14. Enable Password
15. Erase all memory
16. audio input range adjust
17. Channel value display mode



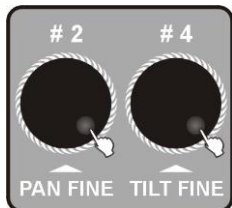
You can select the Menu by Jog wheels and press **ENTER/MAIN MENU** to enter sub Menus for editing.

## 5.1 Create a new Fixture Profile

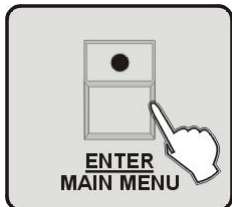


1. Enter Menu Mode.

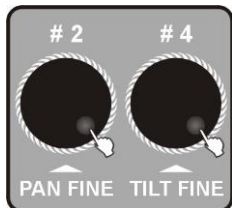
2. Turn jog wheel **#1** up to when the **01.Create a new Fixture** is shown on the monitor, press **ENTER/MAIN MENU** Button to enter.



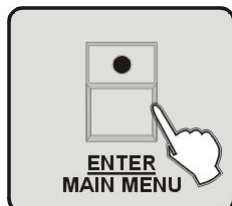
3. Use Jog wheel **#2** and **#4** to change the name of the FIXTURE. Turn Jog wheel **#2** to change the position of the cursor, and Jog wheel **#4** should be used to change the trait of the channel or character. The amount of the letters must be below 26, it can be include ten numbers, one “—”, the length of the Fixture name should be below 16, and it must be begin with letter.



4. Press **ENTER/MAIN MENU** button to change the trait of the channel.



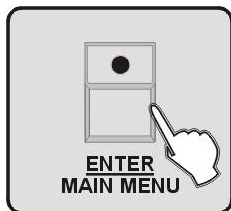
5. Use Jog wheel **#2** and **#4** to change the trait. Turn Jog wheel **#2** to change the position of the cursor, and Jog wheel **#4** to change the trait of the channel or characters.



6. Press **ENTER/MAIN MENU** to enter

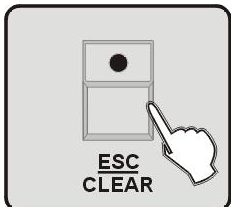


7. Use jog wheel **#2** to select profile (ACME LIBRARY or OTHER LIBRARY) you want to store the fixture profile.



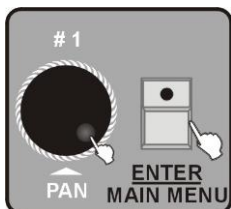
8. Press **ENTER/MAIN MENU** button, all LEDs flicker for 3 times to indicate that you have successfully edited a FIXTURE PROFILE.

9. Repeat steps 3-4 to build 50 FIXTURE PROFILE mas.



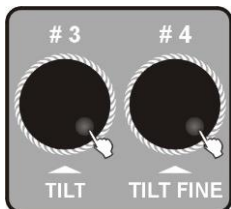
10. Back to the last menu please press **ESC/CLEAR** button.

## 5.2 Modify a Fixture Profile

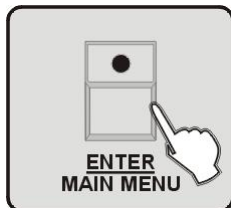


1. Enter Menu Mode.

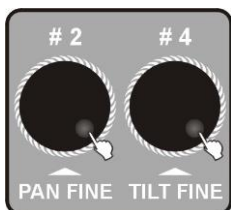
2. Turn jog wheel **#1** up to when the **02.Modif a Fixture** is shown on the monitor, press **ENTER/MAIN MENU** Button to enter.



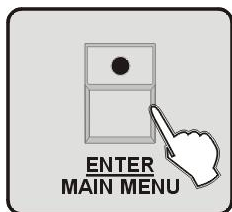
3. Use Jog wheel **#3** to chose the bank of other manufacturers, and Jog wheel **#4** to chose the ACME's.



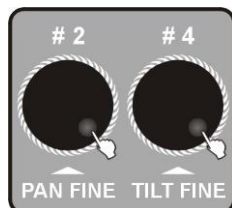
4. Press **ENTER/MAIN MENU** button to enter.



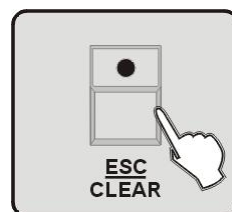
5. Use Jog wheel **#2** and **#4** to change the name of the FIXTURE. Turn Jog wheel **#2** to change the position of the cursor, and Jog wheel **#4** should change the trait of the channel. The amount of the letters must be below 26, it can be include ten numbers, one "—", the length of the Fixture name should be below 16, and it must be begin with letters.



6. Press **ENTER/MAIN MENU** Button to change the trait of the channel.



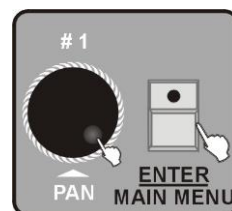
7. Use Jog wheel **#2** and **#4** to change the name of the FIXTURE. Turn Jog wheel **#2** to change the position of the cursor, and Jog wheel **#4** should change the trait of the channel



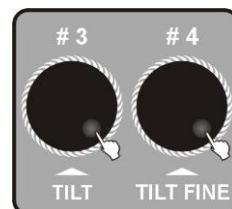
8. Repeat 3-7 to change other FIXTURE PROFILE.

9. Back to the last menu please press **ESC/CLEAR** button.

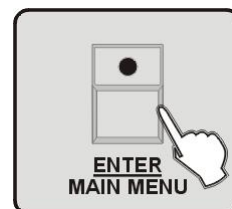
### 5.3 Delete a Fixture Profile



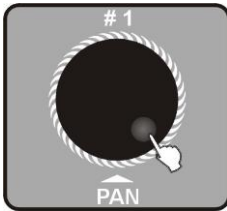
1. Enter Menu Mode.  
2. Turn jog wheel **#1** up to when the **03.Delete a Fixture** is shown on the monitor press **ENTER/MAIN MENU** Button to enter.



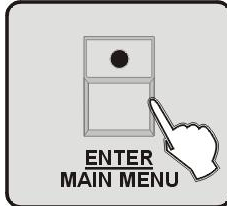
3. Use Jog wheel **#3** to delete the profile of other manufacturers, and Jog wheel **#4** to delete the ACME's.



4. Press **ENTER/MAIN MENU** Button to enter and LCD will show "NO".

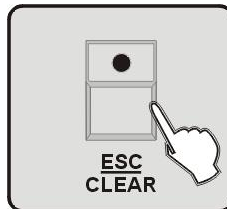


5. Turn Jog wheel **#1** to chose “Yes”.



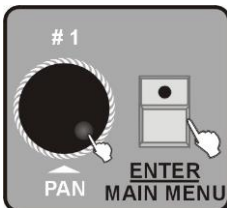
6. Press **ENTER/MAIN MENU** Button, all LEDs shaking for 3 times means success.

7. Repeat 3-6 to delete other FIXTURE PROFILE.



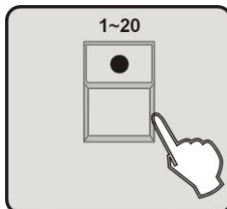
8. Back to the last menu please press **ESC/CLEAR** button.

#### 5.4 Patch a Fixture

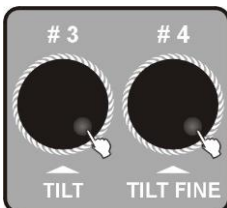


1. Enter Menu Mode.

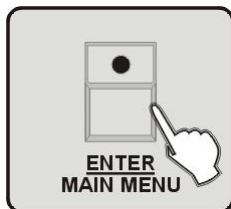
2. Turn Jog wheel **#1** up to when the **04. Patch a Fixture** is shown on the monitor Press **ENTER/MAIN MENU** Button to enter.



3. Press number Button **1~20** to chose the fixture which needs to patch.

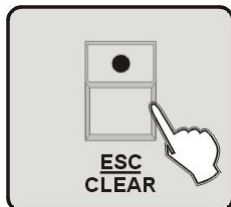


4. Turn Jog wheel **#3** to chose the profile of other manufacturers and Jog wheel **#4** to chose ACME's.



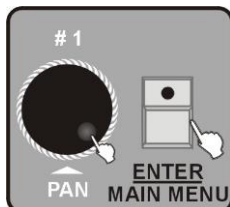
5. Press **ENTER/MAIN MENU** Button to enter, all the LEDs strobe for 3 times.

6. Repeat 3-5 to patch all the fixtures.



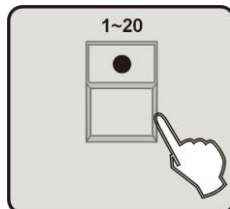
7. Back to the last menu please press **ESC/CLEAR** button.

### 5.5 Reverse channel setup

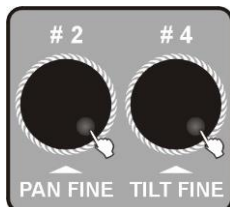


1. Enter Menu Mode.

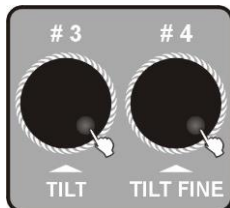
2. Turn Jog wheel **#1** up to when the **05. Reverse channel setup** is shown on the monitor press **ENTER/MAIN MENU** Button to enter.



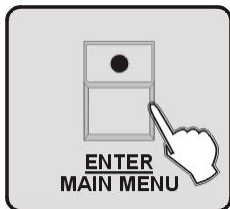
3. Press number Button **1-20** to chose the fixture which needs to reverse.



4. Turn Jog wheel **#2** to change the position of the cursor, and Jog wheel **#4** used to reverse the channel.

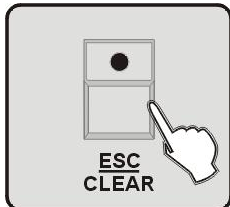


5. Turn Jog wheel **#3** to chose the channel, Jog wheel **#4** to reverse.



6. Press **ENTER/MAIN MENU** Button to enter, all the LEDs will shake for 3 times.

7. Repeat 3-6 to reverse other channels.



8. Back to the last menu please press **ESC/CLEAR** button.

## 5.6 Fade mode setup

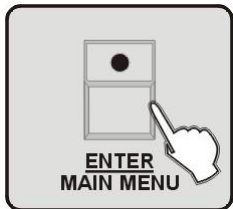


1. Enter Menu Mode.

2. Turn Jog wheel **#1** up to when the **06. Fade mode setup** is shown on the monitor, press **ENTER/MAIN MENU** button to enter.



3. Turn Jog wheel **#2** to select **only pan/tilt** or **all channel**.



4. Press **ENTER/MAIN MENU** Button to enter, all the LEDs will shake for 3 times, then back to the last menu.

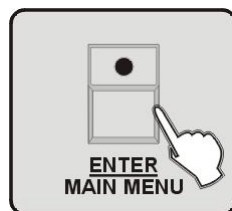
## 5.7 Blackout mode select



1. Enter Menu Mode.
2. Turn Jog wheel #1 up to when the 07. Blackout mode select is shown on the monitor press ENTER/MAIN MENU button to enter.

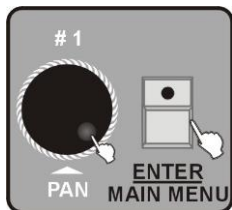


3. Turn Jog wheel #2 to chose Stand by or Pan/tilt by center or Blackout scene.



4. Press ENTER/MAIN MENU Button to enter, all the LEDs will shake for 3 times, then back to the last menu.

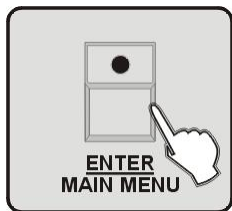
## 5.8 Midi channel select



1. Enter Menu Mode.
2. Use Jog wheel #1 up to when the 08.Midi channel select is shown on the monitor Press ENTER/MAINMENU Button to enter.



3. Use Jog wheel #2 to chose the channel of MIDI (0-16) , it's enlarge mode when the value of the MIDI channel is 0, so MIDI can receive the information of 1-16 channels.



4. Press ENTER/MAIN MENU Button to enter, all the LEDs will shake for 3 times, then back to the last menu.

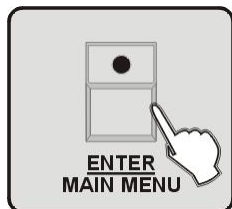
## 5.9 Chase run by inside/outside time



1. Enter Menu Mode.
2. Turn jog wheel #1 up to when the **09.Chase run by inside/outside time** is shown on the monitor, Press **ENTER/MAINMENU** Button to enter



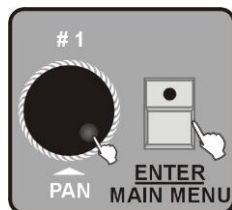
3. Use Jog wheel #2 to chose **Chase run by inside time** or **Chase run by outside time**



4. Press **ENTER/MAIN MENU** Button to enter, all the LEDs will shake for 3 times, then back to the last menu.

## 5.10 Auto remote address

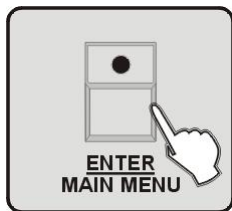
This function is used only for the fixtures which can be addressed long-distance, ensure the unit match this requirements before operation, or it will be of no effect .



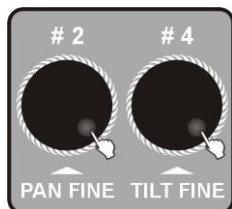
1. Enter Menu Mode.
2. Turn Jog wheel #1 up to when the **10. Auto remote address** is shown on the monitor Press **ENTER/MAIN MENU** Button to enter



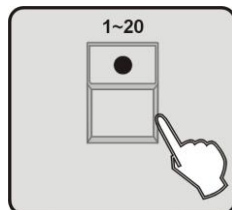
3. Use Jog wheel #2 to select **Yes** (enter) or **NO** (quit to the main menu) .



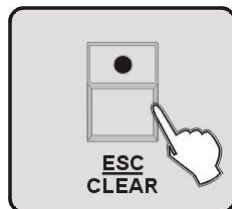
4. Press **ENTER/MAIN MENU** Button to set the address of the fixture, wait for 3 seconds, so the fixture can receive the signal of the controller and move all the motors to their “home” position.



5. After 3 seconds, use jog wheel **#2** to select the fixtures of the first group, and jog wheel **#4** to select the fixtures of the second group. When you turn the jog wheel **#2** or **#4**, the cursor will switch between the first and second group. The fixtures of this two group will be selected in turn, and the unit will act differently when it be selected.



6. Press number Button **1-20**, all the LEDs will shake 3 times, the address of the corresponding fixture will show on the LCD display, it means the fixture’s amount of the channel is as same as the corresponding number button’s.



7. Repeat 5-6 to set the address of other fixtures.

8. Back to the last menu, please press **ESC/CLEAR** Button.

## 5.11 Read SD card

If you have stored program files (??????.PRO) or bank files (??????.CIF) in the directory of DIR2420 which under the root directory of SD card, then you can read them out by this function. And you have to patch the profile in order to use it normally. Every time read the SD card, please don’t move it, or the card or the files will be damaged. The format of the SD card should be FAT, else you have to convert it to FAT by PC, and copy it to SD card.

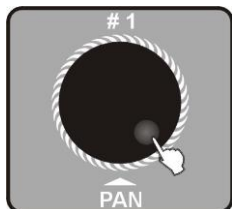


1. Enter Menu Mode.

2. Turn Jog wheel **#1** up to when the **11. Read SD card** is shown on the monitor Press **ENTER/MAIN MENU** Button to enter.



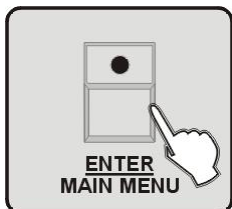
3. Use Jog wheel **#1** to read the program file **01. Load program file** or profile file **02. Load a fixture profile**. Press **ENTER/MAIN MENU** Button to enter.



4. The list of the program/profile files will show on the LCD, turn jog wheel **#1** to select the file name. The amount of the files consider to the amount of the program or profile files which you saved under the directory of DIR2420 in the SD card.

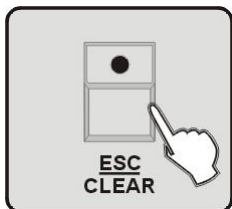


5. Use Jog wheel **#2** to select **Yes/no**.



6. Press **ENTER/MAIN MENU** Button to enter.

7. After read up the file, the LCD will hint to complete. Repeat 3-7 to read up other files.



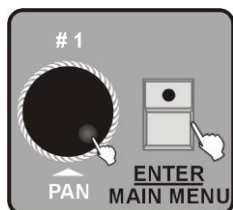
8. Back to the last menu, please press **ESC/CLEAR** Button.

9. Press **ESC/CLEAR** Button 2 times to back to the main menu or 3 times to exit the menu.

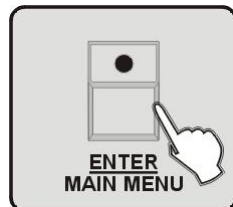
**NOTE:** Please backup the programs before you load program file, or the program file you load will replace all the program in the controller. The controller should store finite bank files, except the current bank files, you can store 50 include create by the controller immediacy more at best. So please store the files in the SD card or computer, and read up the files which you have to use only.

## 5.12 Write SD card

You can store the finished program to the directory of DIR2420 which under the root directory of SD card. Every time read the SD card, please don't move it, or the card or the files will be damaged. The format of the SD card should be FAT, else you have to convert it to FAT by PC, and copy it to SD card.



1. Enter Menu Mode.
2. Turn Jog wheel **#1** up to when the **12. Write SD card** is shown on the monitor Press **ENTER/MAIN MENU** Button to enter.



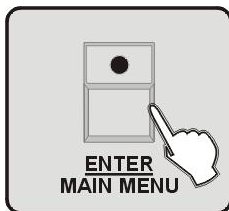
3. LCD will show **01.Save program file**, Press **ENTER/MAINMENU** Button to enter.



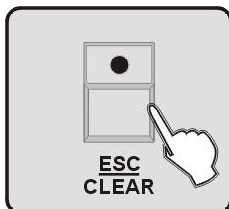
4. Use Jog wheel **#2** to select **Yes/no** Press **ENTER/MAINMENU** Button to enter, **Yes** to save, **No** to exit.



5. Select **Yes**, then LCD will hint to input file name. Use Jog wheel **#4** to select the file name and move the cursor, you can input as much as 8 characters.

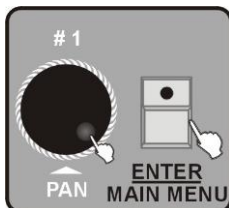


6. Press **ENTER/MAIN MENU** Button to store, it will be finish after about 2 minutes.

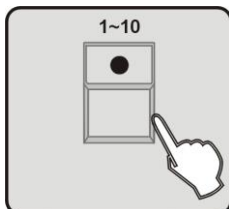


7. Press **ESC/CLEAR** Button to back to the last menu, 2 times to back to the main menu.

### 5.13 Modify Password



1. Enter Menu Mode.
2. Turn Jog wheel **#1** up to when the **13. Modify Passwords** shown on the monitor press **ENTER/MAIN MENU** button to enter.
3. Use Jog wheel **#1** to select **power on password** or **memory protect password**. Press **ENTER/MAIN MENU** Button to enter.

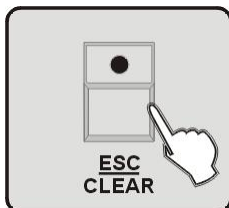


4. Use number Button **1~10** to input 6 digit old password(**10** equal to number 0), if the password is wrong , it will hint to input continually.



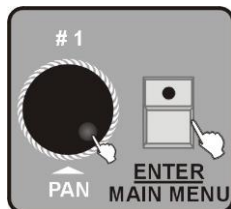
5. It will hint to input new 6 digit password after get exact password. You have to input the same password twice, it will back to the last menu automatically after change the password successfully.

6. Use Jog wheel **#2** to select **Power on password** or **memory protect password**.

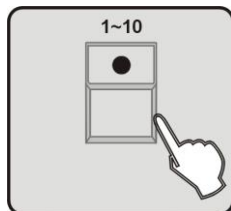


7. Press **ESC/CLEAR** Button to back to the last menu, and again to the main menu.

## 5.14 Enable Password



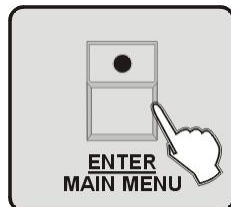
1. Enter Menu Mode.
2. Turn Jog wheel #1 up to when the 14. Enable password shown on the monitor press ENTER/MAINMENU button to enter.
3. Use Jog wheel #1 to select use power password or use memory protect password, press ENTER/MAIN MENU button to enter.



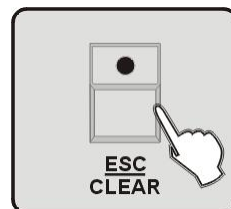
4. The LCD hint to input password, use number button 1-10 to input 6 digit password.



5. Use Jog wheel #2 to select Enable or Disable.

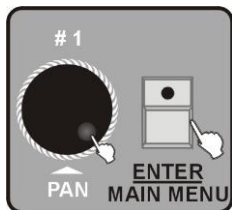


6. Press ENTER/MAIN MENU Button to enter, all the LEDs shake for 3 times indicate that you have set successfully.

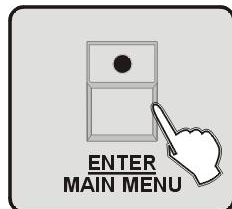


7. Press ESC/CLEAR Button to back to the last menu.

## 5.15 Erase all memory



1. Enter Menu Mode.
2. Turn Jog wheel **#1** up to when the **15. Erase all memory** shown on the monitor press **ENTER/MAIN MENU** button to enter.



3. The LCD hint to input 6 digit memory protect password. Input the exact password, and Press **ENTER/MAIN MENU** Button to delete the memory information. You have to input the password again when it's wrong.



4. Use Jog wheel **#2** to select **Yes** (delete and back to the last menu) or **No** (back to the last menu).

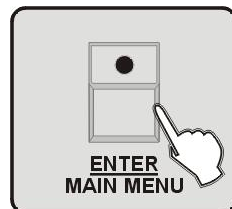
## 5.16 Audio input range adjust



1. Enter Menu Mode.
2. Turn Jog wheel **#1** up to when **16. Audio input range adjust** shown on the monitor Press **ENTER/MAIN MENU** Button top enter.



3. Use jog wheel **#2** to choose the sensitivity of the sound (0-100). The bigger the number the higher the sensibility. Then you can test the sensibility.



4. Press **ENTER/MAIN MENU** Button to store and back to the main menu, back to the main menu without any change Press **ESC/CLEAR** Button.

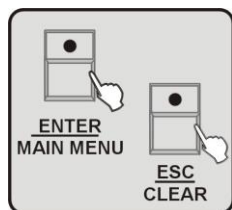
## 5.17 Channel value display mode



1. Enter Menu Mode.
2. Turn Jog wheel #1 up to when 17.Channel value display mode shown on the monitor press ENTER/MAIN MENU Button to enter.

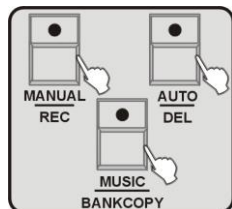


3. Use Jog wheel #2 to select 0-255 or 0-100



4. Press ENTER/MAIN MENU Button to store and back to the main menu back to the main menu without any change Press ESC/CLEAR Button.

## 6. Function Mode

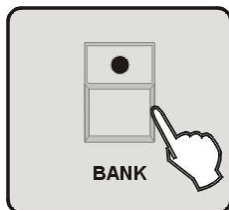


Press MANUAL/REC, MUSIC/BANK COPY, AUTO/DEL Button to enter into manual mode or sound mode or auto mode.

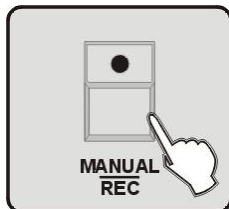
### 6.1 Running scene

Scene can be open solely in the manual mode, but in the sound or auto mode it should circulate with some BANK.

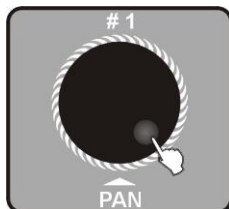
## 1. Manual Mode



1. Press **BANK** Button.



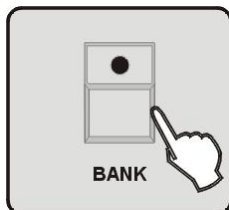
2. Press **MANUAL/REC** to into manual mode. The LED of **MANUAL/REC** will be on.



3. Use Jog wheel **#1** to select the bank you anticipant.

4. Press number Button to open the scene.

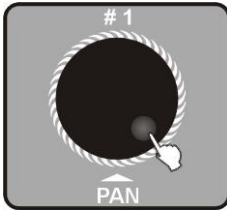
## 2. Sound Mode



1. Press **BANK** Button.

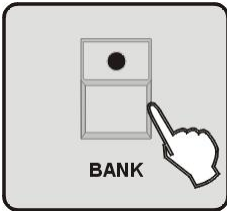


2. Press **MUSIC/BANK COPY** Button to into sound mode, the LED of **MUSIC/BANK COPY** will be on



3. Use Jog wheel **#1** to select the bank you need, then the scene in the bank will run with music. When it is running the scene with Movements in sound activation mode , it will process repeatedly as per the built in movement Loop time then enter next step.

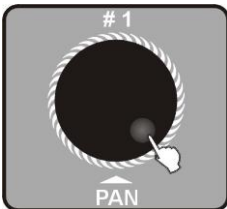
### 3. Auto Mode



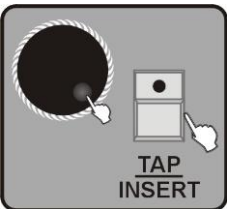
1. Press **BANK** Button.



2. Press **AUTO/DEL** Button to enter auto mode, the LED of **AUTO/DEL** will on.



3. Use Jog wheel **#1** to select the bank you anticipant.



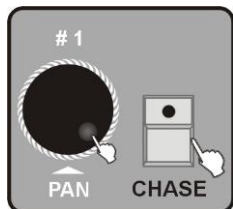
4. Use Jog wheel **#3** or **#4** to adjust current **FADE TIME** or **WAIT TIME**, or use **TAP/INSERT** Button to adjust the speed of the scene.

**NOTE:** When you press **TAP/INSERT** to adjust the speed, adjusting the running speed of the scene is based on the interval of pressing the Press **TAP /INSERT** Button twice which no more than 10 minutes.

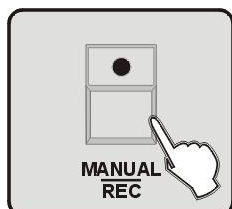
## 6.2 Run Program

Please finish the program and scene before running the program.

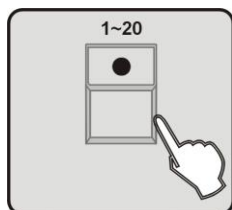
### 1. Auto Mode



1. Press **CHASE** Button, use jog wheel **#1** to select chase page.



2. Press **MANUAL/REC** to enter manual mode, the LED of **MANUAL/REC** will be on.

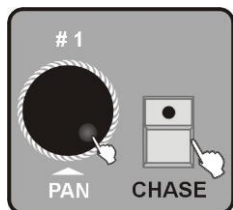


3. Press number Button **1-20** to select the program you anticipate..

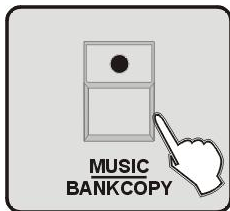


4. Use Jog wheel **#2** to run the last or next step.

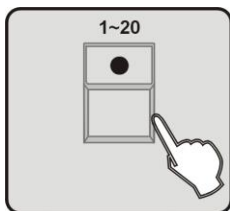
### 2. Sound Mode



1. Press **CHASE** Button, use jog wheel **#1** to select chase page.

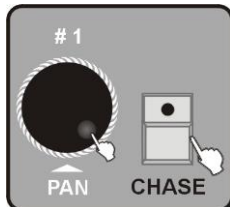


2. Press **MUSIC/BANK COPY** Button to enter sound mode, the LED of **MUSIC/BANK COPY** will be on.

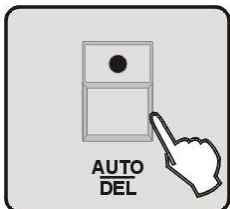


3. Press number Button **1~20** to select the program you anticipate, you can choose much more than one CHASE, and they will run with the music on the train that you select them. When it is running the scene with Movements in sound activation mode, it will process repeatedly as per the built in movement Loop time then enter next step.

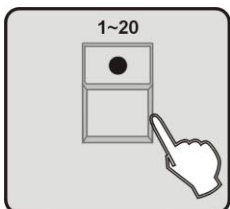
### 3. Auto Mode



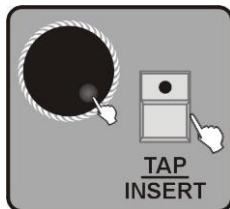
1. Press **CHASE** Button, use jog wheel **#1** to select chase page.



2. Press **AUTO/DEL** Button to enter auto mode, the LED of **AUTO/DEL** will be on.



3. Press number Button **1~20** to select the program you anticipate. You can choose much more than one CHASE, and they will run on the train that you select them.

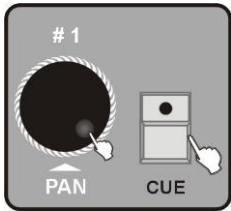


4. Setting to **CHASE RUN BY INSIDE TIME**, then it will run as the FADE TIME or FADE TIME of the step that you set when store the chase. Setting to **CHASE RUN BY OUTSIDE TIME**, then it will run as the FADE TIME or FADE TIME you set last time, you can also adjust by turn the joy wheel **#3** or **#4**, or use **TAP/INSERT** Button to adjust the speed.

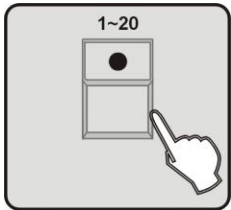
**NOTE:** When you press **TAP/INSERT** to adjust the speed, adjusting the running speed of the scene is based on the interval of pressing the Press **TAP /INSERT** Button twice which no more than 10 minutes.

**6.3 Running CUE**

CUE can only run in manual mode.



1. Press **CUE** Button, use jog wheel **#1** to select chase page.

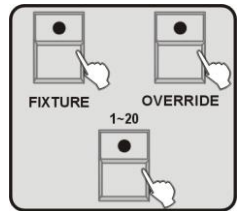


2. Press number Button **1~20** to select the CUE you anticipant. You can choose much more than one CUE and they will run on the train that you select them.

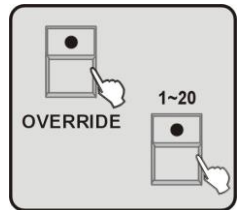
**NOTE:** If a CUE includes several chases with different run time, we regard the run time of the chase with the longest run time as the CUE's longest run time and the chase with short run time will repeat automatically.

**6.4 Over control**

Using over control to change the effect specially, you can operate some units solely when the CUE or CHASE or BANK running. There are two ways to operate:



A. When CUE or CHASE or BANK running, press **OVERRIDE** button, Then press **FIXTURE** button, and use number button **1~20** to choose light, so you can push the handspike to change the effect.

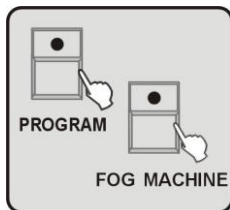


B. When CUE or CHASE or BANK running, press **OVERRIDE** button, then use **1~20** button to open the effect that be programmed.

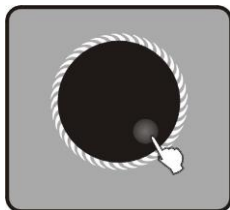
## 7. Fog Machine operation

7.1 Set up another 481CH DMX signal to control the fog machine(keep out the 482CH).

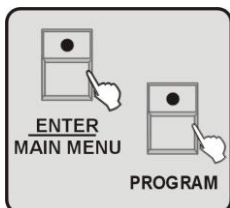
7.2 Fog Machine operation:



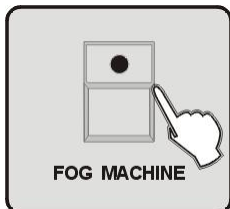
1. Connection: connect the fog machine with the DMX information.
2. Setting: Keep the power on , hold the **FOG MACHINE** button the press **PROGRAM** button to enter the output menu,



Use **#2** or **#3** or **#4** to setup duration set (1-100S) or interval set(0-200S) or volume out(0-255).



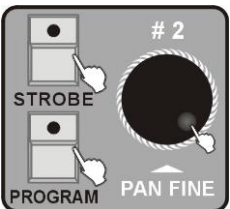
Press **ENTER/MAIN MENU** button to store Press **PROGRAM** button to exit



3. Control: The fog machine work as it's set in normal. Press **FOG MACHINE** button to output maximal fog (set 481CH output to be 255).

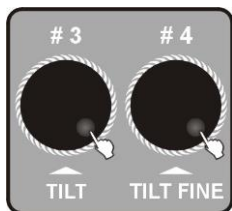
## 8. Strobe light operation

8.1 Set up 483~484CH address in the DMX signal to control the strobe light channel

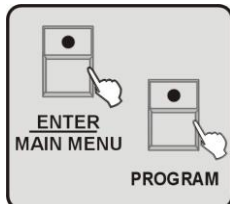


8.2 Operation

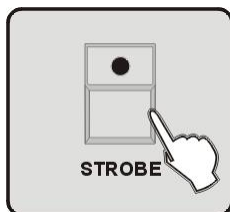
1. Connection : connect the strobe light with the DMX information
2. Setting: keep the power on, hold the **STROBE** button press **PROGRAM** button to enter setting menu, Use jog wheel **#2** to set the strobe speed of the simulate strobe light.



Use jog wheel **#3** or **#4** to set the value of DIMMER (0-255) or SPEED (0-255) that out of the strobe light.



Press **ENTER/MAIN MENU** button to store, press **PROGRAM** button to exit.



3. Control: Press **STROBE** button then the controller will control the DMX strobe light with the value of the DMX be set, and the light strobe in the speed that be set to the simulate strobe light.

### MIDI function list:

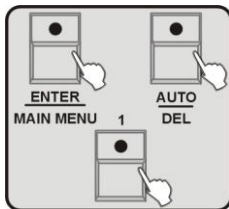
MIDI Channel = 1~15

	note number	function
Bank1	00-19	Turn on or off the scene 1 ~ 20 of Bank 1
Bank2	20-39	Turn on or off the scene 1 ~ 20 of Bank 2
Bank3	40-59	Turn on or off the scene 1 ~ 20 of Bank 3
Bank4	60-79	Turn on or off the scene 1 ~ 20 of Bank 4
Chase	80-99	Turn on or off Chase 1 ~ 20
CUE	100-119	Turn on or off CUE 1~20
	120~125	No function
	126	Blackout

## MIDI Channel = 0

	MIDI Channel	note number	command
Bank 1 - Bank 4	MIDI 1	00 ~ 79	Turn on or turn off scenes from Bank 1 ~ 4
	MIDI 1	80-99	Turn on or off Chase 1 ~ 20
	MIDI 1	100-119	Turn on or off CUE 1~20
	MIDI 1	120~125	No function
	MIDI 1	126	Blackout
Bank 5 - Bank 8	MIDI 2	00 ~ 79	Turn on or turn off scenes from Bank 5 ~ 8
	MIDI 1	80-99	Turn on or off Chase 21 ~ 40
	MIDI 1	100-119	Turn on or off CUE 21~40
	MIDI 1	120~127	No function
Bank 9 - Bank 12	MIDI 3	00 ~ 79	Turn on or turn off scenes from Bank 9 ~ 12
	MIDI 1	80-99	Turn on or off Chase 41 ~ 60
	MIDI 1	100-119	Turn on or off CUE4 1~60
	MIDI 1	120~127	No function
Bank 13 - Bank 16	MIDI 4	00 ~ 79	Turn on or turn off scenes from Bank 13 ~ 16
Bank 17 - Bank 20	MIDI 5	00 ~ 79	Turn on or turn off scenes from Bank 17 ~ 20
Bank 21 - Bank 24	MIDI 6	00 ~ 79	Turn on or turn off scenes from Bank 21 ~ 24
Bank 25 - Bank 28	MIDI 7	00 ~ 79	Turn on or turn off scenes from Bank 15 ~ 28
Bank 29 - Bank 32	MIDI 8	00 ~ 79	Turn on or turn off scenes from Bank 19 ~ 32
Bank 33 - Bank 36	MIDI 9	00 ~ 79	Turn on or turn off scenes from Bank 33 ~ 36
Bank 37 - Bank 40	MIDI 10	00 ~ 79	Turn on or turn off scenes from Bank 37 ~ 40
Bank 41 - Bank 44	MIDI 11	00 ~ 79	Turn on or turn off scenes from Bank 41 ~ 44
Bank 45 - Bank 48	MIDI 12	00 ~ 79	Turn on or turn off scenes from Bank 45 ~ 48
Bank 49 - Bank 52	MIDI 13	00 ~ 79	Turn on or turn off scenes from Bank 49 ~ 52
Bank 53 - Bank 56	MIDI 14	00 ~ 79	Turn on or turn off scenes from Bank 53 ~ 56
Bank 57 - Bank 60	MIDI 15	00 ~ 79	Turn on or turn off scenes from Bank 57 ~ 60

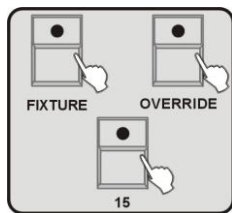
## 9. Super Password



Power off, and Press **Enter/main manual** and **Auto/Del** and **numberButton1** at the same time. Power on afresh, input the super password (888888) as the LCD indicate, then the power password and memory password changed into “111111” and password protect state become DISABLE

Password type	Default password	password protect state
Power on password	111111	Disable
Memory protect password	111111	Disable

## 10. Update the software with SD card



Format the program of the controller , then download the last software and copy to SD: \SUP2420\APP24202.SUP, inset the SD card to the seat, press **FIXTURE** and **OVERRIDE** and number button **15** then Power on afresh until the information show on the LCD display, the controller will test if the SD card stick well and then update the new software, it will cost about 20

seconds, please don't move the SD card or cut the power in order to avoid update frustrated and damage the SD card.

Save the program first, or updating the software may lead the memory program useless. Please refer to “Write SD card” and “Read SD card” to operate.

**NOTICE:** The format of the SD card should be FAD12 or FAD16, but not FAD32 and NTFS, be sure there is no long-name files under the root directory (the amount of the name below 8), the character must be start with letters, and compose with letters or number or underline.

## 11. PROFILE Create notice

### 11.1 PROFILE.CIF(as the profile cyclostyle)

The finished file should use a short name below 8 characters, All use capital letters and suffix with CIF transitorily. (IL-2420 controller nonsupport long file name) or the controller can't read up the profile information.

### 11.2 IM-1200S.CIF is the profile of ACME IM-1200S

### 11.3 Enactment special code, so the controller should distill some channel characteristic to manage.

; ARRT CODE

; D = DIMMER

DIMMER

; P = PAN

PAN

; PF = PAN FINE

PAN FINE in 16 channel mode

; T = TILT

TILT

; TF = TILT FINE

TILT FINE in 1 6 channel mode

; G = ALL GOBO CORRELATION CHANNLES

transfer all gobo correlation channel  
to preset gobo

; C = ALL COLOR CORRELATION CHANNLES

transfer all color correlation channel  
to preset gobo

; N = ETCAETERAS CHANNELS

else channels should be signed N

### 11.4 The channel display message should be no more than 4 capital letters or underline or number, and must be bracket with double quotation marks. Don't replace by blank if shorter 4 character.

You'd better input in English mode, ensure all the input characters are DBC but not SBC case

① "DIM" ;right

② "DIM " ;wrong for the blank

③ "dim" "DIm" ;wrong for the lowercase

④ "DIM" ;wrong for the SBC double quotation marks

### 11.5 Don't change the group which contain",\*\*\*\*\*"

### 11.6 Store the profile that you want to input to the controller under the root directory of SD card.

**EXP:** If SD card is disk F, then the file input route should be "F:\DIR2402\IM-1200S"

## 11.7 The format of SD card should be FAT16 but not FAT32.

IL-2420II PROFILE ;\*\*\*\*\*

VER1.0 ,\*\*\*\*\*

; ADD ACME AND OTHER LIGHT LIBBER SELECT  
DEFAULT ACME; ACME AND OTHER

; FACTORY / MODEL MODEL = MAX 16 CHARACTER  
NAME "AMCE" "IM-1200SZ-24"

; LIGHT CHANNEL NUMBER MAX 24  
CHANNEL 24

DMX ,\*\*\*\*\*

; DMX CHANNELS LIST  
; CHANNEL MAX 24 DON'T REPEAT MAX 2 CHARACTER  
; | ARRT CODE MAX 2 CHARACTER  
; | | DISPLAY INFORMATION MAX 4 CHARACTER DON'T HAVE BLANK  
; | | | CHANNEL FUNCTION  
; | | | |  
1 N "SHUT"; "SHUTTER"  
2 D "DIM"; "DIMMER"  
3 C "C\_C"; "CYAN"  
4 C "C\_M"; "MAGENTA"  
5 C "C\_Y"; "YELLOW"  
6 C "CTC"; "CTC"  
7 C "COLR"; "COLOUR"  
8 G "GOB1"; "GOBO1"  
9 G "R\_G1"; "GOBO 1 ROT"  
10 G "RG1L"; "GOBO 1 ROT LOW"  
11 G "GOB2"; "GOBO2"

```

12 G  "R_G2";  "GOBO 2 ROT"
13 G  "RG2L";  "GOBO 2 ROT LOW"
14 N  "EFFT";   "EFFECT"
15 N  "R_EF";   "ROT EFFECT"
16 N  "IRIS";   "IRIS"
17 N  "FCUS";   "FOCUS"
18 N  "ZOOM";   "ZOOM"
19 P  "PAN";    "PAN"
20 PF "P_F";    "PAN FINE"
21 T  "TILT";   "TILT"
22 TF "T_F";    "TILT FINE"
23 PT "PT_S";   "SPEED P/T"
24 N  "SPED";   "SPEED"

```

```

DMXEND          ,*****
                ,

```

```

END             ,*****
                ,

```

```

; ARRT CODE

```

```

; D  = DIMMER

```

```

; P  = PAN

```

```

; PF = PAN FINE

```

```

; T  = TILT

```

```

; TF = TILT FINE

```

```

; PT = OTHER PAN/TILE CORRELATION CHANNLES

```

```

; G  = ALL GOBO CORRELATION CHANNLES

```

```

; C  = ALL COLOR CORRELATION CHANNLES

```

```

; N  = ETCAETERAS CHANNELS

```

```

;

```

```

;      ARRT CODE                                MAX 2 CHARACTER

```

```

;      |  DISPLAY INFORMATION                    MAX 4 CHARACTER DON'T HAVE BLANK

```

```

;      |  |  CHANNEL FUNCTION

```

```

;      |  |  |

```

```

;      D  "DIM";   "DIMMER"

```

;	N	"SHUT";	"SHUTTER"
;	P	"PAN";	"PAN"
;	PF	"P_F";	"PAN FINE"
;	T	"TILT";	"TILT"
;	TF	"T_F";	"TILT FINE"
;	PT	"PT_S";	"P/T SPEED"
;	G	"GB1";	"GOBO 1"
;	G	"RGB1";	"GOBO 1 ROT"
;	G	"GB2";	"GOBO 2"
;	G	"RGB2";	"GOBO 2 ROT"
;	G	"GB3";	"GOBO 3"
;	G	"ROB3";	"GOBO 3 ROT"
;	C	"COL1";	"COLOUR 1"
;	C	"COL2";	"COLOUR 2"
;	C	"CYAN";	"CYAN"
;	C	"YELO";	"YELLOW"
;	C	"MAGT";	"MAGENTA"
;	C	"CYMM";	"CMY MACRO"
;	N	"FROS";	"FROST"
;	N	"PRSM";	"PRISM"
;	N	"RPRS";	"PRISM ROT"
;	N	"FCUS";	"FOCUS"
;	N	"IRIS";	"IRIS"
;	N	"BANG";	"BEAM ANGLE"
;	N	"CTC";	"CTC"
;	N	"REFT";	"EFFECT ROT"
;	N	"EFFT";	"EFFECT"
;	N	"FRAM";	"FRAME1"
;	N	"F_AG";	"FRAME1ANGLE"
;	PT	"PT_M";	"PT_MACRO"
;	N	"ZOOM";	"ZOOM"
;	N	"SPED";	"SPEED"
;	N	"CONT";	"CONTROL"
;	N	"MACO";	"MACRO"

```
;      N  "F_A";  "FUNCTION A"
;      N  "F_B";  "FUNCTION B"
;      N  "F_C";  "FUNCTION C"
;      N  "F_D";  "FUNCTION D"
;      N  "F_E";  "FUNCTION E"
;      N  "F_F";  "FUNCTION F"
;      N  "F_G";  "FUNCTION G"
;      N  "F_H";  "FUNCTION H"
;      N  "F_I";  "FUNCTION I"
;      N  "F_J";  "FUNCTION J"
;      N  "F_K";  "FUNCTION K"
;      N  "F_L";  "FUNCTION L"
```

**;Note:**

- ;1. All the character must be capitalization except commentary which after";".
- ;2. The finished file should use a short name below 8 characters, all use capital letters and suffix with CIF transitorily, or the controller can't read up the profile information.
- ;3. Don't change the group which contain";\*\*\*\*\*".
- ;4. Display information should be no more than 4 character and without blank.

### **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

Technical Specification

Power Input .....	100-240VAC 50/60Hz
Fuse.....	T1A 250V 5x20mm
DMX Output .....	3 pin female XLR
Stand Alone.....	5 pin male XLR
MIDI Signal .....	5 pin standard interface
Audio Input .....	By built-in microphone or line in
Dimensions.....	483x263x100mm
Weight.....	5.8 kg



**Innovation, Quality, Performance**