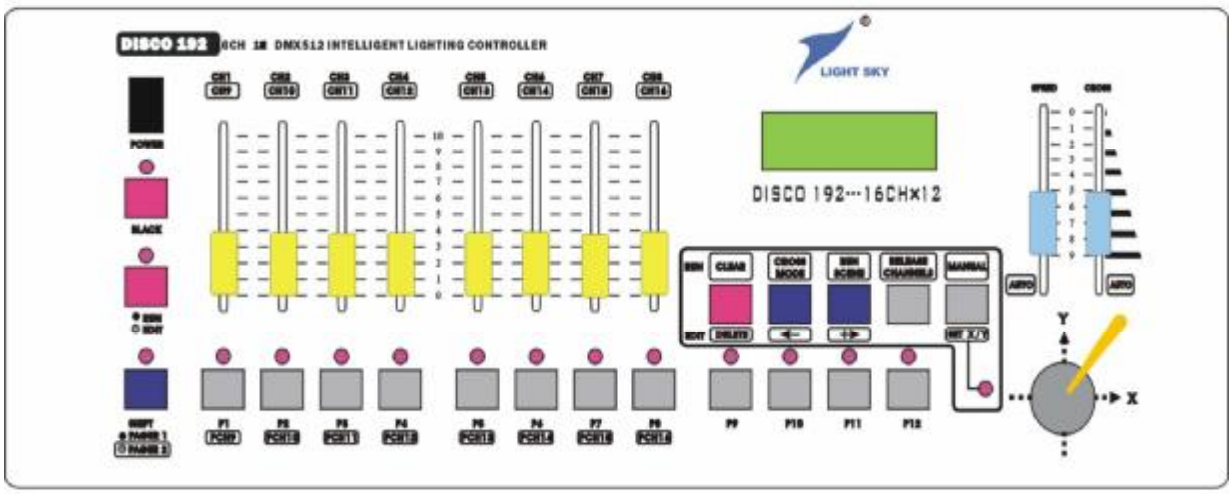
Instruction Manual

192 CHANNELS CONTROLLER

MODEL:DISCO 192



GUANG ZHOU FLY DRAGON LIGHTING EQUIPMENT CO., LTD

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Note: As the company pursues a policy to improve its products all the time, the data contains in this manual are subject to change without notice. The Our Company reserves the right to change the relevant specifications in product improvement. The publisher of this manual shallnot be responsible for the accuracy of the information herein contained or the consequence resulting from such information.

Many thanks to you for your use of FLY DRAGON INTELLIGENT LIGHTING SERIES CONTROLLOR! The console of Disco 192 is used for DMX 512 Signal Output made according to the international standard. Please carefully read the manual before you operate it.

1. PARAMETER INDEX

Standard of Signal Output	DMX 512 International Standard
Number of Total Channel	192 Routes
Number of Controllable Intelligent Lights	12 Sets
Maximum Channels of Controllable lights	16 channels
Number of Programs (field)	12 Fields
Maximum Number of Steps for Program(scene)	40 Steps
Total Steps (scene) of Program	480 Steps
Pausing Time on Scene	0.1-25.5 Second/step
Gradual Changing Speed on Scene	0.1-25.5
Display Screen	LCD Liquid Crystal Display Screen and 16x2 Character
DMX 512 Outlet Interface	Points-Plug & Socket of 3-core XLR
Storing Capacity	Memory Card of L-capacity 128K
Input Voltage	AC220V, 50HZ-9V/1000MA
Dimension	483MM(L)*178MM(W)*80MM(H)*
Weight	3.3 kg

2. POINTS OF ATTENTION FOR SAFETY USE

- The console must be connected to the main grounding.
- To avoid to put on or off the plug of the communication cable as power is on.
- Order for starting machine: Please to first switch on the controllable power of all the electronic lights; then switch on the power of controller otherwise damage the controller.
- Pay attention to damp-proof, water-proof, dust-proof and anti-electrostatic, and periodically service and clean it.

3. PACKING LIST

- Disco 192 Console 1 set
- DMX 512 Power Cable 1 piece
- Manual of Disco 192 1 copy
- Power Transformer 1 piece

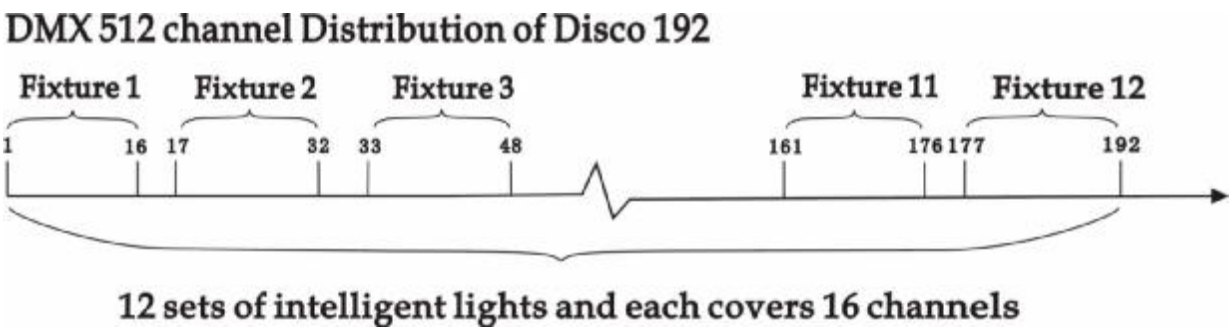
4. COMMUNICATION CABLE

- Use the double-stranded and shielded cable with impedance 120 ohm. If the cable length is more than 200 meters or light number is excessive, the signal booster amplifier should be used, and terminal end resistor (120 ohm/1 w) must be fixed to the last light.
- One core of communication cable must be connected to ground (GND), the second to negative signal while the third one to signal positive. No vice versa, no false welding.
- A single end of communication cable must be connected to earth for shielding.
- The communication cable must be avoided to lay together with the strong voltage cable.

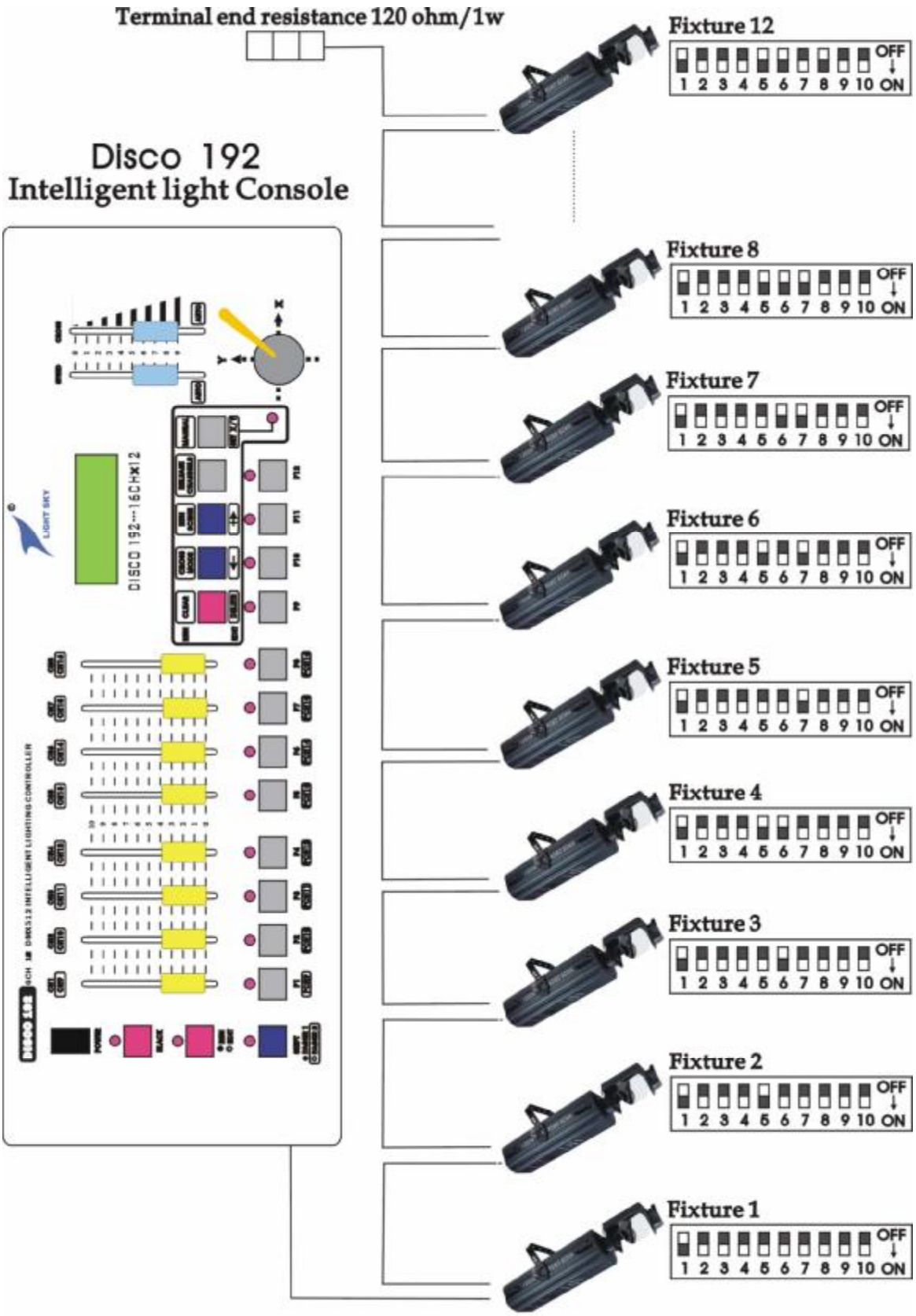
5. DMX 512 ADDRESS DISTRIBUTION

The console of Disco 192 applies 1-192 channel of DMX 512, and is capable to control the intelligent lights within 16 channels. The address distribution is shown as follows:

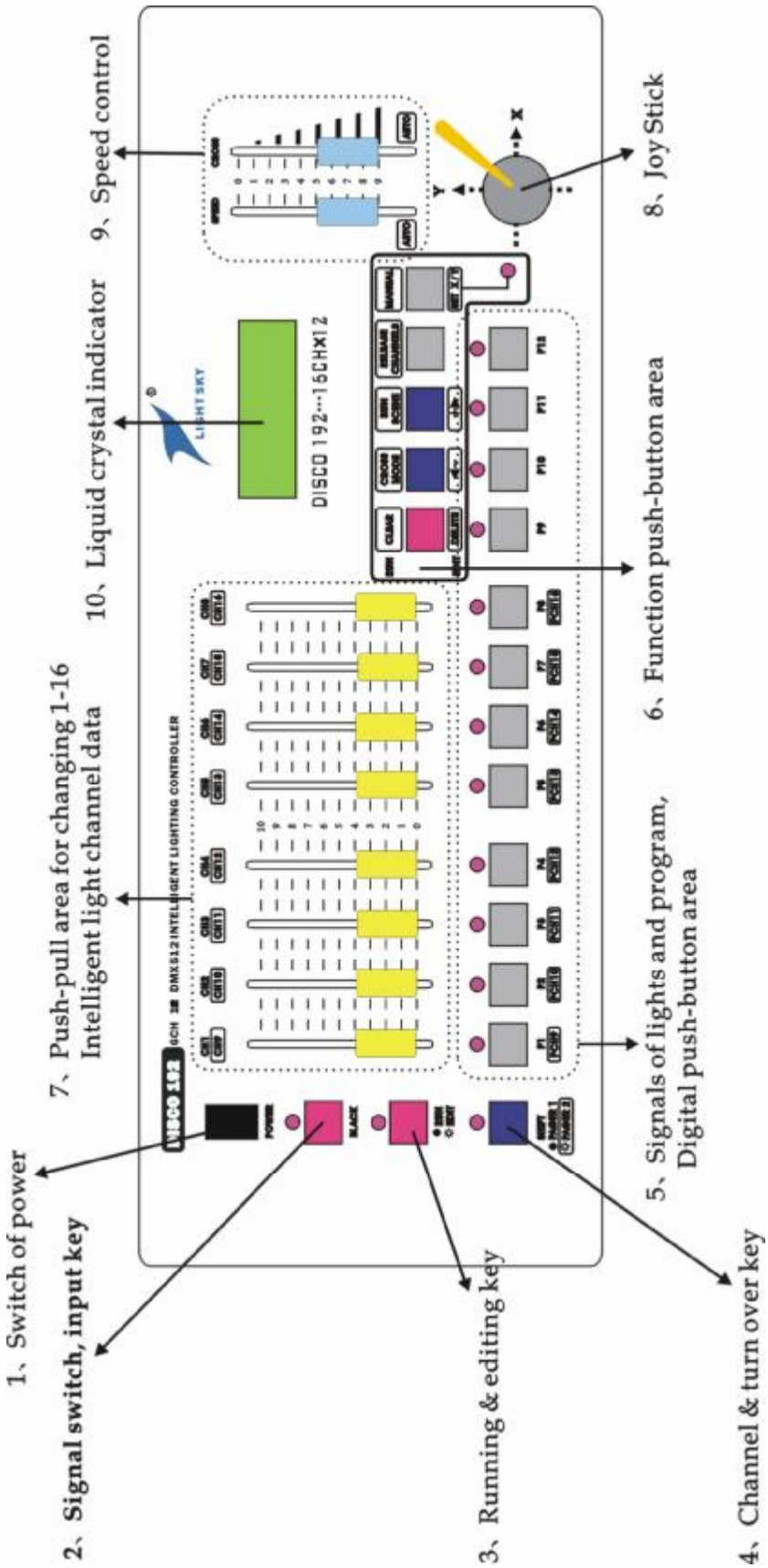
S. № of light	DMX Starting & Ending Add of lights When using Disco 192	
	Decimal System	Switch Position of light Add.
1	1	1 ON
2	17	1,5 ON
3	33	1,6 ON
4	49	1,5,6 ON
5	65	1,7 ON
6	81	1,5,7 ON
7	97	1,6,7 ON
8	113	1,5,6,7 ON
9	129	1,8 ON
10	145	1,5,8 ON
11	161	1,6,8 ON
12	177	1,5,6,8 ON



6. DIAGRAM OF COMMUNICATION CABLE CONNECTING LINE AND PULL－UP CODE OF INTELLIGENT LIGHT ADDRESS CODE



7. INDICATING DIAGRAM OF MASTER BOARD AND FUNCTIONAL DOMAIN



8. DIRECTIONS OF MASTER BOARD FUNCTION DOMAIN

S №	Name	Function Description
1	Power Switch	Power switch is inside the controller. If it is demanded to turn off the power of the whole machine, please pull off the external power plug of transformer.
2	[BLACK] Switch Button of Signal Outlet	Change over to cut-light and running state • LED is on: It is in light cutting state and all the output signal value of DMX is 0. • LED is off: It is in normal output signal state
3	[EDIT/RUN] Edit and Run	Change over into editing or running state • LED is on: It is in edit-programming state. That may edit 12 programs (field) and each field can reach the scene of 40 steps. • LED is off: The program is running.
4	[SHIFT] Turn Over Key of Channel	• When the green indicator is off, it is to show that the channel push-pull area is controlling 1-8CH corresponding data. • When the green indicator is on, it means the channel push-pull area is controlling 9-16CH corresponding data.
5	[P1-P12][PCH9-PCH16] Digital Push-pull Button Area	At a time when in programming state, it is used to select the program (field) № and to choose the controllable light №. When coming into programming state, firstly press the key to select the program (field) № being edited. As press the key area, it means that the light under control has been selected. • When running the program, it is to select the edited program (field) №. • At a time when coordinating to use the function key, it applies to change the selecting state of the corresponding channel or to make a choice of the corresponding light №, and to withdraw the front 12 individual scenes from No 1 program (field), etc.
6	Double-function Push-button Area	Apply it to the programming state. When in program running state, there is a different definition. For the details, please refer to the directions of double-function key.
7	[CH1-8][PCH9-16] Channel Data Regulating Push-pull Area	Adjust and choose DMX value of electronic light corresponding to each channel for regulating and selecting the various design and color effects of apparatus.
8	X, Y Direction, Joy Stick	It is used to dispose X, Y direction scene control channel. Push [SET X,Y] functional key to input P1-P8 or PCH9-PCH16 keys of X, Y scan channel of apparatus, then press [SET X,Y] TO WITHDRAW memory.
9	[SPEED][CROSS] Speed, Time, Control Push-pull Lever	• SPEED Potential regulator: Regulate running program (field) of pausing time on scene for use of programming and running. • CROSS Potential Regulator: Adjust the running speed of gradual change on scene for use of programming and running. • AUTO Area below potential regulator: It is used to automatically carry out the programmed scene pausing time and running speed. The part above the potential regulator is to change running speed and scene pausing time by hand at random.
10	LCD 16x2 Liquid Crystal Indicator Area	For the state indicating every showing data, please refer to the directions of liquid crystal display information.

9. IRECTIONS OF DOUBLE-FUNCTION KEY AREA

EDIT Area	[DELETE] Delete	When programming, it is used to cancel a program or program step, remove and shift a channel display. • Instantly press: Cancel the present program step. • Press for 3 Second: Delete the present program step in order to vacate. • Under the Set-up of [SET X,Y], press [DELETE] key to cancel X,Y running direction channel shift.
	[3 -]Reduce Scene Step	Turn page back of programming time and view the upper step scene.
	[+ 4] Increase Scene step	Turn over page of programming time to memory the present scene (add a scene step) or check the programmed scene.
	[SET X,Y] Set up the Scan Channel	Press [RUN/EDIT] key to switch on the corresponding LED indicator; then press [SET X,Y] key again. According to the instruction on liquid crystal screen, choose two scan channels of X,Y running direction corresponding to electronic light to change onto the rock lever potential regulator for controlling. The yellow indictor will immediately shine; then again press [SET X,Y] key to memory and withdraw.
RUN Area	[CLEAR] Clear Key	• By pressing [CLEAR] key, it can clear the selecting state of digital key. It is convenient for repeating the selection. • By pressing [CLEAR] key, it can clear off all the channel-function data immediately after pressing this key, and all of that come to zero.
	[CROSS MODEL] Select Operation Model	• Model 1: When running a program, all of the channel data run under the control of potential regulator along with the scene transition time. • Model 2: When running a program, the set-up X, Y channel data are under the control of potential regulator along with scene transition time while other remained channel data are all in jumping change. Thus the various non-edited and stored patterns are likely not to be revealed during the slow scanning.
	[SCENE] Run Special Scene	When running a program (field), press the key and in no time choose [P1-P12] key; accordingly move the front 12 scenes out from № 1 program (field), which could show out independently for use of special scene. If want to withdraw the scene show state, please press [EDIT/RUN] key.
	[RELEASE CHANNELS]	•Press [RELEASE] key, then again coordinate with [P1-P12] key to press SHIFT + (PCH 9-PCH 16) key. It is likely to change the data of (CH1-CH16) channel during running a program, which is the corresponding status data to be read or selected at random, and also are the disposed state data in reading and selecting program. Repeat pressing [RELEASE] key in order to store the disposed state and withdraw. •（ O represents that CH1-16 channel data is under the control of push-pull as operating by manual and F represents the channel data is running automatically following program.）
	[MANUAL] Select by Hand	When running a program, press [MANUAL]key, again press any key in [P1-P12] to choose the apparatus № being set in manual state. Then again, push the released channel for achieving the effect of MANUAL + AUTOMATIC controlling light at random.

10. DIRECTIONS OF INFORMATION DISPLAYED ON LCD LIQUID CRYSTAL SCREEN

Display	Concrete Information
FLY DRAGON DISCO 192	Name of company, Model and Edition №
RUN Chase [??] [01] [00.0][00.0]	Press [EDIT/RUN] key, the corresponding indicator is off. It means the console is in waiting state for command. The question mark Chase [??] refers to the program (field) № for waiting input. [01] [00.0]and [0.00] represent the scene step mark, scene pausing time and scene gradually changing speed in order.
RUN Chase [??] CH**1—[***] or X→[***]Y→[***]	The upper line represents the running program (scenes) while the lower line the channel № and channel data.
RUN SCENE SELECT P1-P12	It represents the front 12 scenes as running № 1 program (scene). Select by press [P1-P12] digital key.
EDIT Chase [??] CH [10] [**]	Press [EDIT/RUN] key to turn on the corresponding indicator, which means the console is in editing state. ?? in Chase [??] is to show the program № waiting for command. STEP [01] is № of scene step that will be changed by operating [3 - or + 4] key. When ** displayed inside the last [ ], it refers to that the scene step is the last step in the scene. When [ ] is blank, that means there has been already the scene data.
EDIT Chase [??] CH [**]→[***] or X→[***] Y→[***]	The upper line refers to the editing program № while the lower line the scene pausing time or transition time.
EDIT Chase [??] SPEED → [***] or CROSS→[***]	The upper line means the editing program № while the lower line the scene pausing time or transition time.
EDIT Chase [??] STEP [01][**]	Press [EDIT/RUN] key to put on the corresponding indicator, that means the console is in editing state. ?? in Chase [??] represents the editing program № waiting command. STEP [01] is № of scene step that will vary according to operating [3 - or + 4] key. When ** is displayed in the last [], it means the scene step is the last step in the scene.
12345678FFFFFFFA or FFFFFFFFB	Press [CHANNELS] key to display the left of interface. The lower line number are indicating the state of eight corresponding basic control channels (1-8 channels can be identified by their suffix A while 9-16 channels by their suffix B.) F or O in the lower line is to respectively indicate the corresponding channels belonging to the kind of automatic or manual operation, i.e., if they can be released. Among which, F refers to non-releasing. And it can be changed through the corresponding [P1-P8] key or by pressing [SHIFT] key + [PCH 1-PCH 16].
Set: X-Y X,[] Y:[]	As just entering editing state, press [SET X, Y] key to display the left prompt. X: [ ] Y [ ] are vacant brackets. Press [P1-P8] key or [SHIFT]+(PCH9-PCH16) to input the channel № being transferred onto the joy stick control, or press [DELETE] to cancel the set up channels.
MANUAL [??] FFFFFFFFA or FFFFFFFFB	Under the state of running a program, press [MANUAL] key to show the left prompt. The sign of [??] in upper line means the running program (scene) № while in the lower line is to display 1-16 channels (1-8 channels are identified by suffix A while 9-16 channels, by suffix B) whether they are in the state of release. Among that, F represents that the corresponding channels have not been released while O means that the release has not been set. Again press [P1-P12] key to select one set many sets of apparatus for carrying on the manual operation to the released channels. Re-press [MANUAL] key once to withdraw the blend control of manual and automatic operation and to carry on the automatic operating program.

11. EDITING OF INTELLIGENT LIGHT PROGRAM (SCENE)

(1) Press [BLACK] key to turn off LED.

(2) Press [EDIT/RUN] key to switch on LED for entering programming state.

(3) Press any key in digital keys[P1-P12] for selecting editing program № to display it in Chase [ ] of LCD.

(4) Re-press digital key [P1-P12] to select the controlled intelligen light and to switch on the corresponding LED. If the corresponding indicator failed to shine, that means LED has not been selected and is not affected by the fifth step.

(5) Push [CH1-CH8] to regulate each of the corresponding channel data of fixtures or press [SHIFT] key and push [CH9-CH16] for search the corresponding effect of apparatus (If the scan channel shift of X, Y moving direction has been set, so two straight sliding rods of potential regulator are out of function. You might operate the rocking potential regulator at the lower end of right side to obtain the data.

(6) Repeat Step 4 and 5 to regulate other apparatus for achieving the expected effect needed in the scene of fixtures

(7) Push [SPEED] [CROSS] potential regulator to adjust the scene pausing time and transition time well.

(8) Press [+ 4] to memorize this scene effect and enter the next editing program (view the upper scene by pressing [3 -] key.). Repeat Step 4,5,6 and 7 revision, then memorize again.

(9) Repeat Step 4 – 8 to program other scenes (program step).

(10) Press [EDIT/RUN] key to switch off the corresponding indicator to memorize and withdraw from editing state for entering operating state.

(11) Repeat Step 2-10 to edit other program (scene).

12. RUNNING FOR INTELLIGEN LIGHT PROGRAM

(1) Press [EDIT/RUN] key to switch off LED indicator.

(2) Press the digital key [P1-P12] to select the program (scene) № for operating. If the program has not been edited, the corresponding LED will not shine as the key is pressed.

(3) Regulate [SPEED] potential regulator to change the pausing time between scenes and vary the scene gradual running speed. If [SPEED] or [CROSS] potential regulator is in lower part of AUTO area. The AUTO will run the edited scene pause and scene transition time.

(4) Press [CROSS] key. It is capable to change the running model. For the details, please refer to Part 9: Directions for Double-function Key Area.

(5) If running a program by manual or by auto-joking operation, please following the set-up steps in the below:

(a) First to release the channel: Press [CHANNELS] key, then press [P1-P8] key (or press [SHIFT] key). Again press [PCH9-PCH 16] for releasing the corresponding channels to change F into O. At last to press [CHANNELS] key again to memorize and withdraw. (F: represent the corresponding channels. During the running of a program, the manual data will not be accepted and controlled by the edited program. O: refers to that the corresponding channels have not been controlled by the program, but accept the manual push-pull data).

(b) Select the light to be operated for releasing the channels: Press [MANUAL] key and again press [P1-P12] key to select the light signal to be operated by hand; push the corresponding released push-pull of potential regulator at random to carry on manual + auto joking running program.

Withdraw the selection of manual by way of pressing [MANUAL].

(17) Press [BLACK] key to run the program (scene) to select Pause/Start. When the corresponding LED is shining the pause outputs. When LED is off the output running is normal.

(18) OWING OF SPECIAL SCENE

Under the state of program running (i.e., the corresponding indicator of [RUN/EDIT] is off, press [RUN/SCENE] key, then press any key in [P1-P12] again. It is likely to select the front 12 scenes in the edited No 1 program. Therefore, it is suggested that the front 12 scenes of No 1 program (scene) are better to have a special definition to achieve the effect of stunt showing as it is in programming.

(19) OW TO SET UP AND CANCEL JOY STICK POTENTIAL REGULATOR

Set-up of joy stick potential regulator: Press [RUN/EDIT] key to switch on the indicator. Then, press [SET X, Y] key immediately. According to the display on screen, select two corresponding scene channels of apparatus X, Y moving direction from [P1-P8] or press [SHIFT] key from [PCH9-PCH16] to shift onto joy stick potential regulator for controlling, so the green indicator is shine instantly. If any error occurs by inputting , press [DELETE] key to cancel the input and repress the correct corresponding channels, then again press [SET X, Y] key to memorize and withdraw.

Cancellation of Set-up for Joy Stick Potential Regulator: Press [EDIT/RUN] key to switch on the corresponding LED, then, press [DELETE] key to clear the input data. As the green indicator is off immediately re-press [SET X, Y] key to memorize and withdraw.