FOX1024s

MOVING LIGHT CONTROLLER

User's Manual

Contents

1. Summary

1.1   Functions

FOX series moving light controller, with microcomputer as core, in adoption of new technology, has more powerful and humanized functions.

- 1024 DMX channels, DMX512/1990 standard, Output ports with optical isolated.
- Up to 100 intelligent Fixtures or 100 Dimmer/LED can be connected.
- Up to 42 channels each Fixture. Fixture Library mode, "R20" Fixture Library compatible.
- 300 Playback programs. 40 Scenes can be overlapped and output, under flash or latch mode.
- Effect generator "SHAPE" is provided to program effects like circle, wave, rainbow etc. Overlap, deform, spread and symmetry are also supported.
- Playback trigger mode selectable: Auto1, Auto2, Music synchronous.
- One key "Light Show" is achievable, up to 20 light shows can be saved and used (without PC).
- MIDI ports are provided to connect consoles in parallel or receive MIDI code to run "Light Show".
- LCD display with backlight. 12V operate light (OPTIONAL).
- USB port is provided for data backup and update by USB-disk.

1.2   Specifications   (VER: 2.5)

	FOX1024s
DMX512 Total Channels	1024
MAX Intelligent Fixtures	100
MAX Playback Programs	300
MAX Preset Focus	20
MAX Groups	20
Scene-snapshots	40
Shape-Generator	YES
LCD Display Screen	YES (Chinese/English)
Synchronous Trigger Mode	Auto1, Auto2, Music
Parallel by MIDI, "one key light show"	YES
Library Format	R20 Format
USB Port	YES
Music Control Signal Input	Line level input / MIC input
Power Supply	Switch Power Supply, AC 100~240V, 50/60Hz
Power	15W
Size	482mm × 440mm × 108 mm

2. Installation

2.1 Packing List

FOX1024s moving light controller includes the following items in the carton:
- ONE FOX1024s moving light controller

  TIPS: Model and software version could be checked on boot screen.
- ONE power supply cable, ONE user's manual.

Optional Parts:

USB Disk, 12V Gooseneck Work Lamp;

2.2 Safety Caution

- The controller must be connected with the protective groundwire!
- No liquid into the controller!
- Please mind dust and moist!

2.3 Interface and Connection of Controller

2.3.1 Backboard Plot

DMX512 Output   Audio Input   MIDI (out/in)   Power Input   Lamp Fuse   Power Switch
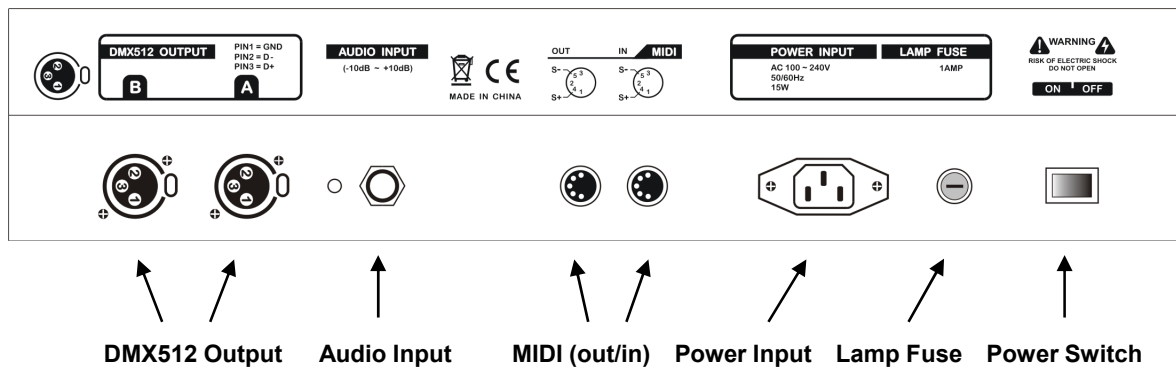
2.3.2 Audio Signal Source

Audio Input
MIC head

- Audio signal can be taken from mixer controller, line level output of other audio equipments, or MIC input, Controller automatically extracts low-frequency component from music as music trigger synchronous signal for Multi-Step Program program.
- One 6.35 mm audio input socket locates on the rear Panel of controller, the accommodation of input level of audio signal covers -10dB ~ +10dB. When audio device is plugged in, source of sound is line level input, when nothing is plugged in, source of sound is MIC selection.

2.3.3 DMX512 Signal Interface & Connection of Fixture

There are 2 sockets(A & B) of DMX512 signal output, they're both 3-pin XLR, pin 1 is for signal ground, pin 2 is for negative, and pin 3 is for positive.

DMX512 cable is screened twist line. Each end of the cable should be joined to XLR plug by user. Pin 1 of XLR plug is connected to screen net. Two lines of twist line (distinguished by different colors) are connected to pin 2 and pin 3 of the plug respectively. Please do not confuse. The schematic diagram for connection is shown as follows:

Pin number	Cable conductor
1	Shield
2	Negative (-)
3	Positive (+)
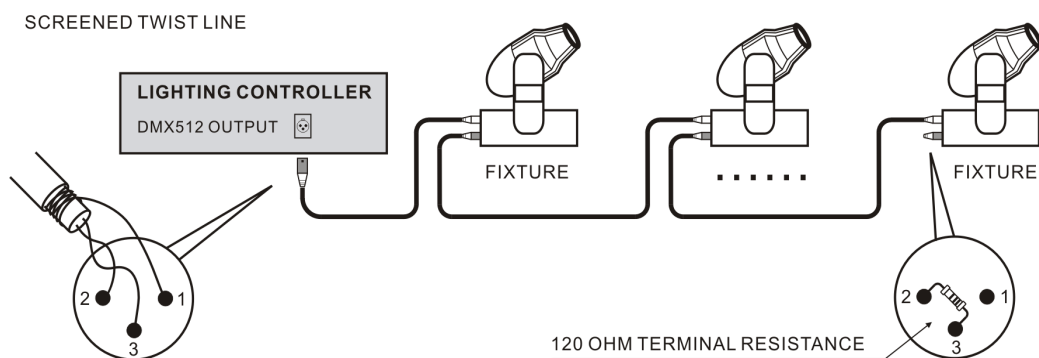
2.3.4 Power Interface

This controller adopts wide range switch power supply (AC100-240V/50-60Hz). Please confirm voltage is suitable to controller before connection. Power socket must be connected with protective groundwire to ensure safety. If to replace fuse, please disconnect power firstly and then operate to ensure safety.

2.3.5 USB Interface

This controller provides a standard USB interface for data backup, renewal of library files and software upgrade.

2.3.6 Gooseneck Lamp Interface

There is one gooseneck interface (3 pins XLR) at top left corner of the controller's panel, gooseneck lamps of voltage 12V/5W can be connected.
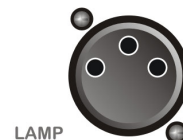
2.3.7 MIDI (out/in)

MIDI ports are provided to connect consoles in parallel or receive/send MIDI code to play/record "Light Show".

3. Operation Guide

3.1 Panel Plot
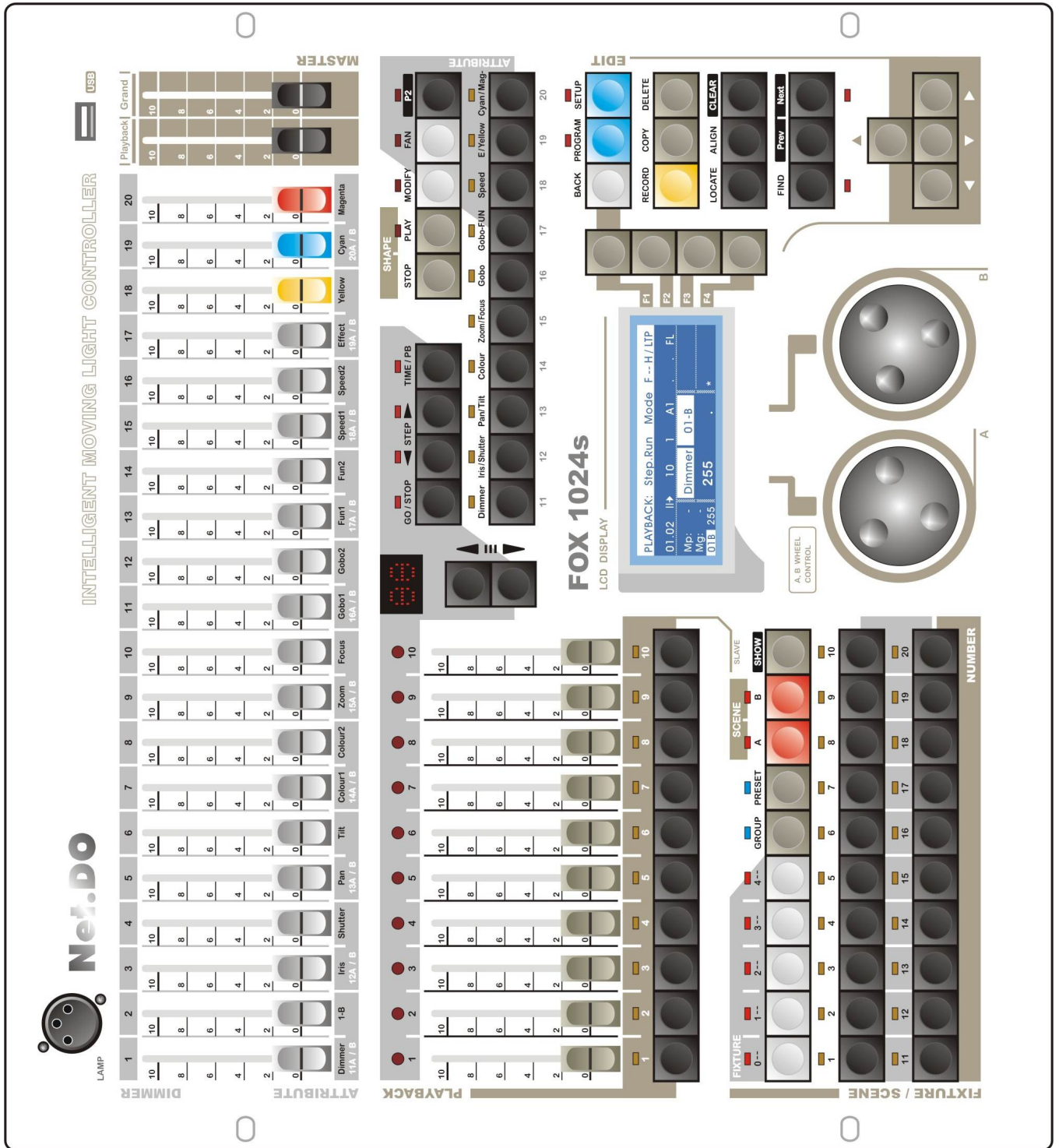
3.2   Attribute Faders and Master Faders
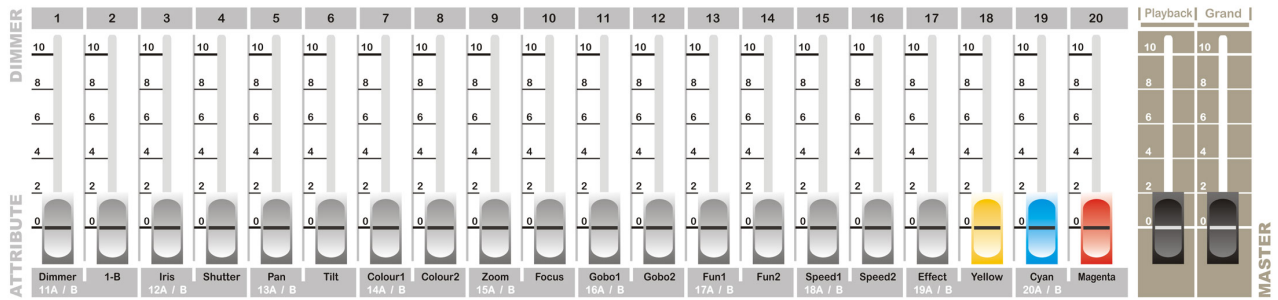
Attribute Faders

There are 20 attribute faders, which can control up to 40 attributes (in 2 pages, switch by **P2** key). These faders can also be set to dimmer faders, which can control the dimming of No.(0_01 ~ 0_20) lights, as an output of a brightness scene. The faders can be set by entering SETUP → Other…→ CH Fader.

Master faders of brightness (MASTER)

There are 2 master faders in the MASTER area:

Playback － Master brightness control of Playback area

Grand － Master brightness control of all output

3.3   PLAYBACK Area

Playback Page Key

Playback Fader

Playback Select Key
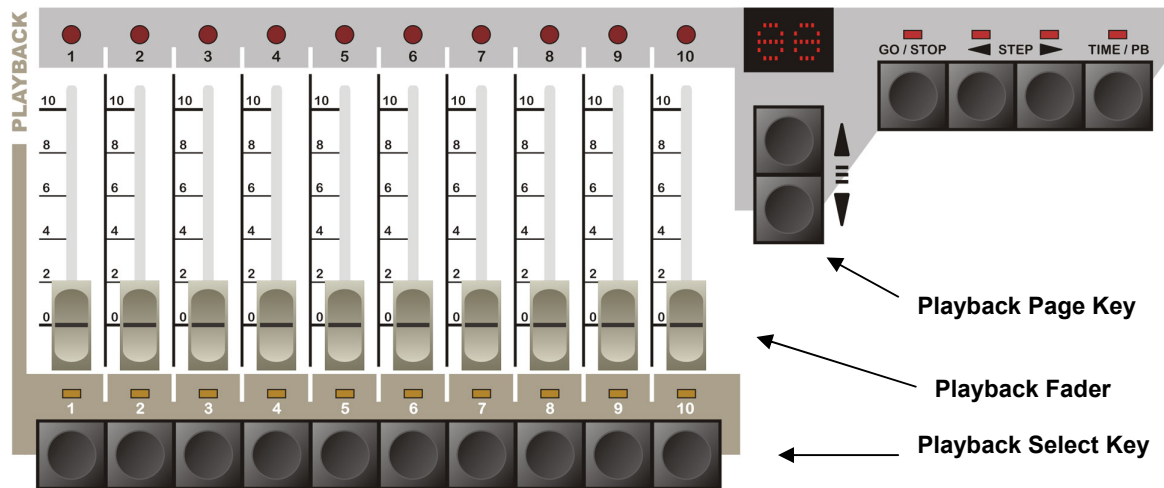
Playback Fader

There are 10 playback faders and 30 pages, which totally can record 300 programs. Push the playback fader and the corresponding programmed contents will be output to the fixtures.

Playback Select Key (Playback key for short): There is one under each Playback Fader.

Playback Page Key (Up / down)：Playback's page up & down. LED screen shows the corresponding pages. (TIPS: holding page key can quick flip)

GO/STOP —To run or suspend the current connected Multi-Step Program;

◀ STEP ▶ —Change the running direction of current Multi-Step Program, or manual-run

Multi-Step Program forwad or backward step by step.

TIME/ PB —Used to Enter Playback Menu. In the menu, programs can be connected by **Playback**

Key, and set the external speed (Auto1), mode of running, starting and ending.

3.4 Function Key (Fixture page 0~4, Group, Preset, Scene A/B, Show）
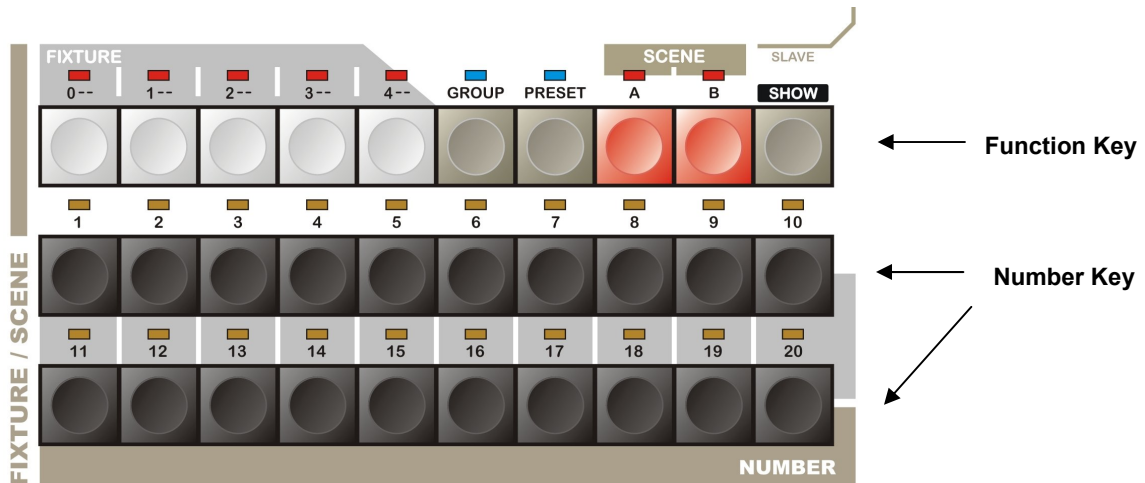
FIXTURE 0-- 1-- 2-- 3-- 4-- Fixture Page Key:

Press Fixture Page Key, **1~20 Numeric Key** will be used for fixture selection. There are 20 fixture numbers each page, totally 5 Page Keys. The fixture numbers correspond to: Page 0 (0_01~0_20), Page 1 (1_01~1_20)，Page 2 (2_01~2_20), Page 3 (3_01~3_20), Page 4 (4_01~4_20), totally 100 fixture numbers.

(TIPS: When an indicator of Fixture Page Key is bright, it means that page is selected; when the indicator flashes slowly, it means there are fixtures selected in that page.)

GROUP **Function Key**

Press **GROUP** key, **1~20 Numeric Key** will be used for group selection**.**

PRESET **Function Key**

Press **PRESET** key, **1~20 Numeric Key** will be used for preset selection.

SCENE A , B **Scene-Snapshot Function Key**

There are 2 Scene pages (A, B), totally 40 Scenes. 20 Scenes per page, selected by **1~20 Numeric Key**

SHOW **"Light Show" Function Key**

Press and hold **SHOW** key for 2sec to enter "Light Show" status (Slave), **1~20 Numeric Key** will be used for internal "Light Show" selection. Press and hold **SHOW** key for 2sec again to quit back to common status (Master).

1~20 Numeric Key   Totally **20 Numeric Keys**, they will have different functions under different status.

- Under Fixture selection status, they are **Fixture Numeric Key.**
- Under GROUP status, they are **Group Numeric Key**.
- Under PRESET status, they are **Preset Numeric Key**.
- Under SCENE status, they are **Scene Numeric Key**.
- Under "Light Show" status, they are **"Light Show" Numeric Key**.

3.5   SHAPE Control Area

STOP   — Suspend the current called SHAPE.

PLAY   — Press once (indicator bright) to run the current called SHAPE.

Press one more time (indicator flashes) to enter SHAPE display.
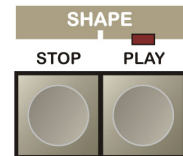
3.6   Fixture Attribute Key

ATTRIBUTE area contains 10 attribute keys, **P2** attribute page key, **MODIFY** , **FAN** .

Attributes---such as Dimmer, Colour, Gobo etc. Attributes can be selected by **Attribute Key,** modified by **Wheel A/B**.

The 10 Attribute Keys correspond to the attribute names above.

Press **P2** (indicator bright) to switch to Attribute Page 2, then the Attribute Keys will become No.11~20 Attribute Keys. One Key controls 2 attributes, so the console can control totally 40 attributes.

FAN   —Used to spread the attribute value of selected fixtures to gain the gradual change effect of attribute value among fixtures.

MODIFY   —Relative change function of attributes.

Fixture Attribute Key
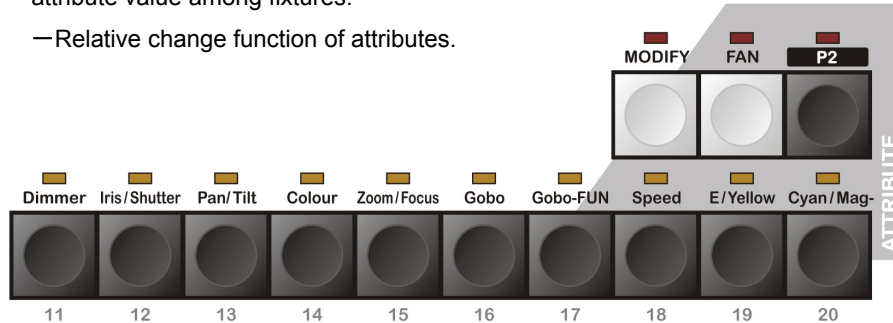
3.7   LCD Display, Wheel A/B, Edit Area

- **LCD Display Control**

BACK : Used to return to previous layer menu.

F1   **F2**   **F3**   **F4** **Soft Keys**:

The controllable contents depend on the current menu page, different menu pages different function;

◄ ► ▲▼ **Cursor Key** (shown as right)

1. Left/Right Key is used to select the items on left/right;

2. Up/Down Key is used to modify the numerical value of the selected items.
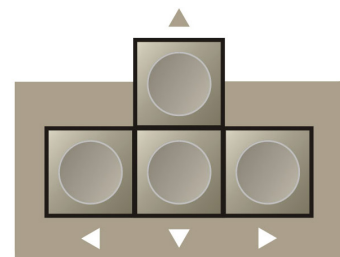
Wheel A/B: There are 2 wheels (**A/B**), the control contents depend on the items displayed in the menu.

If there is no corresponding display, the **Wheel** can modify the selected **Menu Item**.

FOX 1024s

LCD DISPLAY

PLAYBACK: Step.Run   Mode F -- H / LTP

01.02 ‖→   10   1   A1   .   . FL

Mp: -   Dimmer   01-B
Mg: -
01B   255   255   .   *

BACK PROGRAM SETUP

RECORD COPY DELETE

LOCATE ALIGN CLEAR

FIND Prev Next

EDIT

F1
F2
F3
F4

A, B WHEEL CONTROL

A   B

Wheel A/B
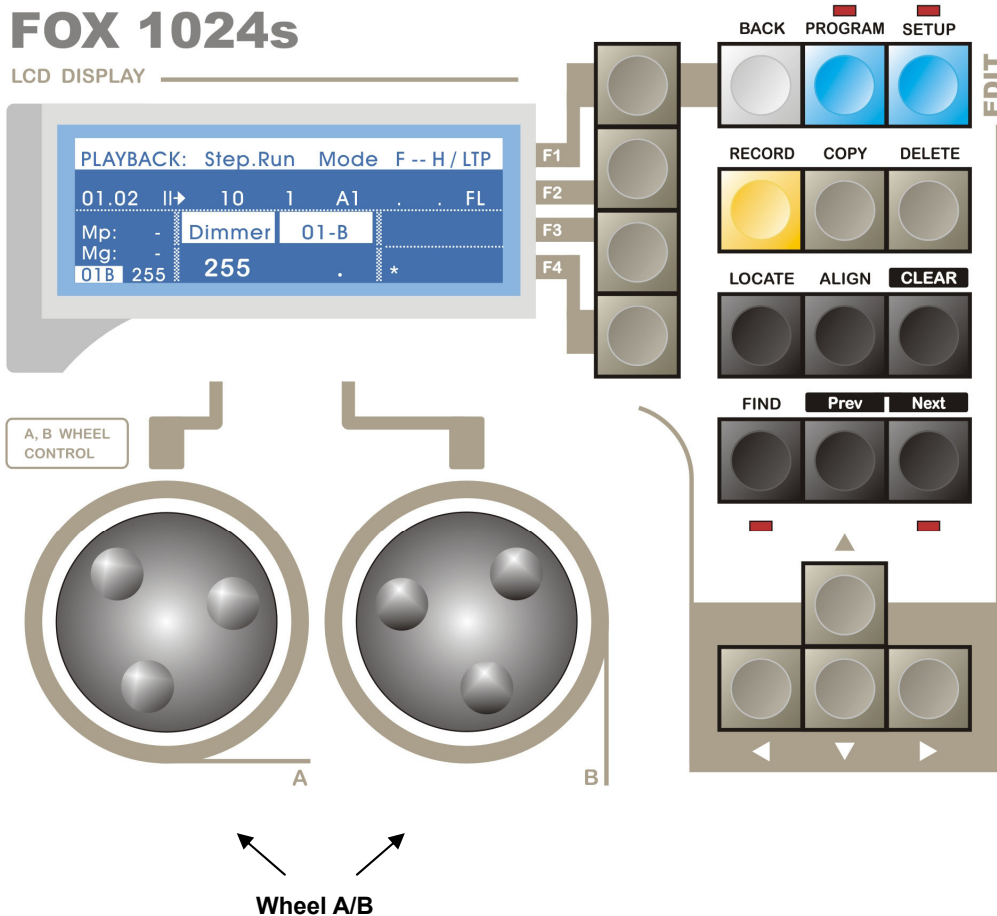
● **Edit Area**

PROGRAM   —Used to enter program menu to edit the relevant parameters.

SETUP   —Used to enter SETUP menu to set fixtures / libraries and manage files.

RECORD   —Used to record data.

COPY   —Used to copy data.

DELETE   —Used to delete data.

*TIPS: While press and hold one of the three keys above, the indicators of **Numeric Key** will show whether there is contents in Playback / Group / Preset / Scene. When the indicator is bright, it means there is content in that key.

● **Fixture Edit**

CLEAR   —Used to clear the selection and value of all manual-run fixtures.

LOCATE   —Used to locate and light up the selected fixtures (set value for all channels).

FIND   —Used to find the selected fixtures (will not set value nor keep value after quit)

ALIGN   —Used to change attributes of selected fixtures to be same as Reference Fixture.

Prev **Next**   —Used to select single / odd / even fixtures among the selected fixtures

4. Quick Start

4.1   Examples

A simple demo is listed below for fast learning of the console's operation. Take creating circle with 10 Martin intelligent fixtures as example (Model: MT2000PR). Procedure is as follows:

Load Library	⇒	Patch Fixture	⇒	Manual-Run Fixture	⇒	Record Program	⇒	Program Playback

1) **Load Library**: Copy library "MT2000PR.R20" to the root directory of U-disk and connect it with console

Operation: SETUP → Library → Import, rotate **Wheel** to select "MT2000PR.R20" and confirm.

2) **Patch Fixture**: Operation: SETUP → Fixture → FixPatch, then press **0--** key to enter Fixture Page 0, select No.1 fixture by **Numeric Key 1**; then set **FixModel** to **"MT2000PR"** and **DmxAddr** to **"A1"**. Copy the settings of No.1 fixture to No.2~10 fixtures. Operation as follows:

(Press and hold **COPY** → Press Fixture **Numeric Key 1** → Press Fixture **Numeric Key 2~10**).

3) **Manual-Run Fixture:**
- Select No.1~10 fixtures;
- Press **LOCATE** key to light up all the selected fixtures.
- Press **PLAY** key to enter SHAPE menu → Press **Edit. .** (Soft key) → Press ▲ key to select **on** → Rotate **Wheel A/B** to set the models of shape(circle), then the fixtures will run circle.

4) **Record Program:**
- Press and hold **RECORD** → Press **Playback Key 1**

Then the record of a "one-step-program" is finished (in Playback Page 1, Key 1, Program No.1.01)

5) Press **CLEAR** to clear all the data of manual-run fixtures.

6) **Program Playback**: Push **Playback Key 1** in **Page 1**, the recorded "one-step-program" will be output to the fixtures immediately.

*Above is just a simple demo for beginners to start learning the console, to understand the operation of advanced functions, reading this manual carefully would be necessary.

5. Setup Menu

5.1 Menu Operation
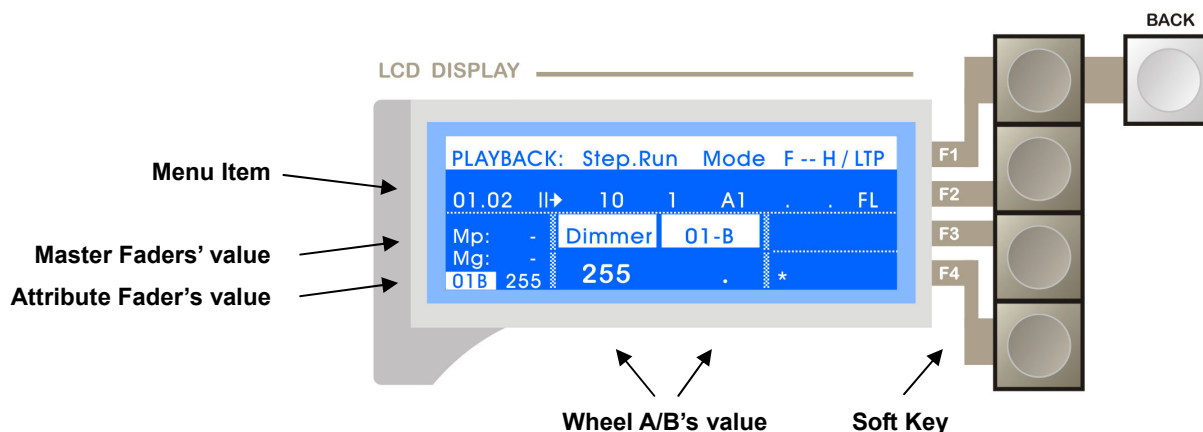
The menu is operated by Soft Keys, which is easy and fast.

There are four Soft Keys: **F1** / **F2** / **F3** / **F4**, which correspond to the items in the right side of LCD screen, press a Soft Key to enter the corresponding sub-menu, press **BACK** to return to previous menu. Press Main Menu key to return to site menu.

The **Menu Item** can be selected and modified by ◄ ► ▲▼ **Cursor Keys**; The selected item is displayed with white background, the value can be modified by ▲▼ **Key** or **Wheel A/B**, the modified data will be automatically saved after the operating menu is exited.

There are 2 Main Menus (PROGRAM / SETUP), this chapter will introduce the functions of SETUP, press **SETUP** (indicator bright) to enter settings menu, the menu tree of SETUP MENU is as follows:
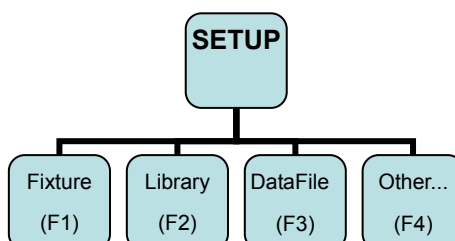
5.2 Library Setting

Path: SETUP → Library

Different fixtures have different channels and attributes, which require libraries to be identified by the console (1 library corresponds to 1 kind of fixture). Library: contains the information of channels and attributes. The attributes can be controlled by attribute keys and Wheel A/B after the correct library is patched to the fixture.
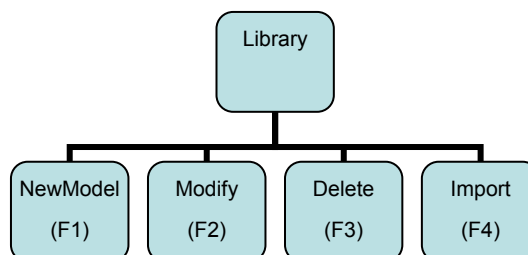
Library: There is a DVD-ROM in the carton, it contains the libraries of over 3 thousand fixtures, which can be imported to the console from U-disk. (Libraries can be custom by <NetDO Library Software> in PC or Android phone)

Build library in the console: libraries can also be built in the console.

● **NewModel:**

The name of new libraries has to be **xxx user**。

In the Library menu, press **NewModel** soft key to enter NewModel menu (As shown on the right.)

Firstly set the total channels according to the information provided by fixture factories; then set the attribute of each channel; finally set the type of running (LTP-inst / LTP-fade / HTP).
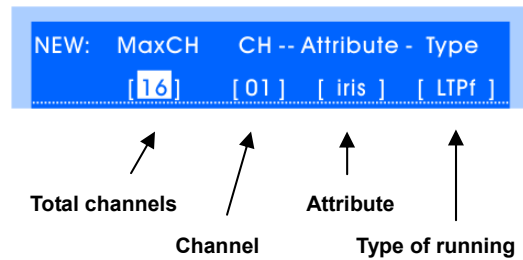
> **LTP-inst:** the channel will run by LTP-instant.
>
> **LTP-fade:** the channel will run by LTP-fade
>
> (Including fade-in / fade-out of playback and fade effect between steps of programs)
>
> **HTP:** the channel will run by HTP, which means the highest value takes precedence.
>
> (After HTP is set, master and playback faders will control this channel proportionally)

*TIPS: For the detailed introduction of **HTP / LTP,** please read Chapter **"HTP & LTP channel"**.

● **Modify:** libraries can be modified.

In Library menu, select the fixture model, press **Modify** Soft Key for modification, finally press **BACK** to exit, data will be saved automatically.
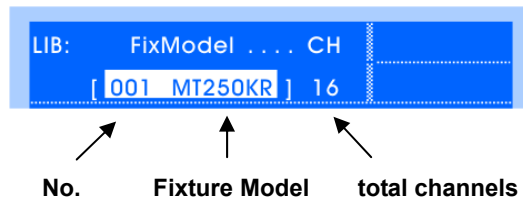
● **Delete:** libraries can be deleted.

In Library menu, select fixture model, press **Delete** Soft Key, the library will be deleted.

● **Import:** libraries can be imported from U-disk.

(**TIPS:** the R20 library should be copied to the root directory of U-disk from the PC firstly)

Operation is as follows:

1) In Library menu, insert U-disk, press **Import** Soft Key, select library in U-disk by ▲▼ **Cursor Key** or **Wheel A/B**.

2) Press **Select** Soft Key to import library to the console, then it can be used to patch fixtures.

5.3 Fixture Setting

Path: SETUP → Fixture

Fixture requires not only library but also being patched to be controlled by the console. Select fixture model and assign DMX address for the fixtures, 1 fixture No. can be patched for 1 fixture.
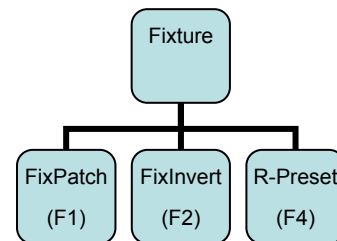
5.3.1 Fixture Patched

Path: SETUP → Fixture → FixPatch

In FixPatch menu, fixtures can be patched, set models and assigned DMX address (As shown on the right)
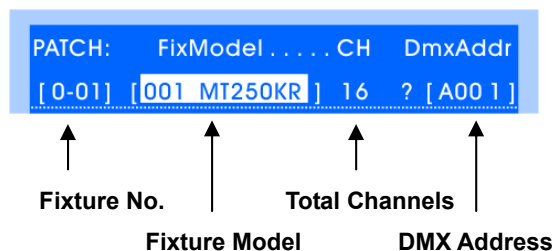
Operation is as follows:

1) Enter FixPatch menu.

2) Press **Fixture Page Key**, then select a single fixture by **1~20 Numeric Key**

3) Set the corresponding FixModel to the fixture;（Remark: "**000-dimmer＊**" is for dimmable lights)

4) Set the corresponding DMX address to the fixture;

5) Repeat Steps 2~4 to patch other fixtures.

*TIPS1: Select menu item by ◄ ► **Cursor Key**, modify contents by ▲▼ **Cursor Key** or **Wheel A/B**;

*TIPS2: When the "？" appears next to the DMX addr, it means this DMX addr overlaps with other fixture's (The indicator of corresponding Fixture Numeric Key will flash slowly), the fixture can't be controlled unless a correct DMX addr is reassigned.

*TIPS3: There are 2 DMX output ports, which correspond to the DMX addr as follows:
   A Port: A1~A512; B Port：B1~B512;

*TIPS4: When the indicator of Fixture Numeric Key flashes fast, it means this fixture is selected. When the indicator flashes slowly, it means the DMX addr of this fixture is not correct.

Skills of Fixture patch:

- **Copy**

  In FixPatch menu, the settings of a fixture can be copied to other fixtures by **COPY Key**, the DMX addr will be automatically assigned sequentially. For example, to copy the settings of fixture No.1 to No.2~10, the operation is as follows:

  --- Press and hold **COPY** → Press Fixture **Numeric Key 1** (source)

      → Sequentially press Fixture **Numeric Key 2~10** (target)

- **Delete**

  In FixPatch menu, the settings of a fixture can be deleted by **DEL Fix Soft Key.**

  Or by **DELETE Key** to delete settings of multiple fixtures, operation:

  --- Press and hold **DELETE**

      → Sequentially press Fixture **Numeric Key** (to delete multiple fixtures)

- **Check**

  --- Press and hold certain **Fixture Page Key**, if the indicators of certain Fixture **Numeric Keys** are bright, it means the fixtures in that page is already patched.

- **Modify DMX addr**

  Selected fixtures with overlapping DMX addr can be reassigned a correct DMX addr by **Corre-Err Soft Key;**

- **Automatically assign DMX addr**

  Press and hold **Corre-Err Soft Key** for 2 seconds to run AlignFix. The console will automatically reassign DMX addr to all the fixtures from addr 001.

- **Fixture Channel Test**

  There are 2 libraries (**CH20/CH40)** in the console, which correspond to the fixtures of 20 or 40 channels. The sequence of the channels corresponds to the Attribute Faders', for convenience to test fixture channels without custom library.

5.3.2 Invert attribute value

Path: SETUP → Fixture → FixInvert

In FixInvert menu, the value sequence of Dimmer can be inverted, Pan & Tilt can be inverted or swapped.

```
INVERT:  Dimmer  Pan . . . Tilt  (swap)
0-01      [inv]    [ . ]   [ . ] [ . ]
```

CLR Soft Key --- used to clear invert of the selected fixture; Press and hold **CLR** soft key for 2 seconds, invert of all fixtures will be cleared.

5.4   Data File

It's necessary to use different data according to different occasions and users; and to prevent data modified by others, the best way is to backup data by U-disk. In DataFile menu, data can be saved and used. Data file supports FAT16 / FAT32 format and is compatible with NetDO EXP/ET series consoles.

Path: SETUP → DataFile

```
           DataFile


 SaveFile   ReadFile   DEL File
  (F1)       (F2)       (F4)
```

```
DATA FILE MANAGE:        SaveFile    F1
                         ReadFile    F2
                                     F3
                         DEL File    F4
```
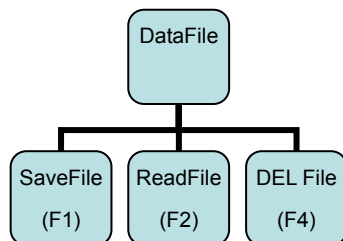
5.4.1 Save File

In DataFile menu, data can be saved in U-disk.

Insert U-disk, press **SaveFile** (F1) soft key to enter SaveFile menu, then select file name (FOX01~99) by

```
U-DISK:    Data File Save
          [ /F01.DAT  ]
```

▲▼ **Cursor Key** or **Wheel A/B**, and press **ENTER** soft key to save all the data into U-disk.

Remark: The new file will cover the old one in the U-disk if their file names are the same！

5.4.2 Read File

In DataFile menu, data in the U-disk can be recovered to the console.

Insert U-disk, press **ReadFile** (F2) soft key to enter ReadFile menu, then select the file and press **ENTER** soft key to read the data file into the console.

```
U-DISK:    Data File Read
      001 [ /F01.DAT  ]
```
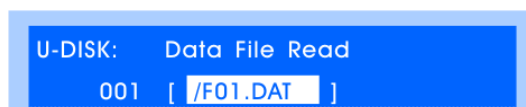
Remark: The read file will cover the original one in the console.

5.4.3 Delete File

In DataFile menu, data files in the U-disk can be deleted.

Insert U-disk, press DEL File (F4) soft key to enter DEL File menu, then select the file and press ENTER soft key to delete.

5.5   Other Setting

The Other… menu tree is shown on the right:

```
              ┌─────────┐
              │ Other…  │
              └─────────┘
          ┌───────┼───────┐
     ┌────────┐ ┌────────┐ ┌──────────┐
     │Initial…│ │CH Fader│ │Midi Sync │
     │  (F1)  │ │  (F2)  │ │  (F3)    │
     └────────┘ └────────┘ └──────────┘
```
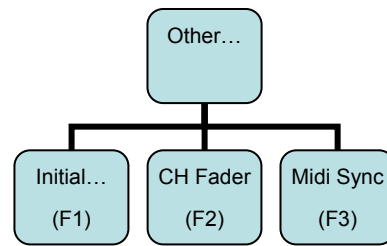
5.5.1 Data Initialized
Path: SETUP → Other… → Initial…

In Initial… menu, there are 4 soft keys as follows:
- **CLR PB** soft key --- Press and hold for 2 seconds to clear all programs in the console.
- **CLR Scene** soft key --- Press and hold for 2 seconds to clear all scenes in the console.
- **CLR Patch** soft key --- Press and hold for 2 seconds to clear all fixture patches in the console.
- **Init All** soft key --- Press and hold for 2 seconds to erase all data and restore factory settings.

Remark: Please notice to backup the useful data before data initialization.

5.5.2 Channel Fader Settings
Path: SETUP → Other… → CH Fader

There are 20 channel faders in the console, which can be set to 2 modes as follows:
- **attribute** mode --- up to 40 attributes can be manually controlled (select fixture and modify value).
  There are totally 2 pages, 20 attributes each page, pages turned by **P2 Key.**

- **dimmer** mode --- Change Fixture No.1~20 to dimming control (output as a separate dimmer scene). Comply with "HTP", same as the playback output.

5.5.3 MIDI Synchronize Setting
Path: SETUP → Other… → Midi Sync

Under Midi Sync menu, Master/Slave status can be set and MIDI channels (1~16) can be selected, consoles can be connected in parallel or receive/send MIDI code to run/record "Light Show".

*TIPS: Under "Slave" status, Playback Faders and Flash Keys of SCENE will be locked (except while recording "One key light show").

6. Manual-Run Fixture

Fixtures can be manually run after fixtures patched.

6.1   Manually-Run Fixture

Attributes (such as Dimmer, Iris, Pan/Tilt) of selected fixtures can be manually modified by Attribute Key or Wheel A/B, this operation is called **Manual-Run Fixture**, which can be operated under running or programming status.

TIPS:

● There are fixtures selected or given value if the indicators of **Fixture Page Key** flash.

● Under selecting fixture status, the attribute value is modified if the indicators of fixture **Numeric Keys** flash slowly.

● Indicator of the **Reference Fixture** will flash fast.

*Explanation: Manual-Run Fixture   --- means manual control fixtures.

　　　　　　　Data of manual-run   --- means the data modified by manual-run.

Important: Manual-Run Fixture is the operation of highest priority, its modified attribute value will cover the value of the running playback and output to the fixtures. The output of playback will not restore until the manual-run fixtures are cleared.

Operation of Manual-Run Fixture:

1) Select fixtures:

Press **Fixture Page Key** to enter selecting fixture status, press **Numeric Key** to select single or multiple fixtures.

(Press two **Numeric Keys** at the same time and the fixtures between them will be also selected. Fixtures can be also selected by "GROUP" function.)

2) Modify Attribute:

Use **Attribute Key** to Modify attributes such as Dimmer, Pan/Tilt, Colour and Shutter. There are 20 **Attribute Keys** (in 2 Pages, turned by **P2** key), each Attribute Key corresponds to 2 attributes. Use **Wheel A/B** to modify corresponding attributes after pressing **Attribute Key**.

Correspondence table of attributes and Wheel A/B:

Key	Wheel A	Wheel B	Key	Wheel A	Wheel B
1	Dimmer	01-B	11	11-A	11-B
2	Iris	Shutter	12	12-A	12-B
3	Pan	Tilt	13	13-A	13-B
4	Colour1	Colour2	14	14-A	14-B
5	Zoom	Focus	15	15-A	15-B
6	Gobo1	Gobo2	16	16-A	16-B
7	Fun1	Fun2	17	17-A	17-B
8	Speed1	Speed2	18	18-A	18-B
9	Effect	Yellow	19	19-A	19-B
10	Cyan	Magenta	20	20-A	20-B

3) Control attributes by Attribute Fader:

Except **Wheel A/B**, **Attribute Fader** can also be used to modify attributes.

*TIPS1: Set Attribute Fader to "attribute mode" before using.

*TIPS2: Attributes can be modified by fader only when the fader value is higher than the current value.

6.2   Clear Manual-Run Fixture

There are 2 ways of clearing manual-run fixture:

- Clear All: Press **CLEAR**, all fixture selecting will be cancelled and value will be cleared.
- Clear certain fixture: Press and hold **CLEAR** → press corresponding Fixture **Numeric Keys**.
  （Clear multiple fixtures by multiple selections）

*TIPS1: After the data of manual-run is cleared, shielded playbacks & scenes will restore outputting.

*TIPS2: Before manual-run fixture, it's recommended to press **CLEAR** firstly to clear all data of manual-run, in order to avoid the output of unwanted value.

6.3   FIND function

The "FIND" function is to light up and fixtures for fast checking. Operation of "FIND" will not affect the value of manual-run (no value is given). This function requires the support of related data in library.

Press **FIND** key, the indicator will flash slowly which means it's in FIND status, press it again to exit; In **FIND** status, selected fixtures will be centered and lighted up (without value), Dimmer channel will be full and unaffected by Master Faders. Only the manually modified data will be saved after exiting.

TIPS: **FIND** function is recommended in editing Presets or recording Scenes, in order to show fixtures while avoid recording the data of Dimmer and Pan/Tilt.

6.4   LOCATE function

The "LOCATE" function is to light up and locate fixtures for fast checking (will give value to each channel). Select fixtures and press **LOCATE** key, the fixtures will be centered and lighted up. This function requires the support of related data in library.

Remark:"LOCATE" function will give value to all channels of the selected fixtures.

6.5   GROUP function

GROUP function is to organize the frequently used fixtures into groups for fast selecting.

- **Call Group:** Press **GROUP** key to enter group status → Press **Numeric Key** (Group No.)

- **Record Group:** Select fixtures → press and hold **RECORD** key → Press **Group Numeric Key**

- **Delete Group:** Press and hold **DELETE** → Press **Group Numeric Key**.

- **Copy Group:** Press and hold **COPY** key → Press **Group Numeric Key** (source)

  → Press another **Group Numeric Key** (target).

6.6   Parity selecting and one by one control of fixtures

Multiple selected fixtures can be controlled in the order of odd number / even number or one by one.

6.6.1 Parity selecting of fixtures

1) Select multiple fixtures;

2) Press Prev   Next   key at the same time to switch to the fixtures of odd number;

3) Press the above keys again to switch to the fixtures of even number;

4) Press the above keys again to exit parity selecting.

6.6.2 One by one control of fixtures

Multiple fixtures can be controlled one by one. This function is very useful in editing Pan/Tilt, Pan/Tilt of selected fixtures can be fast edited one by one instead of being selected repeatedly. Operation:

1) Select multiple fixtures;

2) Press Prev   or   Next   key continuously, fixtures can be selected individually in sequence.

3) Pressing the above keys at the same time will exit selecting.

6.7   FAN function

FAN function is to expand the attributes of selected fixtures. Among the selected fixtures, attributes of the first fixture and the last one change the most, and gradually descend to the middle, to achieve gradient effect. If use FAN to expand the Pan/Tilt attributes, the fixtures will show fan beam.

FAN is usually used in editing Pan/Tilt, it can also be used in other attributes such as Dimmer.

Operation of FAN:

1) Select fixtures;

2) Press **Attribute Key** to select attributes;

3) Press **FAN** key (its indicator will flash and the LCD screen show as right);

4) Rotate **Wheel A/B** to set the value (Range: +/- 50, the effect is according to the selected attribute);

5) Press **FAN** key again (its indicator will go out) to exit.

6.8   MODIFY function

When the edit of Pan/Tilt is manually finished, the **MODIFY** function can be used to modify these Pan/Tilt together as a whole while keep their relative position unchanged.

Press **MODIFY** key, its indicator will flash, which means it's under the **MODIFY** mode; the value of selected fixtures will change relatively instead of becoming the same if their attribute is modified.

MODIFY is usually used in editing Pan/Tilt, it can also be used in other attributes such as Dimmer.

*TIPS: In the modification of Pan/Tilt, this function is more suitable for the fixtures mounted in line.

6.9   Reference Fixture

Multiple fixtures will align to a Reference Fixture when their attribute is manually modified.

6.9.1 Set "Reference Fixture"

For example, to set fixture No.0_05 in Page 0 to be the "Reference Fixture", operation is as follow:

¬¬¬ Press and hold **Fixture Page Key** 0-- → Press Numeric Key 5; (its indicator will flash fast)

6.10   Attribute ALIGN function

Copy the attribute of "Reference Fixture" to other fixtures to make their value same as "Reference Fixture".

There are 2 ways of Attribute ALIGN (firstly select fixtures and "Reference Fixture")

● **Align all attribute:** Press **ALIGN** key to align all attribute of selected fixtures to "Reference Fixture".

● **Align certain attribute:** Press and hold **ALIGN** key → Press **Attribute Key** Successively; (Multiple attribute can be selected. For example: Dimmer → Gobo → …)

6.11   Lamp On / Lamp Off / Reset function

Certain fixtures require operation such as "Lamp On" to their bulbs before use. Operation:

Press **LOCATE** for 2 seconds to enter Fixture Menu. In Fixture Menu, Lamp On/Lamp Off/Reset can be operated. Press **BACK** key to exit.

FIXTURE MENU:	Lamp On	F1
	Lamp Off	F2
	Reset	F3
	BACK	F4

● **Lamp On:**
In Fixture Menu, select fixtures, press **Lamp On** soft key.

● **Lamp Off:**
In Fixture Menu, press Lamp Off soft key.

● **Reset:**
In Fixture Menu, press Reset soft key.

Notice: The corresponding library must contain the MACRO information of Lamp On/Lamp Off/ Reset.
Library can be customized by <NetDO Library Software> in PC or Android phone.

7. PRESET

In programming, certain attribute value (such as colour --- Red/Yellow/Blue…) which is frequently used can be recorded as PRESET for fast calling.

7.1   Import PRESET

Path: SETUP → Fixture

In Fixture menu, press **R-Preset** soft key, the console will import 20 presets from the library. (Notice: the custom presets in the console would be covered.)

20 presets will be assigned to 20 preset **Numeric Keys** as follow:

1 ~ 10：**Colour Presets;**

11~20：**Gobo Presets.**

Remark: The above presets need the support of libraries with preset information, if not, presets can't be imported but can be edited and recorded manually in the console.

7.2   Call PRESET

1） Select fixtures;

2） Press **PRESET** key to enter preset status (indicator above will be bright) → Press **Numeric Key** to select presets

7.3   Customize PRESET

Preset can be customized.

7.3.1 Record PRESET

Remark: Press **CLEAR** key before editing presets to avoid any unexpected affect;

1) Manual-Run fixtures to edit and modified their attribute to the required effect;

2) Press and hold **RECORD** → (select single or multiple attribute by **Attribute Key** → Select fixtures by **Fixture Numeric Keys**) → Press **Preset Numeric Key** to finish recording;

*TIPS1: the steps in the parentheses （） can be skipped. If skip, the console will record all attribute and fixtures that manually modified.

*TIP2: PRESET only saves the modified attribute. It's suggested to edit them in "FIND" status.

7.3.2 Delete PRESET

Press and hold **DELETE** → Press Preset **Numeric Key** to finish deleting

7.3.3 Copy PRESET

For example: copy PRESET 1 to PRESET 5.

Press and hold COPY → Press Preset **Numeric Key 1** (source)

→ Press Preset **Numeric Key 5** (target) to finish copying

8. SHAPE

Shape-Generator(SHAPE) is greatly convenient in controling track & effect of fixtures, such as Circle, Rainbow, Wave etc. SHAPE can also combine different shapes of multiple fixtures to show various dynamic effects which can't be easily achieved by Multi-Step Program. Take the SHAPE of circle for example, the operation of making circle is already finished by the console, just leave the parameters such as speed, size and direction to be set, which is more effective.

In the console there are many Shape-Generators, each one can be set for different effects such as Circle, Rainbow or Wave etc., and parameters such as size, speed, direction, spread and symmetry etc. Shapes can run together but up to 4 shapes can be superposed to 1 fixture at the same time.

Classification of SHAPE: (A~F)

A – Graphics Track

B -- X/Y Track

C – Color Change (3 colors channels)

D – Dimmer Change

E – Iris, Color wheels, Gobo wheels change

F -- Other

8.1   Edit and call SHAPE

SHAPE can be called in Manual-Run, Single-Step Program, Multi-Step Program and Scene.

Call SHAPE in Scene:

Just need to record data of manual-run which uses SHAPE into Single-Step-Program or Scene.

When program or Scene runs, the corresponding SHAPE will run automatically.

Call SHAPE in Chase:

Just add SHAPE into the Program Step in editing Multi-Step Program, when the program runs, the corresponding SHAPE will run automatically.

Example of calling SHAPE in Manual-Run, operation is as follow:

1） Select fixtures firstly, it's suggested to use LOCATE to light up, and then set Colour, Dimmer and Pan/Tilt location;
(the Pan/Tilt location is at the center of SHAPE)

2） Press **PLAY** key, the indicator will flash, which means now it is in SHAPE menu.

3） Press **Edit...** soft key to enter edit status, as shown on the right:

4） Select shape No. by ◄ ► Key. (totally 4 Numbers, 4 Shapes can be surperposed in 1 fixture)

5） Open shape by ▲ Key. (close by ▼ Key)

6） **Select Shape:**
Press **Type** soft key, select shape by **Wheel A/B**.

7） **Set Speed / Direction:**
Press **Speed** soft key; Rotate **Wheel A** to set running speed.

Rotate **Wheel B** to set directions. Five directions: ⟨−, −⟩, ⟨ ⟩, |⟨, ⟩| (left, right, back and forth, left pause, right pause)

8） **Set Size / Distortion:**

Press Size soft key, set shape size by **Wheel A/B** (for example: the size of circle), and the shape distortion (for example: distort circle to be ellipse).

9） **Set Spread/Symmetry:**

Press **Spread** soft key, set spread value by **Wheel A** to make the location of every fixture different in a shape.

For example: When use shape of Circle, it can create wave effect for Tilt and make the fixtures move one after one. (The higher the spread value is, the bigger the offset will be, and v.v.)

Set **Symmetry** by **Wheel B**. For example: When the value is 5, it means every 5 fixtures will be symmetric.

*TIPS: Some shapes are based on current attribute, for example: Circle use current Pan/Tilt location as center, it means the whole shape will move when Pan/Tilt value is modified. And some are only for fixtures with special attribute. For example: rainbow is just for fixtures with RGB/CMY channels.

8.2 Stop SHAPE

There are 3 ways of operation to stop shapes as follows:

● **Stop all shapes:**

Press **STOP** key, all shapes will stop. Then Press **PLAY** key, the corresponding indicator will be bright and all shapes will restore running.

● **Stop shapes of certain fixtures:**

Steps: Select fixtures → Press **PLAY** to enter SHAPE menu → Press **CLR Shape** (F4) soft key Restore shape running by pressing **CLEAR** key to clear fixtures selecting

● **Run a "FORCE-STOP" shape:**

If some fixtures use "STOP" shape in a program, call that program to stop the running shape of these fixtures.
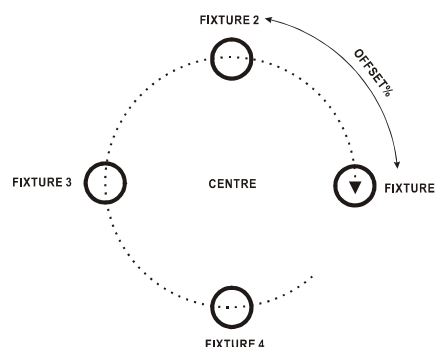
8.3 Check shape of "Reference Fixture"

Select "Reference Fixture", press **PLAY** to enter SHAPE menu; it will display the running shapes.
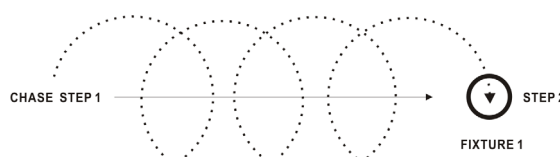
8.4 Skill in using shape

Example 1： Circle with 4 fixtures

1） Select 4 fixtures, set Pan/Tilt to make their spots overlapped (the center of circle);

2） Call a shape; set the Type=Circle, Speed=40%, Size=20%, Spread=25%.

Example 2： Move straight while circling

Program a "Multi-Step Program" (Chase) of 2 steps to make the fixtures move straight, then call the same circle in both steps.

Example 3：Superpose shape

Each fixture can run up to 4 shapes together to achieve multiple graphics.

E.g.: Call rainbow+circle together to make fixtures change colours like rainbow while circling.

Example 4：Use shape of "Force-Stop"

There is a Type of shape called "Stop", which can be used to stop shapes between playback programs. It can force to output a static scene when there are shapes running.

E.g.: No.2 fixture calls "Circle" in Playback 1.03, while it calls "Stop" in Playback 1.04. Run Playback 1.03 and then Playback 1.04, the running shape "Circle" will be forced to stop by shape "Stop".

9. Program

This chapter will introduce every function of program and how to edit program. 300 programs (including "Single-Step-Program" & "Multi-Step Program") can be recorded, in 30 pages, 10 programs each page, and controlled by 10 playback faders.

Program Number (**xx.xx**), the first number before dot is the page number, the second one after dot is the playback number in that page (Correspond to playback faders).

PROGRAM menu tree:

PROGRAM
- EditStep (F1)
- FadeTime (F3)
- FadeSync (F4)
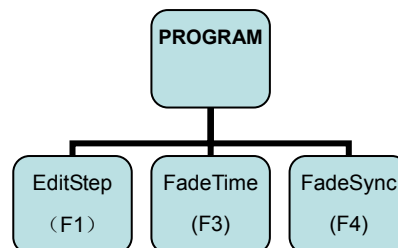
9.1 HTP and LTP channel

HTP channel (HIGHEST TAKES PRECEDENCE): ----- output the "highest value first"

This type of channel obeys the rule of "highest value first", which means only the one with highest value will be output if multiple playbacks control a HTP channel at the same time. Dimmer channel must be HTP channel.

LTP channel (LATEST TAKES PRECEDENCE): ----- output the "latest value first"

This type of channel obeys the rule of "latest value first", which means the last started playback will be output and kept until next one started if multiple playbacks control a LTP channel at the same time. Channels such as Pan/Tilt, Gobo should be LTP channel normally.

9.2 Empty LTP channel

When the value of certain LTP channel in a program is empty (no value), this channel will be ignored in playback.

For example: Program1.01 only records Pan/Tilt while other channels are empty. Program1.02 only records Colour with other channels empty. Then in playback, Program1.01 will only control the moving while Program1.02 will only control the colour, they will not affect each other.

TIPS: In editing programs, the attribute value which is unmodified manually will be empty, LCD will display " **.** ". Press **CLEAR** to clear fixture value.

9.3   Clear LTP remaining value in Playback

In playback, LTP channel will be output by the way of "latest value first", so even the playback fader is pulled down and the program is closed, the value of LTP channel will remain. Sometimes, in order to record a clean scene, the remaining value should be cleared.

Steps to clear remaining value are as follows:

Pull down all playback faders to close programs → Press **CLEAR** key to clear the value

9.4   Record Program

9.4.1 "Single-Step Program" and "Multi-Step Program"

There are 2 kinds of program: "**Single-Step Program**" and "**Multi-Step Program**" (CHASE).

● The program with only 1 Step is called "Single-Step Program", which is used as Scene.
● The program with multiple Steps is called "Multi-Step Program", which is used as Chase. (The number of Steps is not limited but it's decided by the memory of console)

9.4.2 Fast record "Program"

The way of fast recording "Single/Multi-Step Program" under running status is as follow:

*TIPS: It's suggested to clear LTP remaining value firstly in order to edit a clean scene.
          "LOCATE" is suggested in Manual-Run, it will give initial value to all fixture channels to
          avoid the affect of other programs in playback. (Unless the superimposed effect is needed)

Steps of recording:

1）Manual-Run to edit lighting effects; (Superimpose and run multiple saved scenes also can do)
2）Press and hold **RECORD** → (select fixtures by fixture **Numeric Key**)
                                        → Press **Playback Key** to finish recording;

   *TIPS: The step in marks ( ) can be skipped, all fixtures will be recorded if it is skipped.

   Attribute can also be chosen to record:
   Press and hold **RECORD** → (select single or multiple attribute by **Attribute Key**)
                                        → Press **Playback Key** to finish recording;
   ***TIPS:** The console will only record the manually modified attribute, other attribute will be empty. Scene that used to superimpose programs can be created by this way.
3）If there are saved programs in the **Playback Key** when recording, the current program will be saved as the next step of the existed programs (Normally used to record "Multi-Step Program")

9.5   Edit Program

Program can be created and edited in Program Menu, every step of "Multi-Step Program" can also be created, edited and set internal speed in the menu. Steps are as follow:

1）Press **PROGRAM** to enter Program menu; (Indicator above **Playback Key** will be bright if there is program recorded inside)

2）Press **Playback Key** to select program;

3）Press **EditStep** soft key(F1) to enter Step menu; (As shown on the right)

TOTAL.	STEP	TIME	CROSS%	
0015	[1]	[2.0]	[20]	
	Dimmer	01-B	DEL Step	F3
			NEW Step	F4

4）If the program is empty, press **NEW Step** soft key(F4) to add a new step;

5）Edit lighting effect by Manual-Run Fixture;

6）Set <u>TIME</u> & <u>CROSS%</u> of current step(Used in **Auto2 --** The speed and time of Auto2 mode)

- TIME: the time from former step to current step&stay(Range: 0.1~180s), the shorter the time is, the faster the chase will run and vice versa;

- CROSS: speed of crossfade between steps. (Range: 0~100%), 0% is slowest, 100% is fastest. For example: Cross=60%, it means using 40% of time to crossfade from the previous step to the current step, then using 60% of time stay in the current step.
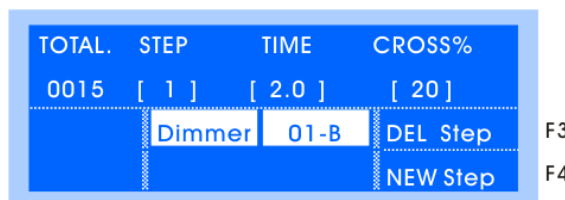
*TIPS1: use ◄ ► Cursor Key to select menu item, use ▲▼ Cursor Key to modify item;

*TIPS2: "Single-Step Program" just needs to be edited 1 step. "Multi-Step Program" can be added new steps. The console will automatically copy the last step to the new one in order for a coherent chase, data of current step can be cleared by pressing **CLEAR** if it's unwanted.

*TIPS3： use ◄ SETP ► key to check data of every step, modified data will be saved automatically.

*TIPS4： new step can be added after current step by pressing **NewStep** soft key at the current step.

*TIPS5： current step can be deleted by pressing **DEL Step** soft key.

9.5.1 Copy Step

Operation of copying step is as follow.

- **Copy a whole program to the next step of current step:**
  E.g.: copy Program1.01 to the next step of Step3 in Program1.02:
  1）In EditStep menu, select Step3 in Program1.02;
  2）Press and hold **COPY** → Press **Playback Key** of Program1.01 to finish copying.

- **Copy single step ---** this function have to be achieved by the assistance of SCENE.
  E.g.: Copy Step9 in Program1.01 to Step10 in Program1.02;
  1）In EditStep menu, select Step9 in Program1.01 and record it to a SCENE
  2）Select Step10 in Program1.02 in EditStep menu, then call the SCENE just recorded.

9.6 Delete Program

Operation of deleting the whole program is as follow:

Press and hold **DELETE** key → Press **Playback Key** of the program to finish deleting.

9.7 Copy Program

Copy a program to another, the operation is as follow:

Press and hold **COPY** key → Press **Playback Key**(source) → Press another **Playback**

**Key**(target); select **Playback Page Key** first if the target is in another page.

9.8   PLAYBACK of Program

Push up Playback Fader or press Playback Key to run the corresponding program.

TIPS1: Press **CLEAR** firstly to ensure there is no data of Manual-Run to affect the playback running.

TIPS2: Ensure Master Faders of **Playback** and **Grand** are pushed up before running playback to avoid no output of Dimmer.

- Up to 10 playbacks can run at the same time.
- All HTP channels will follow playback faders to fade in/out. LTP channels will instantly start(LTP-inst) once the playback fader is pushed, it can also be set to follow playback fader to fade in(LTP-fade)
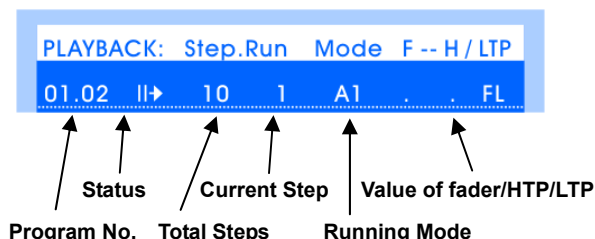
9.8.1 Turn Pages of Playback

Turn pages of playbacks by **Playback Page Key**. Press and hold the key for fast turning.

TIPS: Playback fader that pushed up will keep outputting after page is turned, the program of the same fader in the new page will not be output until the fader is pulled down to 0 and pushed up again.

9.8.2 Playback Key

In Playback Running menu, press F4 soft key to switch the controlling mode of Playback Key to be Swop, Flash or LTP output.

Swop   --- Only 1 playback can be output at the same time.

Flash   --- Press and hold **Playback Key**, the program will be output; Release to stop it.

LTP output (*)   --- Output LTP channels in advanced without Dimmer output. Then push up Playback Fader to output Dimmer.

9.8.3 Use "Playback Menu"

Playback menu is used to set the run parameters of "Multi-Step Program". Press **TIME/PB** key to enter Playback menu, select program by **Playback Key**, then set the speed(Auto1), Run Mode, Start and End way of the current program. As shown on the right:
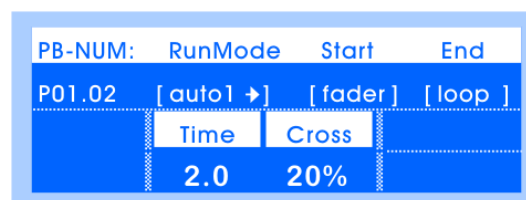
- **Run Mode**

    There are 3 modes of Synchronous trigger to run "Multi-Step Program";

    Auto 1：the running of "Multi-Step Program" is controlled by external speed.

        (In this mode, all steps will ignore the internal speed and run the external speed.)

    Auto 2：the running of "Multi-Step Program" is controlled by internal speed.

    Music：the running of "Multi-Step Program" is triggered by Music rhythm.

    TIPS：Differences between internal speed and external speed of "Multi-Step Program":

    --- Every "Multi-Step Program" has its own external speed which can be set in Playback Menu, the pace of all steps in the program will be the same while the program run external speed.

    --- Every step of "Multi-Step Program" has its own internal speed, in EditStep menu, internal speed of each step can be customized individually.

- **Run Direction**   The default direction of the "Multi-Step Program": ◄(Left), ►(Right).

- **Start Way**

   There are 2 ways to start the playback of "Multi-Step Program":

   1）**fader:**

   The "Multi-Step Program" will start running when Playback Fader is pushed up from 0.

   2）**GO:**

   The connected "Multi-Step Program" will start running by pressing **GO/STOP** key or corresponding **Playback Key**. Programs will not start by pushing up Playback Fader.

- **End Way**

   There are 2 ways to end the playback of "Multi-Step Program":

   1）**Loop:**

   When "Multi-Step Program" runs to the last step, it will return to the first step and run again.

   2）**Stop:**

   When "Multi-Step Program" runs to the last step, it will stop until it's started again.

- **Value of external speed** (external speed of "Multi-Step Program")

   External speed of "Multi-Step Program" is used for Synchronous trigger in **Auto1**. External speed of current "Multi-Step Program" can be set by **Wheel A/B** in Playback menu.

9.8.4 Connect "Multi-Step Program"

The "Multi-Step Program" control area (as shown on the right) can control the program (its number will be displayed in LCD screen) which is connected to the area.

2 ways to connect:

- **First:** Push **Playback Fader** or press **Attribute Key** to connect the corresponding program. (Indicator of corresponding **Attribute Key** will flash fast)

- **Second:** Press **TIME/PB** key to enter Playback menu, then press **Attribute Key** to connect the corresponding program. This method can avoid to affect the output when connecting.

9.8.5 Control "Multi-Step Program"

- **GO/STOP:** Programs can be run and stopped by pressing **GO/STOP** key after it is connected to the control area;

- **◄ STEP ►**：Direction of programs can be temporarily changed by pressing **◄ STEP ►** key after it is connected to the control area; This key can also be used in STOP status to manually run steps gradually.
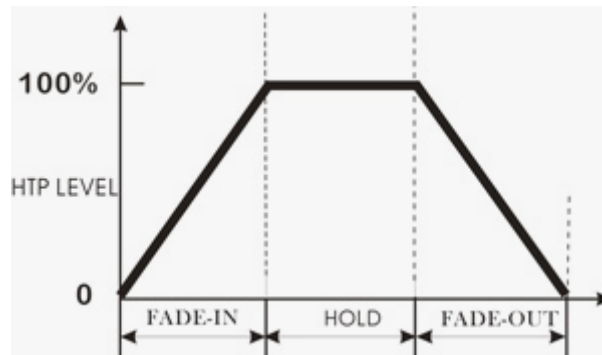
9.9 Fader Time of Playback

Every program has its own fader time of playback, users have to know them well to get good grasp of a show. The fader time of HTP channel and LTP channel is introduced individually as follows:

HTP Time

- HTP Time of Fade In: The time needed for HTP channel value to go from 0 to 100% after the Playback Fader is pushed up.

- HTP Time of Fade Out: The time needed for HTP channel value to go from 100% to 0 after the
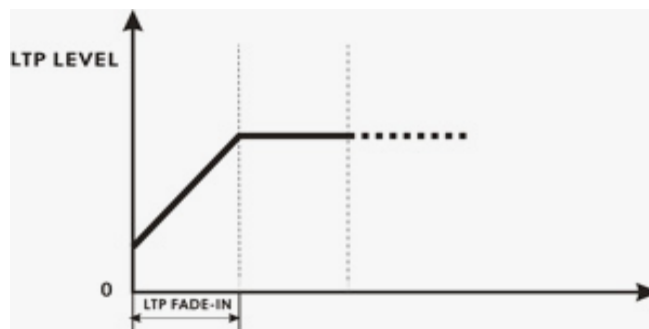
Playback Fader is pulled down to bottom.

(Diagram of HTP Time)

LTP Time

● LTP Time of Fade In: The time needed for LTP channel value to go from original value to next value after the Playback Fader is pushed up.

(Diagram of LTP Time)

9.9.1 Edit Fader Time

　　Path: PROGRAM → FadeTime

Enter FadeTime menu, as shown on the right:

Select program by **Playback Key**, set time by ◄ ► ▲▼

Cursor Key or **Wheel A/B**. Range: 0.1s～59m 59s.

Clear the selected item by pressing **CLR Time** soft key.

Remark: The modification of time doesn't affect the running program, modified time will be used until the Playback Fader is pulled down to 0 and pushed up again.

9.10 Fader Synchronization of Playback

　　Path: PROGRAM → FadeSync

Enter FadeSync menu, as shown on the right:

Select program by **Playback Key**, the following items of Fader Synchronization can be open/close:

● **LTP-Sync**

When it is on: LTP channel value will change correspondingly with the Playback Fader pushed up / pulled down.

(Especially suitable for Pan/Tilt to follow the change of fader)

● **SHAPE--Speed Sync**

When it is on: Speed of SHAPE in the program will be synchronously controlled by Playback Fader, it is used for directly controlling of SHAPE speed.

● **SHAPE—Size Sync**

When it is on: Size of SHAPE in the program will be synchronously controlled by Playback Fader, it is used for directly controlling of SHAPE size.

10. SCENE

There are totally 2 pages (A / B) for SCENE, up to 20 scenes can be saved in each page. Switch page by SCENE **A / B** Function Key, select Scene Number by pressing **1~20 Numeric Key**.

10.1 Edit SCENE

● **Record Scene:**

1) Manual-Run to edit lighting effects; (Superimpose and run multiple saved scenes or playbacks also can do);

2) Press and hold **RECORD** → (Select fixtures) → Press **Scene Numeric Key** to finish recording;

*TIPS: Step in parentheses ( ) can be skipped, if it's skipped, data of all fixtures will be recorded.

Attribute can also be chosen to record:

Press and hold RECORD → (Select single or multiple attribute by **Attribute Key**)

→ Press Scene **Numeric Key** to finish recording;

*TIPS: if select attribute, the console will only record the modified data of the selected attribute.

Create scenes for superimposed through this method.

● **Delete Scene:**

Press and hold **DELETE** → Press **Scene Numeric Key** to finish deleting;

● **Copy Scene:**

Press and hold **COPY** → Press **Scene Numeric Key** (source)

→ Press another **Scene Numeric Key** (target);

(The target **Scene Numeric Key** can be in another page)

● **Check Scene:**

Press and hold **RECORD**, the indicator above the **Scene Numeric Key** will be bright if there is data saved in it.

10.2 Run SCENE

Switch Pages by pressing SCENE **A / B Function Key**，select Scenes to run by **1~20 Numeric Key.**

*TIPS1: Press and hold SCENE **A / B Function Key** for 2 seconds to stop the output of all Scenes.

*TIPS2: When the indicator of **A / B Function Key** is bright, it means the corresponding page is currently selected. When the indicator flashes slowly, it means there are Scenes in that page outputting.

*TIPS3: It's very convenient to make various lighting effects by superimposing Playbacks and Scenes.

Modes of Scene Numeric Key:

- Scenes in Page A are of **LATCH** mode, which means multiple scenes can be output together;
- No.1~10 Scenes in Page B are of **FLASH** mode;
- No.11~20 Scenes in Page B are of **SWOP** mode, only 1 scene can be output at the same time.

11. Synchronous Parallel Operation

Through MIDI interfaces, Master & Slave consoles can be connected to achieve synchronous parallel operation, it means the "Slave console" will follow the operation of the "Master console".

Operation that can be Synchronous: Playback (including: faders, Playback Keys, Page Keys, Go/Stop Keys & ◀ **STEP** ▶ Key) and Scene.

Operation Steps are as follows:

1) Enter Midi Sync menu to set the Master/Slave status of the consoles separately, and select the MIDI channel(it has to be the same channel)

Master Console   Slave Console
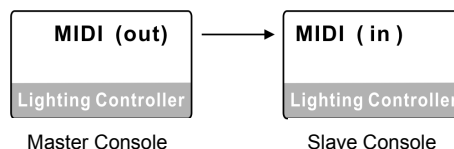
2) Connect "Slave console" to "Master console" with MIDI signal cable.

12. Light Show (Auto Playback)

The console supports "Light Show"(auto playback) in External Time Code & Internal Time Code. Operation that can be recorded/played: Playback (including: faders, Playback Keys, Page Keys, Go/Stop Keys & ◀ **STEP** ▶ Key) and Scene.

12.1 External Time Code (MIDI)

Users can connect the console with PC through MIDI interface (by using USB to MIDI convertor), and record/play "Light Show" with music by MIDI software (For example: Cubase) in PC.

Console   Computer
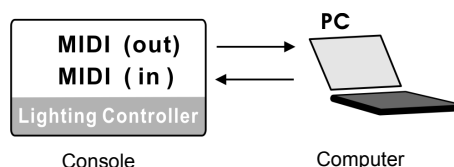
- **Record:**

   Set the console in "Master" status, connect it with PC and run Cubase to start recording.

   *TIPS: After the record starts, it is recommended to pull all the Playback faders to bottom and press key **CLEAR**. The console will send the initial parameters to the computer for recording.

- **Play:**

   Set the console in "Slave" status, connect it with PC and run Cubase to start playing back.

   *TIPS: Under "Slave" status, pressing **CLEAR** Key will clear all the running data of the console.

12.2 Internal Time Code (One Key Light Show)

There are 20 keys for recording "One Key Light Show" in the console to achieve "Light Show" (without PC).

Press and hold **SHOW** Key for 2sec to enter "Slave" status (Light Show), the indicator of **SHOW** will be bright, the **1~20 Numeric Keys** will be used as internal "Light Show" key. (TIPS: Press and hold **SHOW** key for 2sec again, the console will be back to "Master" status)

Under "Slave" status, the following operation of "One Key Light Show" is archievable:

- **Record:**   1) Press and hold key **RECORD** → Press "Light Show" **Numeric Key** to prepare for recording.

   2) The recording will start when there is recordable operation (like push faders, turn pages etc.)

   *TIPS: it's recommended to press key **CLEAR** after the recording starts, in order to clear the outputting data and record the initial parameters.

   3) Press the "Light Show" **Numeric Key** again to end recording.

- **Play:**   Press corresponding **Numeric Key** to start playing. (TIPS: Press it again to stop playing)

- **Copy:**   Press and hold **COPY** Key → Press a **Numeric Key**(copy)   → Press another **Numeric Key**(paste);

- **Delete:**   Press and hold **DELETE** Key → Press corresponding **Numeric Key** to delete;

13. Priority Levels of Different Operations

Priority Levels of different operations are as follows:

Manual-Run Fixture (Priority over) → **SCENE** (Priority over) →   **Playback**

- **Priority between Playbacks:**

   Priority between Playbacks is according to the rules of HTP and LTP channel mentioned above. (HTP is "Highest value takes precedence"; LTP is "Latest value takes precedence".)

- **Priority between Scenes:**

   Between Scenes, all channels will be output according to the rule of HTP, which is more convenient to superimpose scenes.

- **Priority between SCENE and Playback:**

   Between SCENE and Playback, HTP channels will be output according to the rule of HTP; LTP channels will output the value of SCENE. (It means SCENE can superpose on Playback,

playback will restore outputting after SCENE is cancelled.)

● **Priority of Manual-Run Fixture:**

Manual-Run Fixture is of the highest priority, users have to be accustomed to using **CLEAR** key to clear the data of Manual-Run, to ensure the output of Playback and SCENE.

14. Software Upgrade

Upgrade file can be obtained from our dealers and company website. Software has to be upgraded by U-disk.

Steps of upgrade are as follow:

1) Copy the upgrade file to the root directory of U-disk;

2) Turn off the console;

3) Press and hold **PROGRAM** Key and **SETUP** Key at the same time, then turn on the console;

   Hold the keys until the LCD screen displays "UPDATE PROGRAM ===========".

4) Press ▶ **Cursor Key** to confirm, then insert U-disk, the console will automatically upgrade.

5) When the upgrade is finished, the console will automatically restart.

   (Upgrade will not affect user's data in the console)

15. Data Protection

Users can protect their own data in the console by the function DataLock and Login-Password

Steps to enter Data Protection menu:

1) Press and hold **SETUP** Key, turn on the console, hold the keys until the LCD screen displays "INPUT PASSWORD –";

2) Press **Numeric Key 11, 13, 18, 20** together.

Enter SETUP of Data Protection menu, as shown on the right:

● **Data-Lock:** If user doesn't hope the data in console to be modified by others, set the Data-Lock status to be "on".

After this operation, the data in console can only be called but can't be modified or programmed. To cancel the "Data-Lock", set its status to be "off".

● **Login-Password:** User can set password protection, the password is required to be input when the console is turned on every time.

To use this function, set the "Login-Password" status to be "on".

Login-Password = Press **Numeric Key 1, 2, 9, 10** together

NOTICE: Please keep this page, if lost the password, please contact the seller for help!