

1024 Lighting Controller

USER MANUAL



1024 Lighting Controller

Table of Contents

1	Overview	1
1.1	<i>Introduction</i>	<i>1</i>
1.2	<i>Specifications</i>	<i>1</i>
2	Installation	1
2.1	<i>Unpack</i>	<i>1</i>
2.2	<i>Safety instructions</i>	<i>2</i>
3	Operation	3
3.1	<i>Front Panel</i>	<i>3</i>
3.2	<i>Layout</i>	<i>3</i>
3.3	<i>Glossary</i>	<i>4</i>
4	Patching	6
4.1	<i>Patch dimmer</i>	<i>6</i>
4.2	<i>Patch moving light fixtures</i>	<i>6</i>
4.3	<i>View the patching</i>	<i>7</i>
4.4	<i>Changing the DMX address of a fixture</i>	<i>7</i>
4.5	<i>Deleting a patched fixture</i>	<i>7</i>
4.6	<i>Patch Utilities</i>	<i>8</i>
5	Controlling dimmers and fixtures	9
5.1	<i>Selecting fixtures and dimmers for control</i>	<i>9</i>
5.2	<i>Changing attributes of the selected fixtures</i>	<i>9</i>
5.3	<i>Stepping through Selected Fixture one at a time</i>	<i>10</i>
5.4	<i>The Align function</i>	<i>10</i>
5.5	<i>Flip Function</i>	<i>10</i>
5.6	<i>Fan Mode</i>	<i>10</i>
5.7	<i>Advanced Options</i>	<i>11</i>
6	Palette	12
6.1	<i>Customize palette</i>	<i>12</i>
6.2	<i>Which attributes are stored in palettes</i>	<i>12</i>
6.3	<i>Storing a palette</i>	<i>12</i>

6.4	<i>Recalling a palette value</i>	13
6.5	<i>Delete a Palette</i>	13
7	Shapes	14
7.1	<i>Selecting a shape</i>	14
7.2	<i>Shape Parameters</i>	15
7.3	<i>Edit a Running Shape</i>	15
7.4	<i>Change Direction</i>	15
7.5	<i>Delete a Shape</i>	15
7.6	<i>Relative Shapes and Absolute Shapes</i>	16
7.7	<i>Playback Parameters</i>	16
8	Scenes	17
8.1	<i>Creating a Scene</i>	17
8.2	<i>Using shapes in Scenes</i>	18
8.3	<i>HTP and LTP channels</i>	18
8.4	<i>Playing back a Scene</i>	18
8.5	<i>Editing a Scene</i>	19
8.6	<i>Include function</i>	19
8.7	<i>The "Off" button</i>	19
8.8	<i>Copy a Scene</i>	20
8.9	<i>Delete a Scene</i>	20
8.10	<i>Time</i>	20
9	Chase	22
9.1	<i>Programming a chase</i>	22
9.2	<i>Running a chase</i>	23
9.3	<i>Connecting a chase to the controls</i>	23
9.4	<i>Setting speed, crossfade and direction</i>	23
9.5	<i>Manually controlling the chase step</i>	24
9.6	<i>Delete a Chase</i>	24
9.7	<i>The global time of a chase</i>	24
9.8	<i>Set separate time for a step</i>	25
9.9	<i>Advanced Options</i>	25

10	Setup	26
10.1	<i>U-Disk Management</i>	26
10.2	<i>Wipe</i>	26
10.3	<i>Language selection</i>	26
10.4	<i>Personality Management</i>	26
10.5	<i>User Settings</i>	27
10.6	<i>System information</i>	28
10.7	<i>Lock desktop</i>	28
10.8	<i>Art-Net</i>	28
11	Update	28
12	Personality Builder	29

1 Overview

1.1 Introduction

1024 DMX controller can control up to 96 fixtures. It is compatible with the library in Avolite Pearl R20 format and featured with built-in shape effects of pan/tilt circle, RGB rainbow, beam dimming wave, etc. 10 scenes and 5 built-in shapes can be output simultaneously. Faders can be used to output scenes and adjust the intensity of the dimmer channels in the scenes.

1.2 Specifications

DMX512 channel number	1024
Fixture	96
Re-patched Fixture address	Yes
Swap Pan/Tilt	Yes
Reversed channel output	Yes
Channel slope modification	Yes
Channels for each fixture	40 primary + 40 fine tune
Library	Avolite Pearl R20 library supported
Scene	60
Scenes to run simultaneously	10
Total Scene steps	600
Time control of Scenes	Fade in/out, LTP slope
Shapes for each Scene	5
Scene and dimmer by slider	Yes
Swap Scene	Yes
Flash Scene	Yes
Shape generator	Shapes of Dimmer, Pan/Tilt, RGB, CMY, Color, Gobo, Iris , Focus, Zoom
Shapes to run simultaneously	20
Master slider	Global
Real time blackout	Yes
Channel value by wheel	Yes
Channel value by slider	Yes
Dimmer by slider	Yes
USB Memory	FAT32 supported

2 Installation

2.1 Unpack

Please check the below items when unpack the package:

- KingKong1024 x 1 unit
- Installation CD x 1 piece
- Power cable x piece

Optional Accessories

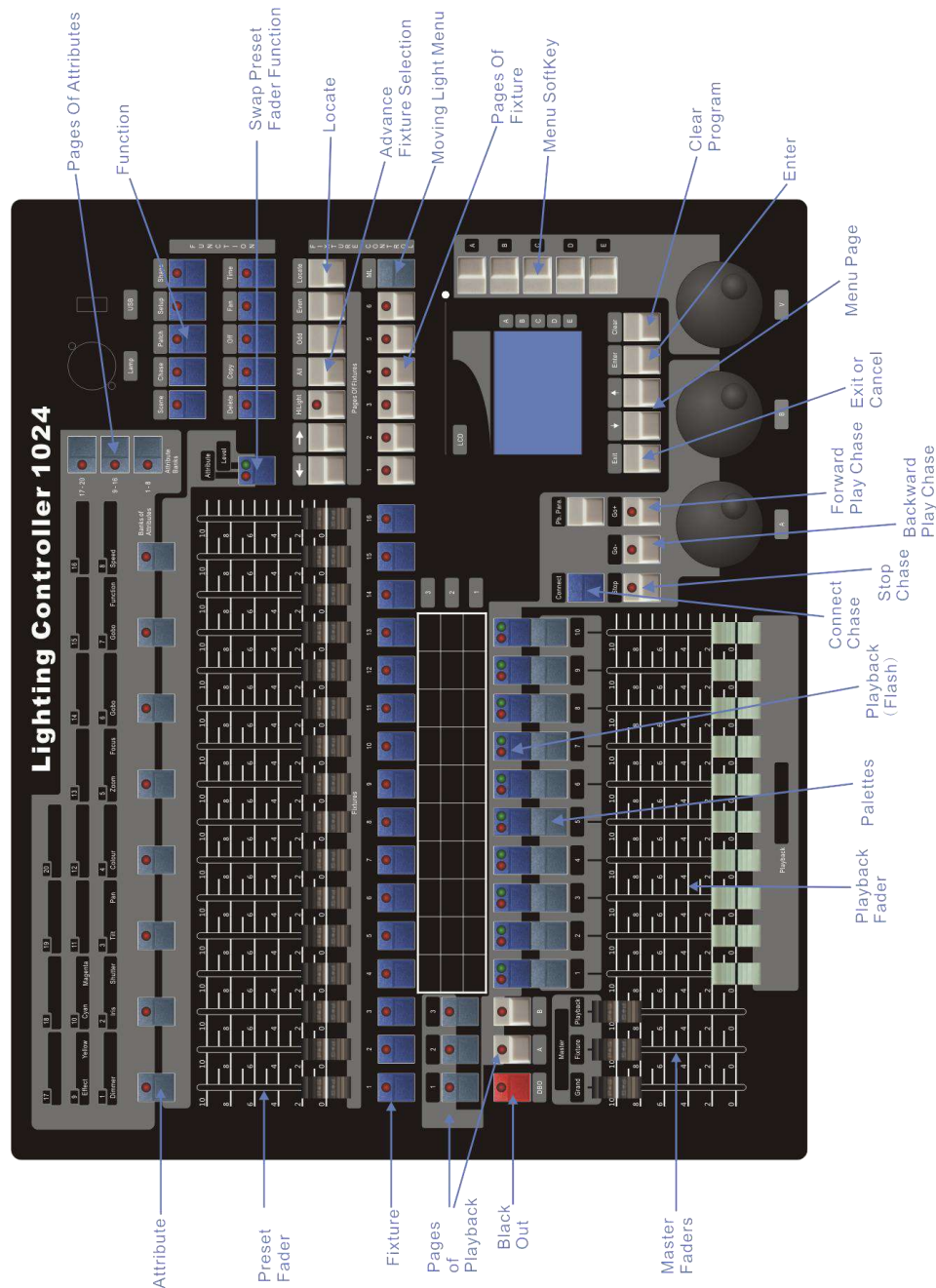
- Flight case
- Goose-neck lamp
- USB Memory stick

2.2 Safety instructions

- The unit must be well-grounded before using.
- Do not splash any liquid on the unit.
- Do not use or store the unit in a wet or dusty place.

3 Operation

3.1 Front Panel



3.2 Layout

- The **Attribute buttons** are used to select which attributes of a fixture (e.g. color, gobo, pan, focus) are going to be controlled using the control wheels. The buttons have light on to show you which attributes are active.
- The **Preset faders** are used to control individual dimmer channels and fixture intensities or control fixture attributes.

- The **Fixture Buttons** are used to patch and select fixtures.
- The **Blackout button** allows you to blackout the whole console. When the Blackout button is activated or when the master slider is not full on, its indicator will be on.
- The **Master Fader** controls the overall output of the intensities in the console. When the master slider is at 0, the dimmer channels in the console will all be 0. You will normally have this master slider set at full; otherwise, the indicator of the Blackout button will keep flashing.
- The **Playback faders & buttons** are to save and to play scenes/chases.
- The **Playback page** can page up/down 10 pages of playbacks.
- The **Chase control area** is to control the running of chases or cue lists.
- The **Wheels** are used to modify the attributes of fixtures, the speed and the slope and other settings of chases and cue lists.
- The **Menu Operation buttons** is used to cancel, select, page up/down or clear the programming area in menu operation.
- The **Menu Option buttons** are used to select control options. The display next to the buttons shows what each one will do. The options for each key change depending on what the console is doing.
- The **Fixture Control buttons** is with the buttons to select fixtures by step or by odd/even and to locate fixtures.
- The **Function buttons** are used to carry out functions such as storing cues, copying, saving to disk, etc. These buttons have lights on to indicate when they are active.

3.3 Glossary

- Scene: The data of a stage Scene that are saved in a playback.
- Chase: The data of a series of fixture performance that are saved in a playback.
- HTP: The type of the channels with the highest output (highest takes precedence), normally for dimmer channels.
- LTP: The type of the channels with the latest output (latest takes precedence), for non-dimmer channels.
- Fade in: The intensity of the light changes from dark to bright.
- Fade out: The intensity of the light changes from bright to dark.
- Slope: It means the change of the gradual changing in a fixture's channel data.
- Scene: A single stage look programmed onto a Playback button or fader. Also known as MEMORY, STATE, CUE, LOOK.
- Chase: A sequence of one or more pre recorded steps which automatically run one after the other.
- Chase Steps: Individual cues within a Chase. See above.
- Playback: Area of the system that can replay recorded Scenes or Chases using Playback Faders.
- Record by fixture: This is the normal mode of the 1024P 1024. It means that when you record a cue, all attributes of every fixture that you have changed are recorded in the cue. So if you change only the position of a fixture, the color, gobo,

intensity and all other attributes of that fixture are recorded as well. This is useful because you know that when you recall the cue, it will look exactly as it did when you saved it. However, it can be slightly inflexible if you want to combine cues.

- Record by channel: This means that only attributes you have changed are recorded in the cue. So if you change the position of a fixture, only the position is recorded. When you recall the cue, the color, gobo etc will remain as they were last set. This means you can use a cue to change the position of some fixtures while leaving the color set from a previous cue, allowing more variety when you are running a show. It is a powerful feature but you can easily get yourself into trouble with it, so you need to be sure which attributes you need to record and which you want to "show through". When you're learning, it's best to have some cues "recorded by fixture" which turn on the fixtures in a known state, then have some color cues to modify just the color, or some gobo cues to set the gobo, or other attributes.

4 Patching

4.1 Patch dimmer

Each dimmer channel is allocated to one fixture button. If you want to link dimmers together, you can allocate several to the same fixture button.

-
- 1) In the initial menu, press Patch, then <A> [Dimmer].
 - 2) On the second line of the display, the 1024 shows the DMX address it is going to patch. The third line shows the current output connector A\B; Press <C> to toggle. You can change the DMX address by rolling Wheel V; or, press <D> to get a suitable DMX address automatically.
 - 3) To patch a single dimmer, press a Fixture button. To patch a range of dimmers, hold down the Fixture button for the first dimmer in the range, then press the last fixture button in the range. The range of dimmers will be patched to sequential DMX addresses.
 - 4) Repeat from step 2 for other dimmers.
-

You can patch multiple dimmers onto the same Fixture button by adjusting the DMX address of the next dimmer to be patched and pressing the Fixture button again.

4.2 Patch moving light fixtures

It's more complicated to patch fixtures than to patch dimmers as there are more attributes in fixtures to control, such as pan, tilt and color, etc., but, there is only brightness in a dimmer. When patching a fixture, a consecutive DMX channels will be used instead of only one channel.

-
- 1) In the initial menu, press <Patch>.
 - 2) If the desired fixture library is not available in the console, you can copy it (in R20 format) to the root directory of a USB Memory stick. (Note: It must be at the ROOT directory. And, it must be R20 format.)
 - 3) Press [Select a Fixture]. It will access the fixture library in the USB Memory stick; if the USB is not inserted, then, it will access the library in the console.
 - 4) Press <Up> or <Down> to browse into the library; Press the soft key to select. When a library in USB Memory is selected, the library will be added or updated into the console.
 - 5) On the second line of the display, the 1024 shows the DMX address it is going to patch. The third line shows the current output connector A\B; Press <C> to toggle. You can change the DMX address by rolling Wheel V; or, press <D> to get a suitable DMX address automatically.
 - 6) To patch only one fixture, press only one Fixture Button that has not been used; To patch a series fixtures, press and hold a Fixture Button and then press another Fixture Button, the fixtures will be patched in consecutive DMX address codes. One Fixture Button can be used to patch only one fixture.
 - 7) Repeat from step 5 for other fixtures of the same type.

- 8) Press <Exit> to return to the upper menu; then, you can select fixtures of another type.

-
- Unlike to patch dimmers, two or more fixtures cannot be patched to a same fixture button. If a Fixture Button is occupied, a new patch cannot be implemented. You have to use another fixture button or delete the fixture in the Fixture Button.

4.3 View the patching

After patching all the fixtures, follow the below steps to ensure that the patched fixtures are right for the controller:

-
- 1) In the initial menu, press <Patch> to enter Patch menu.
 - 2) Press <E> [Patch Information] to view the patching info.
 - 3) The button number, fixture name and address code will be displayed in the menu. Press < Up> or <Down> to browse. Press the fixture button to go to the fixture directly.
-

4.4 Changing the DMX address of a fixture

You can re-patch a fixture to a different DMX address or a different DMX output line. All programming is kept.

-
- 1) In the initial menu, press <Patch> to enter Patch menu.
 - 2) Press <C> [Repatch Fixtures].
 - 3) On the second line of the display, the 1024 shows the DMX address it is going to patch. You can change this by rolling Wheel V. The third line shows the output connector; press <C> to change.
 - 4) Press the fixture button for to patch the fixture at the new address.
 - 5) Press <Enter> to confirm the change.
-

4.5 Deleting a patched fixture

-
- 1) In the initial menu, press <Patch> to enter Patch menu.
 - 2) Press <Delete> to enter the Delete Patch menu.
 - 3) Press the Fixture button that you want to delete.
 - 4) Press <Enter> to delete.
-
- You can delete individual DMX channels from a Fixture button by modifying the channel number instead of pressing a Fixture button. This is useful for deleting dimmer channels from Fixture button which have multiple channels patched to them. Be careful not to delete individual channels out of fixtures using this function.

4.6 Patch Utilities

The 1024 allows several options to be set for each fixture or dimmer when it is being patched. The Patch Options menu is accessed by pressing <D> [Patch utilities] while you are in patch mode. Set the options before you start programming, because playbacks will play back differently when the options are on.

The options are:

- **Invert** – Allows you to invert an attribute of a fixture, so when you set zero the output will be full. You cannot invert some attributes.
-

- 1) In the initial menu, press <Patch> to enter Patch menu.
 - 2) Press <D>[Patch Utilities] to enter the Patch Utilities menu.
 - 3) Press [Set Invert]
 - 4) Select the desired fixtures and press the attribute buttons to select the desired attributes. Then, press or <C> on the right of the screen to modify.
-

- **Set/Reset Instant Mode** – When the 1024 faders LTP (movement) channels between two playbacks, the LTP values normally change smoothly. You can set Instant mode to make the channel snap instantly to the new value.
-

- 1) In the initial menu, press <Patch> to enter Patch menu.
 - 2) Press <D>[Patch Utilities] to enter the Patch Utilities menu.
 - 3) Press <C>[Set/Reset Instant Mode].
 - 4) Select the desired fixtures and press the attribute buttons to select the desired attributes. Then, press or <C> on the right of the screen to modify.
-

- **Swap Pan & Tilt** - If you have some fixtures mounted sideways, it can be useful to swap the pan and tilt channels over.
-

- 1) In the initial menu, press <Patch> to enter Patch menu.
 - 2) Press <D> [Patch Utilities] to enter the Patch Utilities menu.
 - 3) Press <D> [Swap Pan & Tilt] to enter Swap Pan and Tilt.
 - 4) Press <Up> or <Down> to browse the swop info of pan and tilt. You can change the setting with the buttons on the right of the screen.
-

5 Controlling dimmers and fixtures

5.1 Selecting fixtures and dimmers for control

To select the fixtures or dimmer channels that you want to control, you use the Fixture buttons. You can select fixtures or dimmers individually, or several at once.

-
- 1) Press the Fixture buttons for the fixtures you want. The LED in the Fixture button comes on for selected fixtures.
 - 2) To select a range of fixtures, hold down the Fixture button for the first fixture then press the Fixture button for the last fixture.
-

Here are some other things to know:

- Press <Locate> to position the selected fixtures in open white at a central position. These Values are not loaded into the programmer – they won't be saved in a playback unless you modify the fixture.
- You can deselect a fixture by pressing the fixture select button again.
- Once you have changed any attribute, pressing a Fixture button will deselect all fixtures and start the selection process again.

5.2 Changing attributes of the selected fixtures

"Attributes" are the functions of the fixture, like pan, tilt, color, dimmer, etc. You select which attributes you want to modify using the buttons on the top left of the console and set values using the wheels at the bottom of the 1024. The attributes available depend on the fixture type. Dimmer channels only have a dimmer attribute. 1024 can control up to 40 attributes per fixture.

Each attribute button controls two attributes, one on Wheel A and another on Wheel B.

-
- 1) Press the button for the attribute to be changed.
 - 2) Turn the wheels to set the attribute. The display above the wheels shows which attributes are being controlled.
 - 3) Repeat from Step 1 to change another attributes of the selected fixtures.
-

Some other things to know about attributes:

- The Attribute buttons let you select the first 8 attributes. Another 12 attributes are available by pressing the "9-16" and "17-20" button, to cater for the weird and wonderful DMX fixtures of the future. The light on the button stays on when you are using the top 20 attributes.
- If the display above the wheels does not show the attribute when you press the button, that attribute is not available on the selected fixtures.
- There are three operation modes for the sliders above the Fixture buttons. Press <Fader Mode> to change the mode.
 - Level (Pro): The preset faders are to control the dimmer channels of the Fixture button. The data will enter the programmer.

- Level (Run): The preset faders are to control the dimmer channels of the Fixture button. The data will not enter the programmer.
- Attribute: To control the attributes of the selected fixtures. The data will enter the programmer.

5.3 Stepping through Selected Fixture one at a time

If you have selected a range of fixtures, or a group, the 1024 has functions to step through the selected fixtures one at a time. This can make it easier to program a range of fixtures because you don't have to select each one manually.

-
- 1) Select a range of fixtures or a group.
 - 2) Press <←> (Reverse) and <→> (Forward) to select the fixtures in the range one at time.
 - 3) Press <HiLight> button to highlight the output of the selected fixture, so that you can see it on site (the button LED is lit when in Highlight mode)
 - 4) Press <All> button to reselects the all the fixtures that have been selected previously.

-
- Press <Odd> or <Even>, the fixtures at the odd/eve positions will be selected.

5.4 The Align function

The **Align** function allows you to copy an attribute from one fixture to others. This can be useful if you want to set a row of scans to have the same tilt position, or if you want to copy a color from one fixture onto other fixtures.

-
- 1) Press an Attribute button that you want to align.
 - 2) Select the fixture to use as the reference
 - 3) Select the other fixtures you want to align to the first one.
 - 4) Press <M.L. Menu>, then, press [Align Attribute].
 - 5) The attributes will be copied to all the selected fixtures.
-
- You can align all attributes of the fixtures using <A> [Align Fixtures]. (It doesn't matter which attribute is selected).

5.5 Flip Function

The flip function is mainly used for moving heads. This type of fixture has two possible pan and tilt positions for each point on stage, and this function alternates between them. This allows you more freedom to make movement without hitting the pan stop.

-
- 1) Select desired fixtures to flip.
 - 2) Press <ML>.
 - 3) Press <C>.
-

5.6 Fan Mode

Fan mode automatically spreads out the values on a selected range of fixtures. If used on pan and tilt, the result is spreading out "rays" of light beams. The first and last fixtures of the range are affected most, and the central fixtures are affected least. The amount of fan can be set using the wheels. As with shapes, the order in which you select the fixtures sets how the fan effect works.

The fan effect, while normally used on pan or tilt attributes, can be applied to any attribute.

-
- 1) Select the fixtures you want to fan
 - 2) Select the attributes to fan (Pan/Tilt or Color, etc);
 - 3) Press <Fan>
 - 4) Set the amount of fan using the wheels;
 - 5) The controllable attributes will be displayed in the bottom two lines in the screen.
 - 6) Turn off Fan by pressing the <Fan> button again when you have finished
-

Fan mode needs to be used on at least 4 fixtures to give good effects. If you have an odd number of fixtures, the central fixture will not move in fan mode.

Press the Fan button again to leave Fan mode. Any effects you have set will remain in the programmer.

- It's fairly easy to accidentally leave Fan mode turned on and be very confused about why the wheels aren't working properly, so turn it off as soon as you have completed the effect.

5.7 Advanced Options

There are more two pages of advanced options under <ML> menu; press <Up> or <Down> to scroll.

- **Align:** Refer to Section 5.5.
- **Flip:** Refer to Section 5.6.
- **De-Select fixtures** deselects all fixtures but does not clear the programmer.
- **Macro:** to light up the lamps or to auto check the fixtures, which shall be set in the personality file in advance.

Palette

When in programming, you will find some of the positions or colors will be frequently used. The console allows you to store the frequently used data, like an artist using his palette. Therefore, you can access such data quickly by pressing a single button. 20x5 pages of palettes are available in the console.

Actually, when patching a fixture, 1024 will automatically load 10 preset positions, 10 colors and 10 gobos into the palette of this fixture. That allows you to apply a specific color and/or gobo without searching with wheels. Normally, the positions shall be edited in advance. But, the preset palettes shall be provided in the personality files.

5.8 Customize palette

1024 allows you to select on your preference the ways of using palettes.

Press <Setup>, then press <A> [User Setting]; there are two options in it:

- **Save Pal. not link A / Save Pal. link Attr.:** When recording a palette entry, you can select to link it to attributes or not. If yes, then, only the data of the selected attributes in the programmer will be recorded. Otherwise, all the data in the programmer will be recorded.
- **Use Pal. not link At / Use Pal. link Attr.:** When loading a palette entry, you can select to link to attributes or not. If yes, only the data of the selected attributes will be loaded; otherwise, all the data will be loaded.

5.9 Which attributes are stored in palettes

A palette entry can store any or all attributes of a fixture, so you could store position, color and gobo in the same palette entry. However, it's easier to operate the 1024 if you have some palettes for position, some for color, some for gobo and so on. There are 60 palettes available so you don't need to mix them up.

5.10 Storing a palette

This is how you save a palette value:

-
- 1) Press <Clear> to clear the programmer.
 - 2) Select the fixtures for which you want to store palette values.
 - 3) Use the attribute buttons and wheels to set the attributes you want in the palette entry. You can store any or all attributes of a fixture in each palette entry. Only attributes you have changed will be recorded.
 - 4) If in [User Settings], [Save Pal. link Attr.] was selected, then, you need to select the attribute buttons for the attributes you want to store (the dimmer button will store all attributes). It's better to save only one type of attribute (e.g. Tilt/Pan).
 - 5) Press <Scene/Palette>, then, press <Palette> to save.
-

- If in [User Settings], [Save Pal. link Attr.] was selected, then, when storing the palette values, only the data of the selected attributes will be stored. If you want

to store all the data that you have modified, you can set the attribute button to the dimmer attribute or change to [Save Pal. not link A] in [User Settings].

- When you select to Record by Fixture, all the data of the modified fixtures will be recorded. Then, it's nothing about the selected attributes. This way is for the use in Mode 1 and Mode 2 (refer to the next section).

5.11 Recalling a palette value

To recall a palette value, this is what you do:

-
- 1) Select the fixtures.
 - 2) If in [User Settings], [Use Pal. link Attr.] was selected, then, you need to select attributes to load the relevant data. The dimmer attribute can load all the data in the palette. If in [User Settings], [Use Pal. not link At] was selected, then, all the data of the palette will be loaded directly.
 - 3) Press <Palette> to recall it.

-
- It's easiest if you only save one type of attribute (such as pan/tilt) into each palette, then you can just leave the Dimmer attribute button selected when recalling the palette. If you store a mixture of attributes, you always have to make sure that the correct attributes are selected when recalling a palette and this is an extra step which you could do without.

5.12 Delete a Palette

Press <Delete>, then, press the desired <Palette> button twice to delete.

6 Shapes

A shape is simply a sequence of values which can be applied to any attribute of a fixture. A "circle" shape, for example, applied to the pan and tilt attributes, would cause the fixture to move its beam around in a circular pattern. You can set the centre point of the circle, the size of the circle and the speed of the circle movement.

In addition to beam position shapes, there are a large number of other shapes available in this console. The shapes are defined for a particular attribute such as color, dimmer, focus and so on. Some shapes will not work with some fixtures; focus shapes, for example, can produce nice "focus pull" effects on fixtures which have DMX focusing, but will do nothing on fixtures which don't have focusing.

When you use a shape with more than one fixture, you can choose to either apply the shape identically to all the fixtures, or offset them so that the shape runs along the fixtures creating "wave" or "ballyhoo" type effects. This is called the spread of the shape.

6.1 Selecting a shape

Selecting a shape is very similar to selecting a value from a palette. When you choose a shape, it will be applied to all selected fixtures.

-
- 1) Select the fixtures the shape is to be applied to.
 - 2) In the initial menu, press <Shape>.
 - 3) Press <A> [Playback a Shape].
 - 4) Select a shape type: Pan/Tilt shape, dimmer shape, RGB shape, CMY shape, Color wheel shape, gobo wheel shape, focus shape, iris shape and zoom shape.
 - 5) Press <Up> or <Down> to browse and confirm with a soft key.
-

- Most shapes are based on the current settings of the fixture, so a circle would move around the current pan-tilt position of the fixture.
- If the shape description says "Even" or "Parallel", this describes the Spread of the shape. You can always change this later.
- You can change the base value of a shape (e.g. the centre of a circle) by changing the attributes using the wheels in the usual way. You can reduce the Size to zero (see next section) to help you see what the base value actually is.
- You can run up to 5 shapes at a time by repeating the above procedure. 1024 supports up to 20 shapes to run simultaneously.
- In the Shape menu, press [Edit a Shape] to view the running status of the shapes.
- To apply the same shapes to two different groups of fixtures, the shapes will show twice in the list. You can adjust the "two" shapes individually.
- To delete a shape press <Shape>, press <Delete>, select the desired shape and then press <Enter> to delete.
- Each shape works on specific attributes. If a certain attribute is not available in a fixture, then, the related shapes will not apply to the fixture.

6.2 Shape Parameters

It's quite easy to modify the range and the speed after a shape is selected. To create the most wonderful effects of the shapes, the more fixtures the better.

-
- 1) In the initial menu, press <Shape>.
 - 2) Press <C> [Shape Parameters].
 - 3) Highlight the desired shape with a soft key. Then, adjust the value with <Wheel Value>.
-

If there are many shapes running together, the operation will only be applied to the current shape. In [Edit a Shape], you can edit the parameters of any running shapes. There are totally three pages of shape parameters; Press <Up>/<Down> to scroll. The parameters are:

- **Size:** The range of the channel data. When at 0, the shape will be paused.
- **Speed:** The running speed of the shape. When at 0, the shape will be paused.
- **Repeat (Drg.):** The period of a shape is 360°. This means the interval angle between two nearby fixtures.
- **Spread:** It means the total fixture number (not including the first fixture) in a shape period. When the value=none, all the fixtures will perform the same movements; When the value=1, then, the first fixture and the third fixture will perform the same. When the value=2, then, the first fixture and the fourth fixture will perform the same. When the value=even, then, the all the fixtures will be distributed evenly in the shape period to create an even wave.

6.3 Edit a Running Shape

Option [Edit a Shape] in Shape Menu can be used to edit a running shape. Only the selected shape can be edited. The shapes in a Scene cannot be edited here.

-
- 1) In the initial menu, Press <Shape>.
 - 2) Press [Edit a Shape].
 - 3) The screen shows the shapes that can be edited.
 - 4) Press a soft key to highlight (select) a shape.
 - 5) Exit and then edit the parameters of the Shape.
-

6.4 Change Direction

The shape can be change direction.

After playback a shape, in the shape menu press <C>[Change Direction] to change direction.

6.5 Delete a Shape

-
- 1) In the initial menu, Press <Shape>.
 - 2) Press <Delete>.
 - 3) Press a soft key to highlight (select) a desired shape.

- 4) Press <Enter> to delete.
-

6.6 Relative Shapes and Absolute Shapes

Some shapes will operate on the current settings of the fixture; a Circle shape, for example, will be centred around the current pan and tilt positions of the fixture. This is called a **relative** shape. If you change the pan and tilt of the fixture, the whole shape will be moved.

- All Position (pan/tilt) shapes, and other shapes with "User" or "Usr" in the name, are Relative shapes.

Other shapes always operate about a fixed value; a Rainbow shape, for example, is centred at the midpoint of the color mix attributes so that a full range of colors is obtained. This is called an **absolute** shape. The current settings of the fixture are overwritten by the shape.

- Non-position shapes (color, gobo, focus, dimmer, iris) are usually Absolute shapes, unless they have "User" or "Usr" in the name. For example, "Magenta Even" is an absolute shape centred on 50% magenta, but "Magenta Even Usr" is a relative shape which will change around the current Magenta value of the fixture.

If you run a Scene containing a shape, when you turn the Scene off the shape will stop.

6.7 Playback Parameters

This option lets you set parameters for a shape stored in a playback / Scene. When a Scene fades in, you can determine whether the shape should start at full size and speed instantly, (Static) or whether the shape speed and/or size should fade in as well (Timed).

-
- 1) In Shape Menu, Press <E>[Playback Parameters]. Then, press the <Playback> button of the playback you want to set parameters for.
 - 2) Press <A> to set the size to Static or Timed.
 - 3) Press to set the speed to Static or Timed.
 - 4) <C> allows you to remove the offset caused by a shape when it is stopped.
-

7 Scenes

There are many functions in the controller to create a complicated lighting effect; and, the most fundamental part is a Scene, in which you can store a "look" you have created using your light.

There are 10 scene buttons on 6 pages; totally 60 scenes and chases can be stored.

7.1 Creating a Scene

This console has a special internal Scene called the "Programmer". Whenever you change an attribute of a fixture, the changes are stored in the Programmer. When you record a Scene, the contents of the programmer are stored in the Scene. Nothing else from the console output is stored.

This console has two programming modes, "Record by Fixture" (the normal mode) and "Record by Channel". You can change the mode by pressing when storing a scene. The differences between these two modes are:

- **Record by Fixture** - When you change any attribute of a fixture, all the other attributes are placed in the Programmer as well. You will get exactly the result you expected when you recall the Scene, but you can't combine Scenes containing the same fixtures, because the new Scene will just override the old one.
- **Record by Channel** - Only the attribute you change is placed in the programmer. This means you can save Scenes which only contain position information, then recall them with other Scenes to set colors, gobos etc. This is much more flexible but requires more programming initially, because you need several Scenes to get a result. It also lays you open to problems if you don't keep tabs on what you are doing. (This is known as *Tracking* mode on other consoles).

When you press <**Clear**>, all fixtures are cleared from the programmer. You should get into the habit of pressing <Clear> before you start to program a Scene, or you can end up recording fixtures you don't want. You also need to press <Clear> when you finish programming, because any functions in the programmer will override playbacks.

Turning on a Scene does not place the values from the Scene in the programmer (but the Include function lets you do this). The Locate Fixture function does not place any values in the programmer either.

-
- 1) Press <Clear> to clear the programmer. This ensures that you are starting with a clean slate.
 - 2) Set up the stage effect using the fixtures. You can include shapes in a Scene. Remember that only the fixtures you have changed will be included in the Scene.
 - 3) Press <Scene>.
 - 4) Empty Scenes will flash.
 - 5) Press the Playback button of a flashing playback to record it. (Select a new page first if you want to use a different page).
 - 6) Press <Clear> to clear the programmer. Repeat from 2 to program more Scenes

Other useful things to know about recording Scenes:

- You can record the whole output of the console (not just what's in the programmer) by pressing [Record Stage]. The option will highlight when Record stage mode is active. Normally, this option will not be used.
- The grids above each playback fader/button allow you to write on the name of the Scene using the low-tech but reliable method of marker pen (use a strip of tape on the surface). You can then see at a glance what's in each Scene.

7.2 Using shapes in Scenes

As you would expect, any shapes you have set up will be saved as part of the Scene. If the base value of the shape is not in the programmer (e.g. the central pan/tilt position, for a circle), and the shape is a "User" type, then the Scene will contain a "relative" shape. When you recall the Scene, the shape will start based on the current position of the fixture. This allows you to create lots of different effects by layering a few different Scenes - one for the shape, one for the base position. You can either use "Record by channel" mode, and not set the position, or use the "Off" function to achieve this effect.

7.3 HTP and LTP channels

The 1024 can treat control channels in two ways:

- Dimmer or intensity channels work on the principle of "highest takes precedence" (HTP). If an HTP channel is turned on at different levels in several Scenes, the highest level will be output. When you fade a Scene, the HTP channels fade out with it.
- Moving light channels work on the principle of "latest takes precedence" (LTP). The latest change takes over from any other values, so the most recent Scene to be turned on is the one which is output. When you fade a Scene, LTP channels do not normally fade (though you can make them if you want, except for channels set to instant). They set their full values when the Scene starts to fade in, and stay there until another value is set. (You can set the value this happens at using the User settings menu).

The fixture personality file tells the console which channels of a fixture are HTP and which are LTP. Normally, only dimmer attributes are HTP, and everything else is LTP. If a fixture does not have an intensity control channel, the Gobo channel is defined as HTP to make sure the fixture blacks out when a Scene is turned off.

7.4 Playing back a Scene

To playback a Scene, just push up the playback slider or press the playback button. (Make sure there are no values in the programmer by pressing the <Clear> button, because anything in the programmer will override the playback).

- You can turn on more than one Scene at once.
- All the HTP (intensity) of the Scenes fade in/out as the slider is up/down. The LTP (movement) channels will start immediately once the slider is not at zero. (The LTP channels also run like this when the Scenes are in Mode 1 or Mode 2 unless

- the channels are set without fading function in the fixture library.)
- To flash control a scene while stop other scenes, we can use the Swop function. Press <Swop> (indicator on), then, you can flash the scenes.

7.5 Editing a Scene

You can edit any part of a saved Scene:

-
- 1) Press <Clear> to empty the programmer.
 - 2) Turn on the Scene you want to edit, so you can see what you are doing. Turn off all other Scenes to avoid confusion.
 - 3) Select the fixtures you want to change, and make the changes.
 - 4) Press <Scene> button.
 - 5) Press <Playback> button of the Scene you are editing.
 - 6) Our console will tell you a Scene already exists on playback.
 - 7) Press <A> [Merge Scene] to amend the existing scene. Unchanged information is not affected.
-

- If you are in "Record by fixture" mode, all attributes of any fixture you've changed will be saved in the Scene with their current settings. If you only want to save certain attributes of a fixture, you need to use "Record by channel" mode.
- You can overwrite the existing Scene entirely using [Replace Scene]. This wipes the playback and saves the current programmer as a new Scene.
- If the Scene contains shapes, and you have selected some new shapes, the original shapes in the Scene will be deleted (after a warning). To get round this you need to use Include on the original Scene (see next section) to load the shapes into the programmer. Ensure that the playback fader for the Scene is at zero (i.e. the shape is not active) when including the Scene.

7.6 Include function

Include function lets you load selected parts of a Scene back into the programmer. (Normally, only manual changes to fixtures are put in the programmer). You can then use this to make a new Scene. This is useful if you want to make a Scene which is similar to one you already have.

-
- Press <Copy/Include>.
 - Press the <Playback> button of the desired Scene; then, press <Enter> to include the data.
-

7.7 The "Off" button

The "Off" button allows you to remove an attribute which has been stored in a Scene, as if you never recorded it.

For example, suppose you recorded a Scene which had scans at a certain position, with the color set to green. If you later decide that you don't want a color recorded at all in the Scene, so that the previous color setting of the scans will be used, you use

the Off function to turn off the color in the Scene. You can also use the Off function to remove complete fixtures from a Scene.

Using the Off button is not the same as recording an attribute at zero. It is like not recording the attribute at all.

- 1) Turn on the Scene you want to edit, so you can see what you are doing.
 - 2) Select the fixtures you want to change.
 - 3) Press <OFF> (one of the blue command buttons) to display the off menu.
 - 4) To switch off all attributes of the selected fixtures, press [OFF Selected Fixtures].
 - 5) To switch off selected attributes, press the appropriate attribute button, then use <C> and <D> to set each attribute to Off. (The screen shows which attribute will be turned off for each button.)
 - 6) Press <Scene>
 - 7) Press playback button for the Scene you are editing to save the changes. Unchanged information is not affected.
-

- Attributes which are Off are shown on the screen. (The stage output will not change as the output values remain at their last settings).
- Attributes or fixtures set to "Off" can be turned back on again by selecting them in the usual way and changing them by using the wheels.
- You can also use this function to turn off fixtures or attributes in a palette entry. Use the procedure above, but instead of editing and recording a Scene, edit and record a palette entry instead.

7.8 Copy a Scene

- 1) Press <Copy/Include>.
 - 2) Press a <Playback> button that stores a Scene.
 - 3) Press an empty <Playback> button to copy.
-

7.9 Delete a Scene

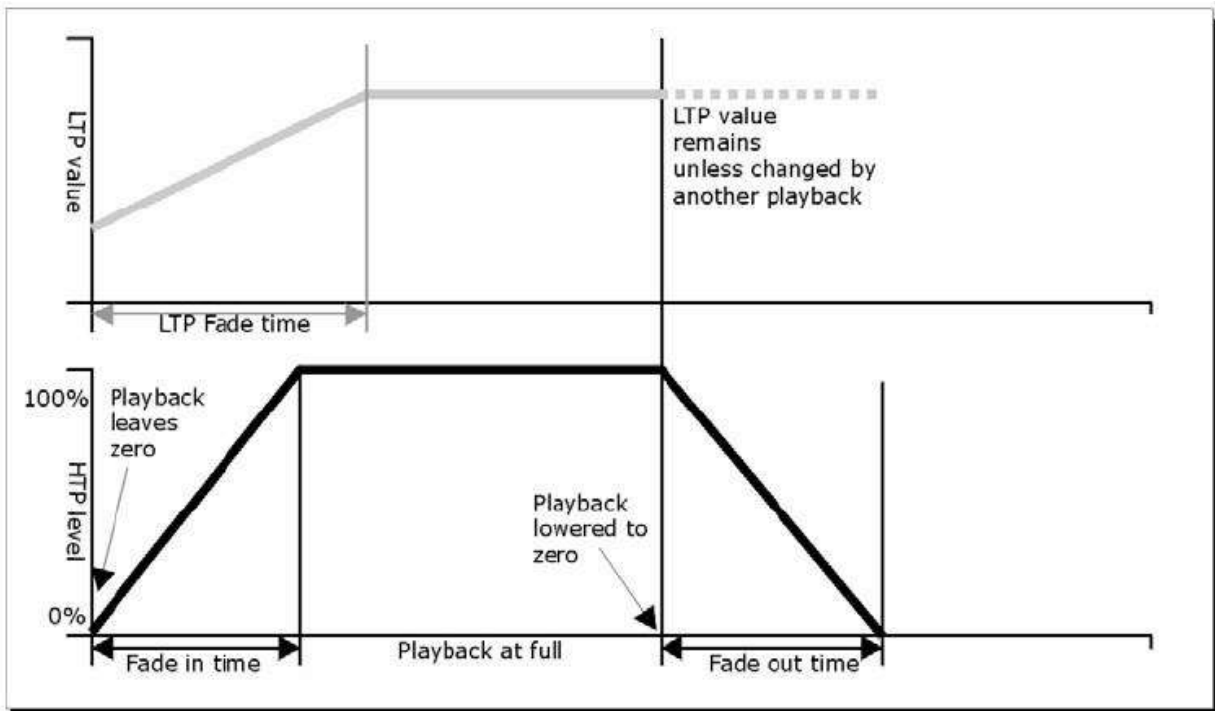
To delete a Scene:

- 1) Press <Delete>.
 - 2) Press a desired <Playback> button.
 - 3) Press the <Playback> again to delete.
-

7.10 Time

You can set a fade in and fade out time independently for every Scene. The fades only affect HTP (intensity) channels. There is a separate LTP timer which allows you to set movement times. LTP channels which were set to "instant" during Patching ignore LTP fade times.

-
- 1) Press <Time>.
 - 2) Press the Playback button of the playback you want to set times for.
 - 3) There are two pages in the menu. Press <Up> or <Down> to browse. Select a desired option and modify the data with <Wheel V>.
 - 4) Press <Enter> twice to save and exit or press <Exit> twice to exit without saving.
-



The effect of the times is shown in the following picture.

The times you enter are also affected by the Scene mode:

- **Mode 0** – No timing information is used. The HTP channels faded with the 0-100% position with playback faders.
- **Mode 1** – Channels fade as set by the HTP and LTP fade times (except Instant LTP channels). If you enter times for a Mode 0 Scene, it will automatically change to Mode 1. If HTP times are set to zero, the HTP levels will fade with the fader
- **Mode 2** – HTP channels fade as set by the HTP times, or with the fader if times are set to zero. LTP channels are controlled by the fader position (except Instant channels). The initial data of LTP is the data before the slider is push up. Set the LTP fade time to 0 to use this mode.
- **Mode 3** – HTP channels fade as set by the HTP times, or with the fader if times are set to zero. LTP channels are controlled by the fader position (except Instant channels). The initial data of LTP is 0. Set the LTP fade time to 0 to use this mode.

8 Chase

In the console, one chase can be edited with up to 600 steps.

8.1 Programming a chase

To program a chase, you have to set up the lighting for each step of the chase, then save it. The contents of the programmer are recorded as a step.

You can either set all the fixtures and dimmers manually for each step, or you can use Include to load in the information from Scenes you have already recorded.

You cannot use an existing Scene as a chase step just by turning it on. You need to use the Include button to load the Scene into the programmer.

-
- 1) Press <Chase> In the Playback area, the LED indicators of the <Playback> buttons without any scene stored will keep flashing; those with a chase will keep always on; and, those with a scene will be off
 - 2) Press a desired <Chase> button to enter the chase menu. At this time, the LCD will show the current page number and the total step number of the multi-step scene; Press <Up> or <Down> to turn the pages
 - 3) After editing the stage effects, press <C> [Record] to enter the record menu.
 - 4) Press /<C> to select the storage mode.
 - 5) If it comes to the last step, then, press <D>[Record Ad Final Step] to store directly, or, press an off <Playback> button to store in it. To insert or overwrite a step, select a desired position, then, press to overwrite or press <C> to insert a step before the selected one.
 - 6) Press <Chase> to finish when you have stored all the steps you want.
-

- Press <Clear> when you have finished saving the chase. Otherwise, when you try to play it back the programmer will override the chase and you won't see the chase properly.
- The current step number is displayed in the second line.
- You can record shapes in a chase. If the same shape is saved in subsequent steps it will continue from step to step, if not it will stop at the end of the step time. (The console considers the shape to be the same if you didn't press <Clear> after the previous step, and didn't change the speed, size or spread of the shape from the previous step; or if you Included the shape from the previous step and have not modified it)
- Max. 600 steps can be edited in a chase.
- Adjust the step time, select [Time] and press the <Playback>. Then, adjust the time.
- To insert a new step, you need to set the effects of the new step first. Press <C> [Record] and press the <Playback> button to which you will insert it. Press <D> [Insert a Step]. The new step will be inserted and the following steps will be pushed back by one step.
- To delete a step, press <Delete>, then, press the desired <Playback>. Press

- <Enter> to confirm.
- To copy a step, press <Clear> to clear the programmer; then, press the desired <Playback> to include its data to the programmer and save.
- If there are more than 10 steps in the chase, press <Up> or <Down> to turn the pages.
- You can add a shape in the chase by pressing <Shape Generator>.

8.2 Running a chase

Push up a playback fader or press a playback button, it will run a chase.

- Two or more chases can be output simultaneously.
- All the HTP (brightness) of the chases are controlled by faders. The LTP (movement) channels will implement the chase as the fade time defines.
- Press <Swop> (indicator on), then, you can flash control a certain chase while stop other playbacks.

8.3 Connecting a chase to the controls

When running a chase, the playback control will automatically connect to chases.

- By pressing <Connect> and then pressing the desired <Playback> button of chase, a user can set which chase to connect for playback control.

8.4 Setting speed, crossfade and direction

Run a chase, then, you can use the wheels to adjust speed and fade time.

- **Speed:** The interval time between two steps. But, the "time" here is the global time. If some steps are set with special time, then, it will run as per its own time.
- **Crossfade:** It means, within the interval time between two steps, the ratio of Wait Time to fade Time. The three data on screen are fading in slope ratio; fade out slope ratio and LTP slope ratio. FF means it is all slope time during the total time and the Wait Time is 0; When the value is 70, it means 70% of the total time is slope time and rest is Wait Time.
 - **Wait Time:** For example, a fixture is going to move from Point A to Point B. If the Wait Time is set to 3 seconds, then, the fixture will stop at Point A for 3 seconds and then start moving.
 - **Fade Time:** For example, a fixture is going to move from Point A to Point B. If the Fade Time is set to 3 seconds, then, the movement of the fixture from Point A to Point B will last for 3 seconds.

Once the speed of chase is saved, it will run at this speed in the entire future playback:

-
- 1) Use <Wheel A> to adjust the speed.
 - 2) In the initial menu, select [Chase Parameters].
 - 3) Press <A>[Save Speed].
-

- When a chase is running and you use the wheels to do something like adjust the positions of some fixtures by manual, then, you can press <Connect> + [Speed/Cross] to change the mode of the wheels.

- Set the chase to the speed at time of editing, press <Connect> + <A> [Clear Temp. Time].
- Chase direction is controlled by <Go+> and <Go->. Direction can be saved in chase for future running: Press B [Chase Parameters] + [Save Direction].

8.5 Manually controlling the chase step

Press <Stop>, then, chase can be controlled by manual. If the chase is set as "Link=Close", then, it will automatically change to manual control. More description about "Link" is available below.

- Press <Go+> or <Go-> to restart the chase.

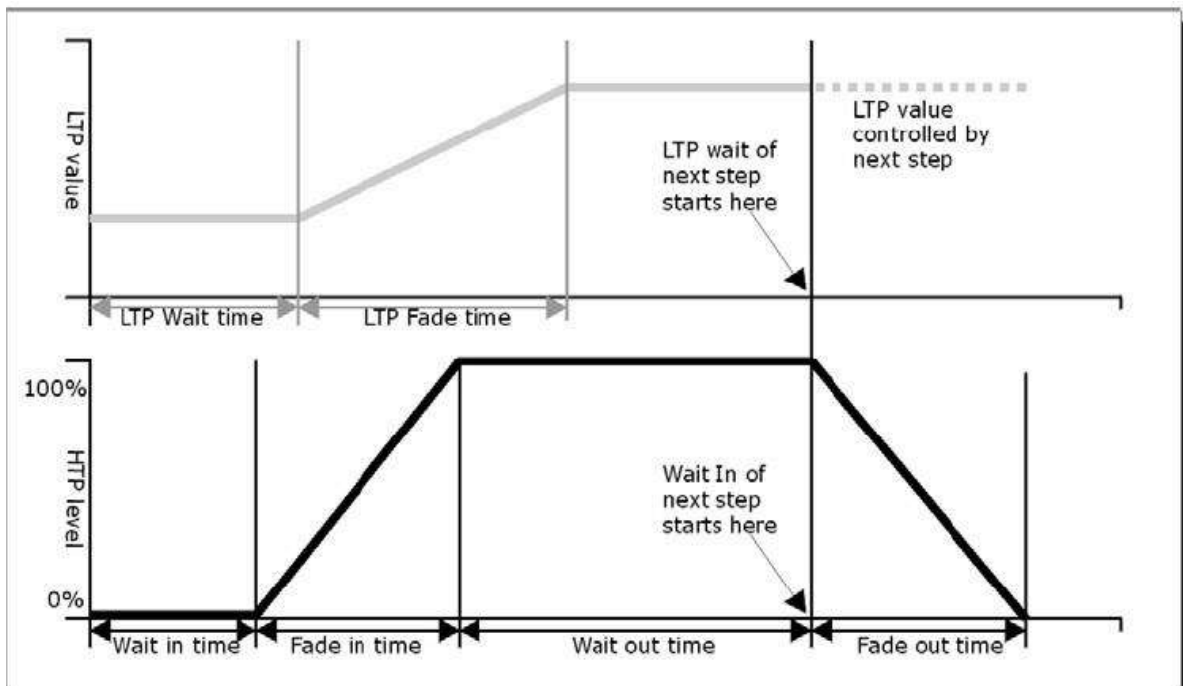
8.6 Delete a Chase

To delete a chase is the same as to delete a Scene. Press <Delete>, then press the desired <Playback> button twice.

8.7 The global time of a chase

To set the global time for a chase:

- 1) Press <Time> and press a chase <Playback>.
- 2) Press <Up> or <Down> to turn the pages. Press <A>-<E> to select an option. Use <Wheel Value> to adjust the value.
- 3) On Page 2 of the Time menu, there is a "Link" option. If "Link" is set to ON, the chase will run step by step automatically. If "Link"=OFF, you need to press <Go+> or <Go-> to run the steps one after another.
- 4) Press <Enter> twice to save and exit or press <Exit> to exit without saving.



The time options include (see the figure above):

[Wait Fade In] – The wait time before an HTP channel fading in

[Wait Fade Out] –The wait time before an HTP channel fading out

[Fade In] –The fade in time of an HTP channel

[Fade Out] – The fade out time of an HTP channel

[LTP Slope] – The fading time of an LTP channel

[LTP Wait] – The wait time before an LTP channel fading

[Slope] – The fading time of LTP channel.

[Connect] – If close the connection, then, the Scene running will be paused at this step until <Go+> or <Go-> is pressed.

8.8 Set separate time for a step

Fade in/out time can be set to each single step separately. A chase step with separate time is called a complex step; if it is using the global time, then, it is a simple step. To set separate time for each step, you can use unfold for easy operation.

-
- 1) Press <Chase>, and then press the <Playback> button of the chase.
 - 2) Press <Time>, and then press the <Playback> button of the step.
 - 3) Press <Up> or <Down> to turn the pages. Press <A>-<E> to select an option. Use <Wheel Value> to adjust the value.
 - 4) Press <Enter> twice to save and exit.
-

- Any modification will turn a step into a complex step.
- To turn a complex step back to a simple step, you can use <Fixture Menu> button in the time editing menu to change.

8.9 Advanced Options

Each chase has options which can be set to affect the way it runs. Press <Chase Parameters>. You need to have a chase “connected” first.

The options are:

- [Save Speed] –saves the current speed of the chase (set using the wheel A/B).
- [Save Direction> –save the direction of the chase by using <Go+> and <Go->.
- [Loop Playback/Bounce/Stop on final step] - makes the chase stop on the final step. If the final step is a blackout, the chase will appear to turn itself off, so you can just press Go whenever you want to make it happen again.
- [Skip Time Options] - Allows you to skip the first wait and/or fade of a chase. You often want to do this so the chase starts as soon as you raise the fader. (Press the button to cycle through options):
 - Skip first wait time (The wait time is missed when the chase is first turned on)
 - Skip first all time (All times are missed when the chase is first turned on)
 - Wait and Fade for all steps (All times will be implemented when the chase is turned on).

9 Setup

Press <Setup> to enter Setup menu. In the menu, you can implement data back-up, loading, data erasing, language selection, library management, user settings and version information.

9.1 U-Disk Management

To backup and read data.

- Save Data: Enter data saving menu; Use Wheel V to modify the characters. <Up>/<Down> to move the cursor; [Delete] to delete a character. After naming, insert a U-Disk. Press [Enter] to save.
- Read data: Insert a U-disk; Select Read Data. All the data names in the U-Disk will show in the screen. <Up>/<Down> to select a data. Press <A>-<E> to select a desired option to load the data.

9.2 Wipe

To wipe all the data or only the playbacks in the console.

- Wipe Playback: Only the data in the playback area will be wiped off. Other data will remain.
- Wipe Palette: Only the data in the palette area will be wiped off. Other data will remain.
- Wipe All: Data of playback, palette and patch will all be wiped off. But, the library data will remain.

9.3 Language selection

Chinese and English are available in the console.

9.4 Personality Management

- Delete Personality: Max. 32 libraries can be saved in the console. You have to delete an old library to save a new library if the total libraries are over 32.

-
- 1) Enter Delete Library menu.
 - 2) Use <Up>/<Down> to browse.
 - 3) Press <A>-<E> to select
 - 4) Press [Enter] to delete.
-

- Delete all Person.: All libraries will be deleted.
 - Update Personality
-

- 1) Insert a correct USB Memory stick. In the menu, press <D>, then, it starts reading libraries in the USB.
 - 2) Select a desired Personality to add. Once updated, the line will be highlighted.
-

- Personalities can be created or edited directly with the console.

-
- 1) Press <Setup>.
 - 2) Press <D> [Personality Manage].
 - 3) Press <E> [Edit Personality].
 - 4) Under this menu, you can create new personalities or edit existing personalities.
 - 5) Use Wheel B to modify the characters. <Up>/<Down> to move the cursor; [Delete] to delete a character. After naming, press [Enter] to enter Channels Number Menu.
 - 6) Under Channels Number Menu, use Wheel V to modify the channel number or press a fixture button to enter the channel number. Press <Enter> to enter Channel Edit Menu.
 - 7) Select a desired channel to edit. Once selected, the option will be highlighted. Press <Attribute> to design an attribute to the channel. If the channel is not a fine-tone channel, then, press the option button again, you will enter Advanced Channel Setting Menu.
 - 8) Under Advanced Channel Setting Menu, Use Wheel V to modify the characters. <Up>/<Down> to move the cursor; [Delete] to delete a character. Option B is to change the attribute type; Option C is to change the channel type; Wheel V is to change the locating value of the channel; Option D is to edit the reverse status of the channel. After editing, press <Exit> to return to the upper menu.
 - 9) Repeat Step 7 until you finish editing all the channels. Then, press <Enter> to enter Macro Menu.
 - 10) Under Macro Menu, select a desired macro command to edit. Use Wheel B or press a fixture button to enter a channel number; Use Wheel V to enter a function value. After editing the macro command, press <Enter> to save the created/edited personality.
-

9.5 User Settings

For users' different preferences, the console offers different ways of selecting palettes.

Press <Setup>, select User Settings. The below options are available:

- **Save Pal. not link A/Save Pal. Link Attr.:** When saving a palette, you can select to link with attribute or not. If to link, only the data in the selected attributes will enter the programmer and be saved. If not to link, then, all the data in the programmer will be saved.
- **Use Pal. not link At/Use Pal. link Attr.:** When loading a palette, you can select to link with attribute or not. If to link, only the data in the selected attributes will be loaded. If not to link, then, all the data will be loaded.
- **Palette LTP = Open/Close:** If this option is set to Close, when you recall a palette and then press <Clear>, the data of the channel in the palette will go back to the previous value. If this option is set to Open, the data will remain.

- **Palette Pro. = YES/NOT:** If this option is set to Yes, the value of the palette will go into programmer and the playback cannot change it. If this option is set to NOT, the value of the palette will not go into programmer and the playback can change it.

9.6 System information

Press <Setup>, then browse with <Up>/<Down>, you will see System Information. The version number can be seen in this option.

9.7 Lock desktop

Hold down <Setup> and <ML> button for 3 second. The Controller will be lock. If you want to unlock, also hold down <Setup> and <ML> button for 3 second.

9.8 Art-Net

Press<Setup>, then browse with <Up>/<Down>, you will see Art-net.

Can Change IP Value By wheel < V>

IP Address should on Same Network.

10 Update

-
- 1) Power off the console.
 - 2) Copy the updated file to a U-Disk and insert it to the USB port of the console.
 - 3) Power on the console. It starts searching the update firmware; Once detected, it prompts to update or not.
 - 4) Press <Enter> to update. After updating, it reboots automatically.
-

11 Personality Builder



- 1) Select your language.
- 2) Press [New] to create a new personality or press [Load] to load an existing personality.
- 3) Enter the name of the personality.
- 4) Select the tags with blue background.
- 5) Enter the channel value in DMX box in Attribute Setting column.
- 6) Select the channel type in the scroll-down menu of Attribute Setting.
- 7) Change the attribute name as you wish.
- 8) Enter the fine value in the fine channels, if any.
- 9) Enter the value for the Locate function.
- 10) Setup the Fade able or HTP and invert. (Normally, keep it intact.) If you set HTP, the channel will be 0 after press <Clear>, and change by playback fader.
- 11) Repeat Step 4-10 to setup another attribute.
- 12) Save the personality.

MADE IN CHINA