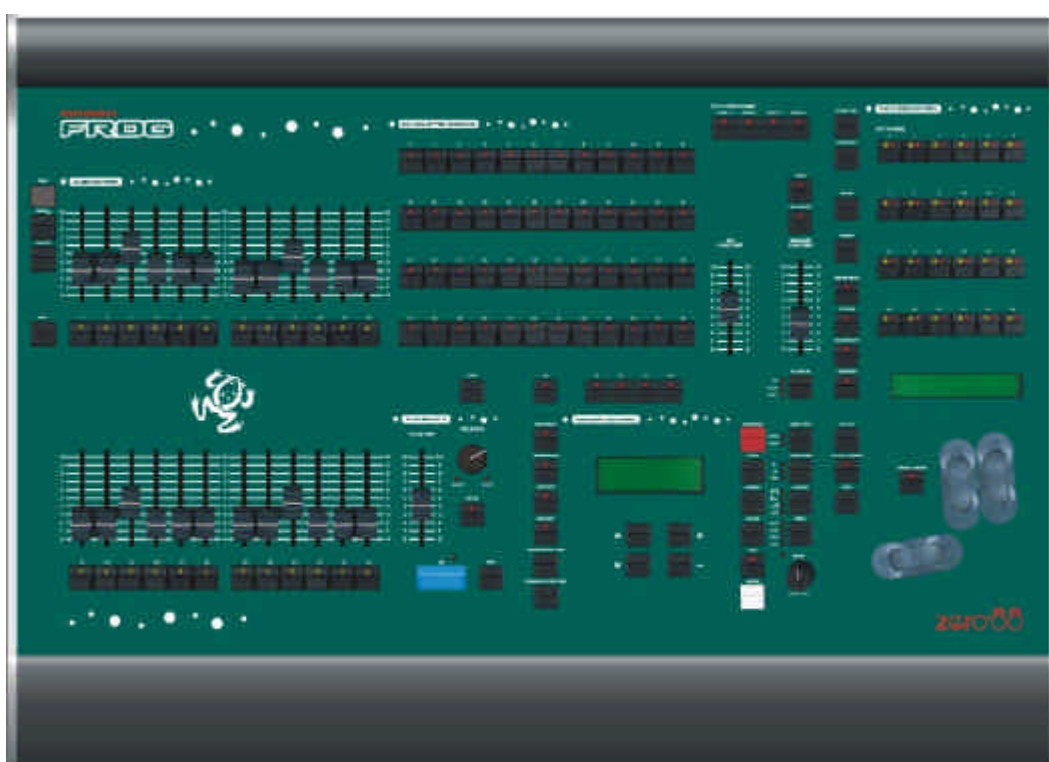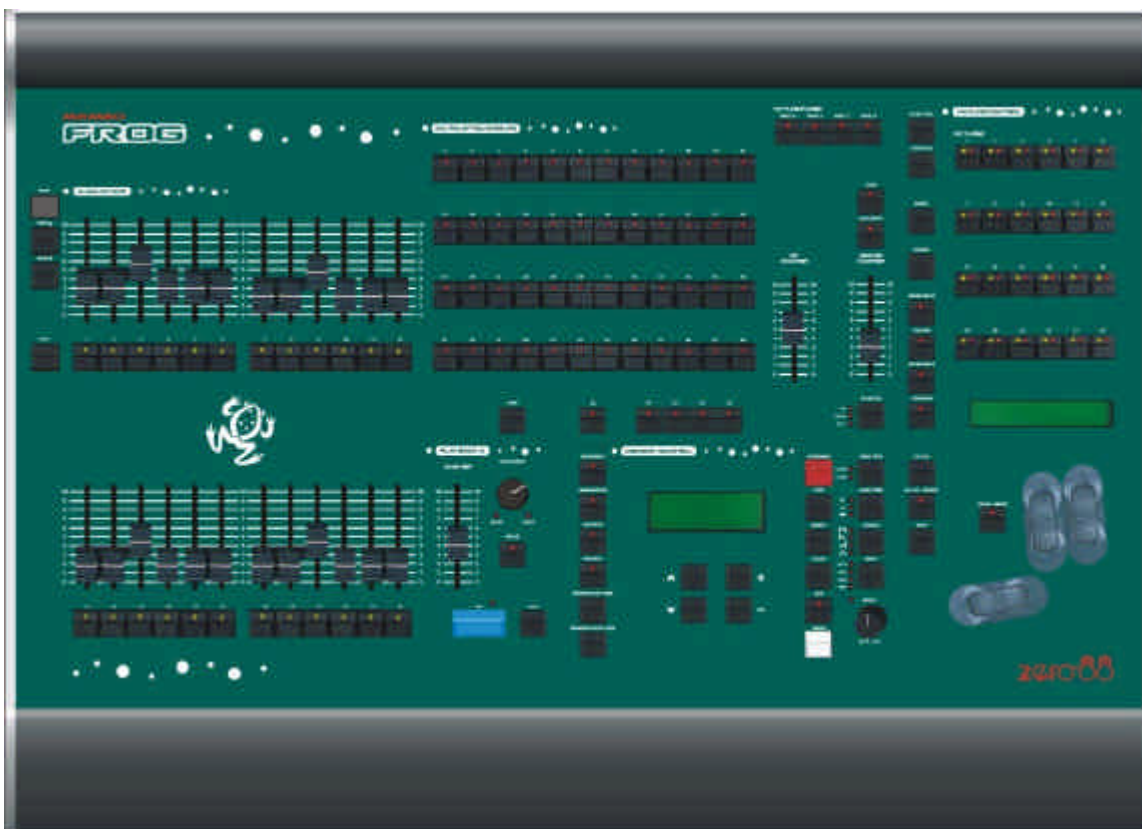# MAMBO FROG
OPERATING MANUAL

zero®88

MAMBO FROG
OPERATING MANUAL

If a portable or temporary three phase mains supply is used to power this desk, we recommend that the desk mains plug is removed before connecting or disconnecting the supply. Serious damage will occur if the desk is connected across two phases.

This equipment is designed for use as a lighting control desk only, and is unsuitable for any other purpose. It should only be used by, or under the supervision of, an appropriately qualified or trained person.

Zero 88 Lighting Ltd. reserves the right to make changes to the equipment described in this manual without prior notice. E & OE.

Federal Communications Commission

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Contents

Figure 1 - 1: The Mambo Frog Lighting Desk

This Manual

This manual describes the operation of the Mambo Frog lighting control desk.

This chapter contains a general overview of the desk followed by a brief description of the front panel controls and displays, and details of the main LCD user interface.

The quickstart tutorial chapter is provided to help you get the desk up and running quickly and lead you through the basic desk functions.

For detailed descriptions of the main desk functions (presets, memories, submasters etc.) refer to the relevant chapter(s) in the manual.

The manual concludes with chapters on Super User functions, other features (eg FROG function, palettes) and technical specification of the desk.

Conventions

Throughout this manual the following conventions are used.

References to controls, buttons and lights on the front panel appear in capital letters, for example:

GRAND MASTER, GO, PAUSE.

References to the main LCD (eg the Memories screen) are shown as follows:

```
Current:   1 s
Next:     <2 *>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>v
```

References to fields which appear on the main LCD screen are shown in italics, for example:

Current, Next, Fade Up, Fade Down.

For news, views and the latest software visit our dedicated Frog web site at www.frogsupport.com

Introduction

Overview of the Mambo Frog

This section provides a summary of the main functions of the Mambo Frog lighting control desk.

LCD Interface

All setup, programming and playback information is displayed on the main LCD display.

The MEMORIES, SUBMASTERS, SX and OUTPUTS keys on the front panel enable quick and direct access to the main programming, playback and information screens.

Channels

The desk controls up to 1024 moving light channels.

Fixtures

The lighting desk can control up to 96 moving light fixtures.

The fixtures are divided into 4 pages of 24 fixtures each.

DMX Patch

The fixtures can be soft patched to DMX channels (1 - 512) on two different DMX universes (A and B).

Palettes

The desk provides user programmable Colour, Beamshape and Position palettes (48 of each attribute).

Memories

Memories can be recorded as scenes or chases. All memories have their own trigger, fade times and dwell time.

Chase memories have their own modifiers which affect their output. (Direction, Attack, Drive, and Speed).

Both full and partial memories can be recorded.

Submasters

The desk provides a total of 216 submasters (9 pages of 24).

Submasters can be loaded with channel data or transferred memories.

One page is always active, which is indicated by the seven segment display on the front panel.

Page Overlay is provided to allow submasters from different pages to be used at the same time.

SX Buttons

The desk provides 48 SX buttons which can be loaded with channel data or transferred memories.

The data on the SX buttons can be flashed, soloed or faded up and down in specified times, as required.

Playback X

The Memory Stack is made up of all the programmed memories (scenes and chases).

Playback X provides a simple method of playing back the memory stack using the GO button.

There are also MASTER, PAUSE and OVERRIDE controls.

Remote Switches

Up to six remote switches can be connected to the desk and configured as Go or Go to memory actions.

Super User

Super User functions are provided for setting up the desk defaults, clearing memories, submasters and show data, and resetting the desk.

Loading and saving shows to floppy disk, setting up a lock code and resetting the DMX output functions are also provided within Super User.

Lock Function

A lock function is provided to prevent unauthorised editing of desk setup and show data.

Desk Output

The fixture channels are output via DMX 512.

Monitor Displays

The desk has a video output for the display of memory, submaster, SX, outputs and other data on a monitor screen.

External Keyboard

An external keyboard may be connected to the desk via the mini DIN connector on the rear panel.

This allows text and numeric data to be entered in the appropriate fields on the main LCD screen.

Floppy Disk Drive

The desk has a floppy disk drive to enable show data to be saved and loaded.

Assigning fixture types from the fixture library, changing the common fixture types on the desk and performing software upgrades are also achieved via floppy disk.
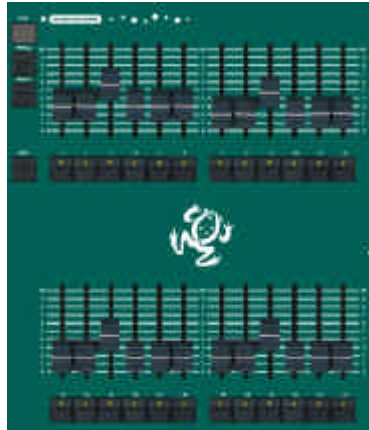
Figure 1 - 2 : Submaster Controls

Front Panel Controls

This section describes the controls and displays on the front panel of the Mambo Frog lighting control desk.

The controls have been divided into the following sections:

- Submaster Controls
- Playback X Controls
- SX Controls
- Memory Controls
- Fixture Controls
- Other Controls

Submaster Controls

- SUBMASTER FADERS

The SUBMASTER FADERS control the output levels of the channel data or memory data loaded onto them.

- SUBMASTER FLASH BUTTONS

The SUBMASTER FLASH BUTTONS are used to flash or solo the channel or memory data on the submaster.

The action of the button is determined by the FLASH FUNCTION button.

The buttons are also used to select submasters when transferring memories.

Each button has a yellow light in it which is used to indicate when the output is fading and for page overlay.

- SUBMASTER PAGE UP/DOWN

The submaster PAGE UP and PAGE DOWN buttons are used to select the current submaster page (1 - 9) .

- SUBMASTER PAGE DISPLAY

The current submaster page is indicated on the seven segment PAGE Display.

- STEP BUTTON

This button is used to manually step through, or set the beat for, any chase memory with a manual or beat drive respectively that is currently being output on a submaster.

Figure 1 - 3: Playback X Controls

Playback X Controls

- MASTER FADER

The Playback X MASTER fader controls the maximum output level of the brightness fixture channels in the memories on the memory stack.

The colour, beamshape and position fixture channels are not affected by the Playback X MASTER fader.

- GO BUTTON

This button initiates a dipless crossfade between the current memory being output and the next memory on the memory stack.

The red light next to the GO button comes on during the crossfade, and flashes if the crossfade is paused.

- PAUSE BUTTON

This button is used to halt progression through the memory stack and will stop a cross fade between memories if one is in progress.

When the show is paused, the red light in the PAUSE button flashes. When the PAUSE button is pressed again, the light in the PAUSE button goes off and the show continues.

- OVERRIDE CONTROL

This control is used to slow down or speed up progression through the memory stack.

When the control is moved away from the neutral position the red SLOW or FAST light flashes accordingly.

- STEP BUTTON

This button is used to manually step through, or set the beat for, any chase memory with manual or beat drive respectively that is currently being output on the Playback X.

SX Controls

- SX BUTTON

This button displays the SX screen on the LCD, used when programming, editing, copying and deleting SX.

- SX SELECTION BUTTONS

These buttons are used for selecting an individual SX and for outputting the channel data or memory data loaded onto the button.

- SX MASTER FADER

This fader controls the maximum output level of the brightness channels in the data loaded on the SX buttons.

- STEP BUTTON

This button is used to manually step through, or set the beat for, any chase memory with a manual or beat drive respectively that is currently being output on any of the SX buttons.
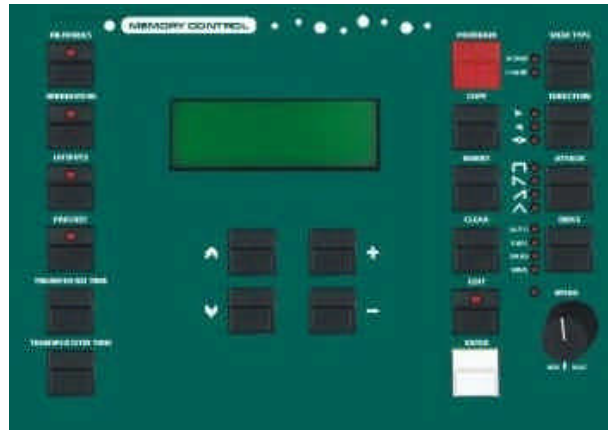
Figure 1 - 4 : Memory Controls

Memory Controls

- LCD DISPLAY

The LCD display provides the main user interface to the desk in setup, programming and running the show.

The brightness and contrast of the LCD display can be adjusted as required in Super User.

- MEMORIES BUTTON

This button displays the Memories screen on the LCD. This screen is used when programming, editing, transferring, copying and deleting memories from the memory stack.

- SUBMASTERS BUTTON

This button displays the Submaster screen on the LCD. This screen is used when programming, editing, copying and deleting submasters.

- OUTPUTS BUTTON

This button is used to display the output values of the fixture channels, or the DMX outputs on the LCD.

- PREVIEW BUTTON

This button is used to preview memory, submaster or SX data.

- TRANSFER NO TIME BUTTON

This button is used to transfer a memory without time onto a submaster or SX button.

- TRANSFER WITH TIME BUTTON

This button is used to transfer a memory with its fade times onto a submaster or SX button.

- UP / DOWN CURSOR BUTTONS

These 2 buttons are used to move the cursor up and down the LCD display.

- + / - BUTTONS

These 2 buttons are used to adjust values on the LCD display.

- PROGRAM BUTTON

This button is used to confirm the programming of memories, submasters and SX data.

- COPY BUTTON

This button is used to copy memory, submaster or SX data.

- INSERT BUTTON

This button is used to insert point memories, and add or insert chase steps.

- CLEAR BUTTON

This button is used to clear or delete memories, submasters etc..

- EDIT BUTTON

This button is used to Edit a memory, submaster or SX button.

- ENTER BUTTON

This button is used for selecting 'soft' buttons on the main LCD display.

- MEMORY TYPE BUTTON

This button is used to select the memory type being programmed or edited. The adjacent red lights indicate the memory type (Scene or Chase).

- DIRECTION BUTTON

This button is used to set the Direction modifier when programming or editing a chase memory. The accompanying lights indicate the selected direction (Forward, Backward or Bounce).

- ATTACK BUTTON

This button is used to set the Attack modifier when programming or editing chases. The accompanying lights indicate the selected attack (Snap, Slow Attack, Slow Decay, Crossfade).

- DRIVE BUTTON

This button is used to set the Drive modifier when programming or editing a chase memory. The accompanying lights indicate the selected drive (Auto, Vari, Bass, Manual or Beat).

- SPEED CONTROL

This control is used to set the Speed modifier when programming or editing a chase memory. The red light next to the control provides additional feedback when editing chase speed.
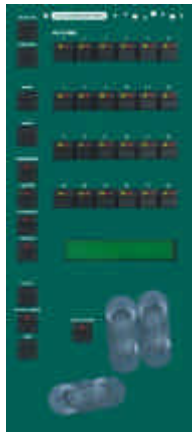
Introduction

Figure 1 - 5: Fixture Controls

Fixture Controls

This section of the front panel contains various controls and displays used in the control, programming and editing of moving light fixtures.

- FIXTURE PAGE BUTTONS

These buttons are used to select the required page of fixtures (A - D). When a page is selected, the red light in the button is lit.

- FIXTURE SELECTION BUTTONS

These buttons are used to select individual or groups of fixtures when programming, editing or patching.

Each button contains two lights. When a fixture is assigned, the yellow light in the button is lit. When a fixture is selected, the red light in the button is lit.

- ATTRIBUTE BUTTONS

These 4 buttons (BRIGHTNESS, COLOUR, BEAMSHAPE, POSITION) are used to select an attribute for the selected fixture(s).

This determines the fixture parameters assigned to the control wheels, and displayed on the WHEEL LCD.

Only one attribute can be selected at a time. The red light in the button indicates the selected attribute.

These buttons are also used when programming and selecting palettes.

- WHEEL GROUP BUTTON

When the parameters for the current attribute of the selected fixture(s) are contained in more than one group, this button is used to switch between the different groups of parameters.

The red light in the WHEEL GROUP button is lit when there is more than one group of parameters.

When there is only one group of parameters for the selected fixture and attribute, the light in the button is off, and pressing the button has no effect.

- SELECT ALL BUTTON

This button is used to select all fixtures on all four pages.

- CLEAR ALL BUTTON

This button is used to clear (deselect) all the currently selected fixtures on all four pages.

- HOME BUTTON

This button is used as a quick method of setting all the parameters for the selected fixture(s) to their home position (ie brightness to full, colour to white, no gobo, no effects, shutter open, pan and tilt to mid position etc.)

It is also possible to home the parameters of a single attribute (brightness, colour, beamshape or position).

- FROG BUTTON

This button is used to set the currently selected fixture channels to output random FROG values (see chapter 7).

- FROG SCREEN BUTTON

This button is used to display the FROG Function screen on the LCD.

- STEP BUTTON

This button is used to manually step through fixture channels which are outputting random FROG values.

- CONTROL WHEELS

The three control wheels are used for programming and editing fixture parameters.

- WHEEL LCD

The Wheel LCD is used to indicate which fixture parameter is being controlled by which wheel, and also the current value of the parameter.

The brightness and contrast of the Wheel LCD can be adjusted as required in Super User.

- GROUP BUTTON

This button is used when programming and selecting fixture groups (see chapter 7 for details).
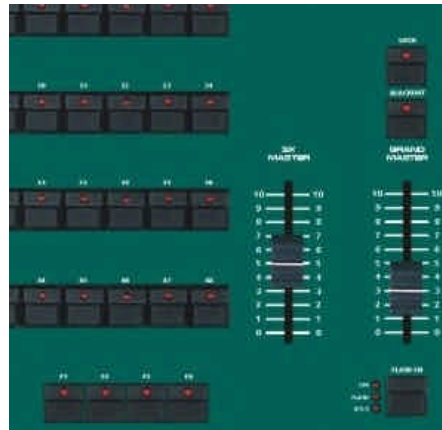
Figure 1 - 6: Other Controls

Other Controls

- GRAND MASTER FADER

This fader controls the final output values of all the fixture brightness channels resulting from the preset faders, submasters, SX buttons and Playback X.

It does <u>not</u> affect the fixture colour, beamshape or position channels of any assigned fixtures.

- BLACKOUT BUTTON

This button is used to reduce all the fixture brightness channels to zero, producing a blackout.

It does <u>not</u> affect the colour, beamshape or position fixture channels.

When blackout is active, the red light in the button flashes. Pressing the BLACKOUT button again will return the desk to normal outputs.

- FLASH FUNCTION BUTTON

This button is used to determine the operation of the SUBMASTER FLASH BUTTONS.

The red lights next to the FLASH FUNCTION button indicate the current setting (OFF, FLASH or SOLO).

- LOCK BUTTON

This button is used to lock and unlock the desk.

When the desk is locked, the red light in the LOCK button is lit and none of the setup, memory or submaster data can be modified.

The locking and unlocking processes require entering a lock code. The lock code is set in Super User.

- FUNCTION BUTTONS

Four function buttons are available on the front panel (F1 – F4), and are used for the following functions:

F1 - Monitor Functions

F2 - Naming Functions

F3 - Individual live adjustment of chase modifiers on Playback X, submasters or SX buttons.

F4 - Not Used

Introduction
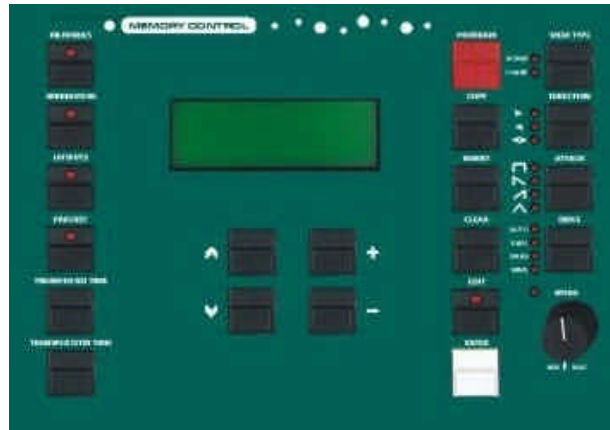
Figure 1 - 7: Memory Controls containing Main LCD

Main LCD User Interface

The LCD display, together with various front panel buttons, provides the main user interface to the desk and is used in setup, programming, editing and running the show.

The main LCD is 4 x 20 characters.

Most of the LCD screens consist of a title, editable fields and soft buttons.

Some LCD screens contain error messages, warnings, instructions or information.

This section of the manual describes how to use the cursor keys, the + and - keys, and the ENTER key to navigate through the LCD screens and adjust the values in the editable fields.

Numeric data may also be entered via an external keyboard, if preferred (see chapter 7 for details).

Editable Fields

On the LCD display, editable fields are indicated by angled brackets (<…>).

The value of a field can only be edited, using the + and - keys, when it is highlighted (ie. the angled brackets are displayed as flashing).

In this manual, the highlighted field is shown in **bold text**.

The up and down arrow keys are used to move through the editable fields, options and soft buttons on the LCD.

It is possible to move from the last item on the LCD screen to the first and vice versa using the up and down arrow keys.

Example - Memories screen:

```
Current:   1   s
Next:   <  2   *>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```

The *Current* field is not editable. The *Next, Fade Up* and *Fade Down* fields are editable.

The *Next* field is highlighted (flashing), so the + and - keys will adjust the next memory number.

Pressing the down arrow key will move the cursor to the *Fade Up* field.

Editing Fade Times

Fade times are displayed on the main LCD in minutes, seconds and tenths (mm:ss.t).

Each field within the fade time is editable using the + and - keys.

The minutes and seconds fields rollover automatically when adjusting the seconds and tenths.

The up and down arrow keys move the flashing cursor between the fields.

For example, the flashing cursor is on the minutes field of the *Fade Up* time:

```
Current:   1   s
Next:   <  2   s>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```

Press the down arrow key to select the seconds field in the *Fade Up* time:

```
Current:   1   s
Next:   <  2   s>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```

Press the down arrow key to select the tenths field in the *Fade Up* time:

```
Current:   1   s
Next:   <  2   s>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```
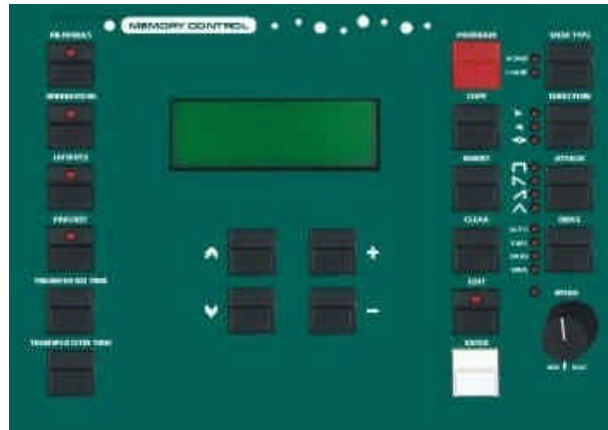
Figure 1 - 8 : Memory Controls

Soft Buttons

Soft buttons are indicated on the LCD using square brackets ([…]) and curly brackets ({…}).

Where a display contains more than one soft button (eg *OK* and *CANCEL*), the default button is indicated by square brackets. A selected button is highlighted (ie flashing).

The up and down arrow keys are used to select the required soft button.

The selected soft button on the LCD is actioned by pressing the ENTER button on the front panel.

Example - a warning message with two soft buttons (*Yes* and *No*):

```
***** WARNING ******
Memory is programmed
Overwrite memory ?
[YES]   {NO}
```

The *YES* button is the default button and also the currently selected button. Pressing the ENTER key on the front panel will activate the *YES* button.

```
***** WARNING ******
Memory is programmed
Overwrite memory ?
[YES]   {NO}
```

In the above display, the *NO* button is selected. Pressing the ENTER key will activate the *NO* button.

Long Lists

On several of the LCD screens, there are more editable options and/or soft buttons than will fit on the four lines of the LCD display.

In these situations, up and down arrow characters are displayed on the right hand side of the LCD screen to show there are further options available.

The up and down arrow characters are shown as '^' and 'v' respectively in this manual.

When the up and down arrow keys are used to scroll up and down the list of options and buttons, the screen title remains displayed on line 1 of the LCD and Lines 2 – 4 on the LCD will change accordingly.

For example - The LCD screen below contains a title, six editable options and an *Exit* button.

```
*** SCREEN TITLE ***
Option 1: <100%>
Option 2: <100%>
Option 3: <100%>    v
```

The 'v' indicates that there are one or more options below *Option 3*.

Pressing the down arrow key 3 times will select *Option 4* and the LCD will show the following:

```
*** SCREEN TITLE ***
Option 2: <100%>    ^
Option 3: <100%>
Option 4: <100%>    v
```

The '^' indicates that there is one or more options above *Option 2*. The 'v' indicates that there are one or more options below *Option 4*.

Pressing the down arrow key 3 times will select the *Exit* button and the LCD will show the following:

```
*** SCREEN TITLE ***
Option 5: <100%>    ^
Option 6: <100%>
[Exit]
```

The '^' indicates that there is one or more options above *Option 5*. The *Exit* button is the last option in the list.
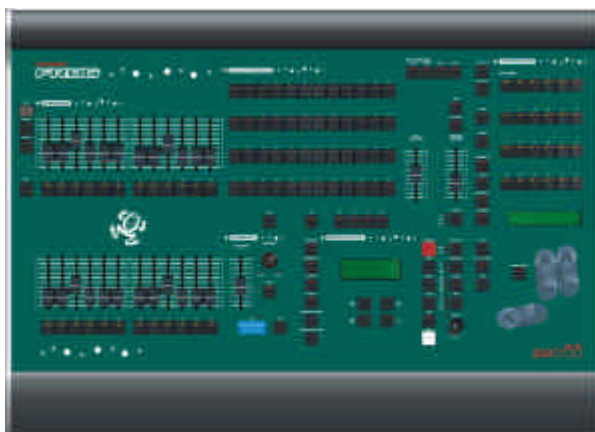
Figure 2 - 1: The Mambo Frog Lighting Desk

Introduction

This chapter enables you to get the desk up and running quickly, and to program and playback a simple show.

It starts by covering how to turn on the desk, set up fixture data on the outputs, save the data to memories, submasters or SX buttons, and transfer memories onto submasters or SX buttons.

It then continues with playing back the memories using the Playback X controls, and outputting data from the submasters and SX buttons.

Before starting a new lighting session it may be necessary to clear the existing show or reset the desk. If this is the case refer to chapter 6 for details.

This tutorial assumes that a suitable lighting rig has been set up with dimmers, luminaires and moving light fixtures, which are controlled by a standard DMX signal.

Turning on the Desk

Connect the DMX cable to the desk.

Connect the power supply to the desk and switch on at the mains.

Ensure that Blackout is not active (red light in the BLACKOUT button is off).

Set the GRAND MASTER fader to full.

Set all SUBMASTER faders to zero.

Press the MEMORIES button to display the Memories screen.

Assigning Fixtures

The Mambo Frog desk can control up to 96 fixtures. A fixture may be a simple 'generic' light, a lamp and scroller or an intelligent fixture such as a moving mirror or moving head.

For details of how to assign fixtures on the desk see page 6-3.

Patching Fixtures

Once fixtures have been assigned they need to be patched to DMX addresses. For details on how to patch fixtures on the desk see page 6-7.

For news, views and the latest software visit our dedicated Frog web site at www.frogsupport.com
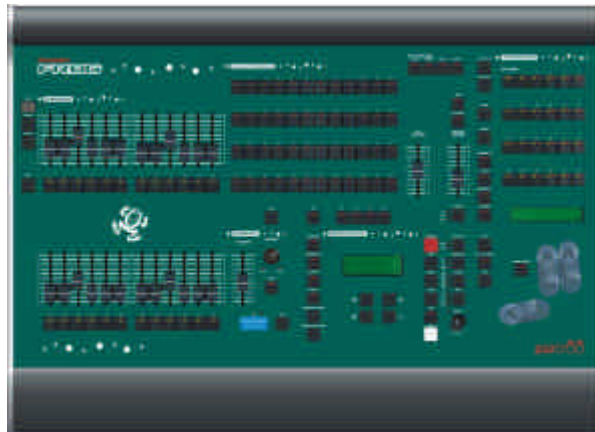
Figure 2 - 2: Mambo Frog Front Panel

Setting Fixture Channels

Fixtures are programmed by selecting the fixture(s), selecting the attribute, then adjusting the parameter levels using the control wheels, as follows:

Use the FIXTURE PAGE and FIXTURE SELECTION buttons to select the fixture(s) required. The red light in the button is lit when the fixture is selected.

Select the required attribute using BRIGHTNESS, COLOUR, BEAMSHAPE or POSITION button.

The corresponding fixture parameters are assigned to the control wheels. The parameter names and values are displayed in the WHEEL LCD.

Use the control wheels to set the fixture parameter values.

If there are more parameters for the selected fixture(s) and attribute, the light in the WHEEL GROUP button is lit. Press the WHEEL GROUP button to step through the parameter groups.

Programming a Scene into a Memory

Press the MEMORIES button to display the Memories screen on the main LCD.

Use the + and - keys to select an <u>unprogrammed</u> memory:

```
Current:    1    s
Next:    <  2    *>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```

Set the levels of the fixture parameters to the required values, as described earlier in this chapter.

Press the PROGRAM button to store all the current output levels in the memory.

The '*' next to the memory number on the LCD display is replaced by an 's' to indicate the memory is now a programmed scene.

The programmed memory becomes the *Current* memory. The *Next* memory automatically increments (if the option is set in Desk Setup).

```
Current:    2    s
Next:    <  3    *>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```

Programming a Scene onto a Submaster

Press the SUBMASTERS button to display the Submasters screen on the main LCD.

Use the + or - keys to select an <u>unprogrammed</u> submaster:

```
Submaster: < 2-3 *>
Contents:   Empty
```

Set the fixture parameter levels to the required values, as described earlier in this chapter.

Press the PROGRAM button to store all the current output levels on the submaster.

The *Contents* field on the Submaster screen changes to *Ch Data:*

```
Submaster: < 2-3 d>
Name:
Contents:   Ch Data
Fade Up: <00:03.0>v
```

Use the cursor keys to select the fade times, LTP actions or LTP trigger level field and adjust the value as required using the + and - keys.
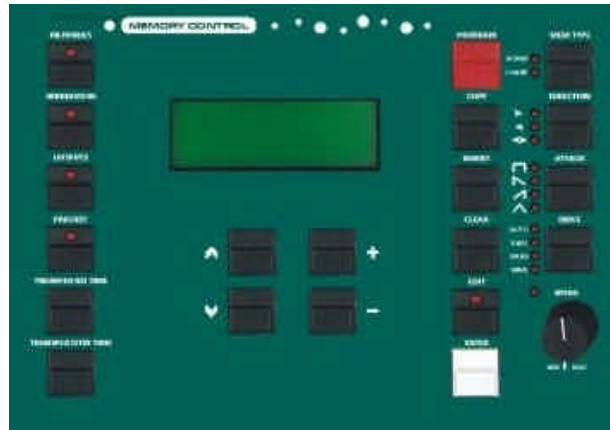
Figure 2 - 3 : Memory Controls

Programming a Scene onto an SX Button

Press the SX button to display the SX screen on the main LCD.

Use the + or - keys or one of the SX SELECTION buttons to select an unprogrammed SX button:

```
SX Number: <  1  *>
Contents:  Empty
```

Set the fixture parameter levels to the required values, as described earlier in this chapter.

Press the PROGRAM button to store all the current output levels on the SX button. The *Contents* field on the LCD changes to *Ch Data*:

```
SX Number: <   1  d>
Contents:  Ch Data
Fade Up:  <00:03.0>
Fade Down:<00:03.0>v
```

Use the up and down cursor keys to select the *Action, Fade Up, Fade Down, LTP Fade, Colour, Beamshape, Position* or *LTP Trigger Level* field on the LCD, and adjust its value as required.

See chapter 5 for further details on the SX button parameters.

Transferring a Memory onto a Submaster

Press the MEMORIES button to display the Memories screen on the main LCD.

Use the + or - keys to select a programmed memory:

```
Current:   21  s
Next:    <  22  s>
Fade Up:  <00:05.0>
Fade Down:<00:05.0>
```

Press and hold down the TRANSFER WITH TIME (or TRANSFER NO TIME) button on the front panel.

Use the PAGE UP or PAGE DOWN button to select the required page.

Press the appropriate SUBMASTER FLASH button. The selected memory will be transferred onto the submaster.

Release the TRANSFER WITH TIME (or TRANSFER NO TIME) button on the front panel.

Transferring a Memory onto an SX Button

Press the MEMORIES button to display the Memories screen on the main LCD.

Use the + or - keys to select a programmed memory:

```
Current:   37  s
Next:    <  38  s>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```

Press and hold down the TRANSFER WITH TIME (or TRANSFER NO TIME) button on the front panel.

Press the appropriate SX SELECTION button. The selected memory will be transferred onto the SX button.

Release the TRANSFER WITH TIME (or TRANSFER NO TIME) button on the front panel.
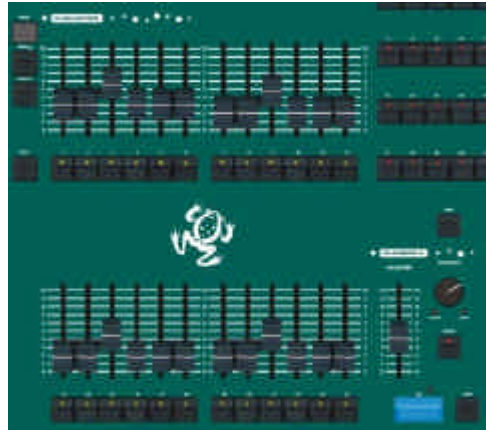
Figure 2 - 4: Submaster and Playback X Controls

Playing Back the Memories

The programmed memories are played back in ascending numerical order using the GO button.

Set the Playback X MASTER and the GRAND MASTER faders to full.

If not already selected, press the MEMORIES button to display the Memories screen on the LCD.

```
Current:   1 s
Next:     <2 >
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```

Select memory number 1 or the first programmed memory using the + and - keys on the front panel.

Press the GO button. The outputs fade from their current levels to those programmed into the selected memory, using the programmed transition times.

While the crossfade is taking place, the red light next to the GO button is on.

The *Current* and *Next* memories are incremented automatically.

To output the next programmed memory, press the GO button again.

Repeat until the end of the memory stack is reached. Pressing the GO button will then return to memory 1 (or the first programmed memory).

Playback Using Submasters

The SUBMASTER FADERS are used to play back loaded channel data or transferred memories.

Select the required submaster page using the PAGE UP or PAGE DOWN buttons as appropriate.

Move the appropriate submaster fader to the level required.

If the submaster has **zero** fade up and fade down times, the outputs from the fixture brightness parameters are controlled manually. The output level is directly related to the physical position of the submaster fader.

If the submaster has **non-zero** fade up and fade down times, the outputs of the fixture brightness parameters will fade up and down according to the fade times for the submaster.

If the LTP Trigger is enabled, the Colour, Beamshape and Position fixture channels will be triggered, and then snap or fade to their programmed levels, when the submaster reaches the LTP Trigger Level.

Playback Using SX Buttons

Ensure that the GRAND MASTER and SX MASTER faders are both set to full.

Press the required SX SELECTION BUTTON to output the data or transferred memory on that button.

The behaviour of the outputs depends on the action of the SX button.

Flash Action

The **Brightness** channels are flashed to their programmed levels. The **Colour, Beamshape** and **Position** fixture channels snap to their programmed levels.

Solo Action

The **Brightness** channels are flashed to their programmed levels. All other **Brightness** channel data from Playback X, submasters or SX buttons is reduced to zero. The **Colour, Beamshape** and **Position** channels snap to their programmed levels.

Go Action

Pressing the SX SELECTION button toggles between fading up and fading down the data on the SX button. While the outputs are fading up or down, the light in the SX SELECTION button flashes. When the outputs reach their programmed value, the light in the SX SELECTION button remains on.
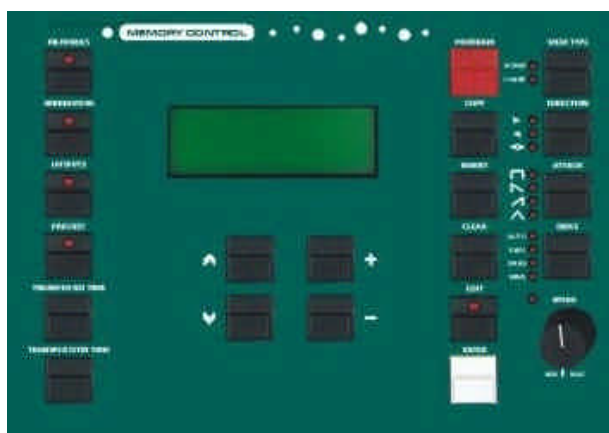
Figure 3 - 1 : Memory Controls

Introduction

The Mambo Frog desk provides a maximum of 400 full width scene memories.

Both scene and chase memory types are available.

Memory Numbers

Memory numbers can be whole numbers (1, 2, 3..) or numbers with a decimal point (eg 1.1, 1.2).

This allows up to 9 memories to be inserted individually between two whole number memories.

The range of available memory numbers is 0.1 to 999.9.

Memory Zero

Memory Zero is a special programmed scene memory. It is displayed on the Memories screen as memory "—".

All fixture brightness channels are set to zero; all fixture colour, beamshape and position channels are set to their home (default) values.

Memory Zero can be selected like any other memory, or copied, but it cannot be edited, previewed or deleted.

Memory Storage Limits

The desk has a maximum capacity of 400 full width scene memories.

A Scene memory uses one memory block. A Chase memory uses one memory block per step (max. 99).

Therefore, if chase memories are programmed the number of available memories is reduced accordingly.

For example the desk capacity is 400 scenes or 40 ten-step chases, or a combination of scenes and chases such that the total number of memory blocks required does not exceed 400.

Low Memory Warning

A "LOW" warning is displayed on the top line of the Memories screen when the number of memory blocks available is getting low (10%).

An "OUT" warning is displayed flashing on the top line of the Memories screen when there is no memory space left.

For news, views and the latest software visit our dedicated Frog web site at www.frogsupport.com

Memories

Memory Types

The Mambo Frog lighting desk provides two types of memories - scenes and chases.

Common Memory Data

All memories have a memory number, memory type, fade up time, fade down time and dwell time which is stored as part of the memory data.

All memories have an LTP fade time, and Colour, Beamshape and Position actions (snap or fade) which determine how the different fixture parameters behave when the memory is played back. These are all stored as part of the memory data.

All memories have a Trigger which allows them to be triggered with the GO button, to run automatically, when the previous memory has completed, to be triggered at a specified time, or to be triggered by a SMPTE or MIDI timecode signal (Frog Box only).

All fade and dwell times are in the range 00:00.0 to 99:59.9 with a resolution to 1/10 second.

The fade times and actions define the transition from the current memory to the incoming memory.

The Fade Up and Fade Down times affect the fixture brightness channels.

The LTP Fade time affects the fixture colour, beamshape and position channels.

The Dwell Time determines how long the current memory is output for, after completing its fade.

The Trigger determines if the memory requires a GO button press, runs automatically, or runs at a specified time. Memories with timecode triggers are triggered by an incoming SMPTE or MIDI timecode signal (Frog Box).

The default fade times, LTP actions, dwell time and trigger are adjustable in the Desk Setup section of Super User.

Scene Memories

A scene memory contains a set of channel data for all the assigned fixtures (full mode) or tagged fixtures (partial mode).

The fixture channel data includes brightness, colour, beamshape and position data.

Chase Memories

A chase memory consists of a number of steps (maximum 99). Each step contains a set of channel data for all the assigned fixtures (full mode) or tagged fixtures (partial mode).

The fixture channel data includes brightness, colour, beamshape and position data.

Chase Modifiers

A chase memory also contains the following modifiers:

Direction – the order in which the chase steps are output - Forwards (>), Backwards (<), or Bounce (<>).

Attack – the transition <u>between</u> steps - Snap, Slow Attack, Slow Decay or Crossfade. This <u>only</u> applies to the fixture <u>brightness</u> channels.

Colour Action - the transition <u>between</u> steps of the colour fixture channels - *Snap* or *Fade.*

Beamshape Action - the transition <u>between</u> steps of the beamshape fixture channels - *Snap* or *Fade.*

Position Action - the transition <u>between</u> steps of the fixture position channels - *Snap* or *Fade.*

Drive – the method by which the steps are triggered when the chase is output (Auto, Bass, Vari, Manual or Beat).

Speed – defines the basic speed of the chase (approx. 1 - 600 beats/minute).

N-Shot Chases

Chase memories have an additional parameter called *Shots* which determines how many times the chase runs when it is triggered from the Playback X, submaster or SX button.

The Shots parameter has a range of 0 - 255, where 0 = run continuously, 1 = run once, 2 = run twice etc.

Movement Effects

The desk provides the following four movement effects:

- Ellipse
- Quadrilateral
- Triangle
- Figure of Eight

The user can select one of the movement effects, and adjust its size, offset, rotation and speed to give a wide range of automatic effects.

The Movement Effect parameters are displayed on the WHEEL LCD in two separate Position parameter groups, which can be adjusted to the required values using the control wheels.

LCD Display – Memories

Programming, editing, copying, transferring, deleting and playing back memories are performed via the Memories screen on the main LCD.

To display the Memories screen on the LCD, press the MEMORIES button on the front panel. For example:

```
Current:   1    s
Next:    <  2    s>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>v
```

The up and down arrow keys move the flashing cursor (**< >**) through the editable fields on the screen.

The + and - keys are used to modify the data in the field indicated by the flashing cursor.

In **Partial** programming mode, the Colour, Beamshape and Position action fields are only editable if the attribute is programmed in the memory.

If the attribute is not programmed in the memory the value is shown as "---" and is not editable.

Memories Screen Data

Current - The current memory on the Playback X, together with a status character (s = scene, c = chase). This field is not editable.

Next - The next memory on the Playback X, together with a status character (* = unprogrammed, s = scene, c = chase).

Fade Up - the HTP fade up time for the *Next* memory.

Fade Down - the HTP fade down time for the *Next* memory.

LTP Fade - The LTP fade time for the *Next* memory.

Colour - The action of the colour fixture channels for the *Next* memory.

Beamshape - The action of the beamshape fixture channels for the *Next* memory.

Position - The action of the position fixture channels for the *Next* memory.

Dwell - The dwell time for the *Next* memory.

Trigger - The trigger for the *Next* memory (*Go*, *Auto*, *Real Time* or *Timecode*).

Time - If the Trigger is set to *Real Time* or *Timecode*, the actual time at which the memory will be triggered.

The time is displayed as HH:MM:SS for Real Time and HH:MM:SS:FF for Timecode.

Jump - The memory number to jump to on completion of the *Next* memory.

Selecting a Memory

1. Press the MEMORIES button to display the Memories screen on the main LCD.

2. Use the up and down arrow keys to select the *Next* memory field (if not already selected).

3. Use the + and - keys to select the required memory.

When selecting the *Next* memory on the Memories screen:

If the memory is unprogrammed the chase modifier lights are all off.

If the memory is a programmed scene the chase modifier lights are all off.

If the memory is a programmed chase the chase modifier lights indicate the values programmed into that memory.

NOTES

Selecting Memories

Pressing the MEMORIES key moves the cursor to the Next field on the Memories screen on the LCD.

When the cursor is on the Next field on the Memories screen, pressing the + and - keys together will select the first programmed memory.

SMPTE/MIDI Timecode Triggers

Memories programmed with SMPTE or MIDI timecode triggers will only be triggered by an incoming SMPTE or MIDI timecode signal when the show is played back on a Frog Box.

Memories

Programming Memories

Memories can be programmed as Full or Partial. The programming mode for the desk which determines if memories are saved as Full or Partial, is a user option in Desk Setup (see chapter 6).

Full Memories

When a scene memory or chase step is programmed, the current output levels of all the fixture channels are recorded into the memory data.

When the memory is played back via Playback X or using a submaster or SX button, the data for all fixture channels is output.

The fixture brightness channels are mixed in on a HTP (highest takes precedence) basis.

The fixture colour, beamshape and position channels are output on an LTP (last takes precedence) basis.

Partial Memories

When a scene or chase step is programmed, the current output levels of all the fixture brightness channels are recorded in the memory.

The selected LTP attribute(s) for the "tagged" fixtures are also recorded into the memory data.

When the memory is played back via Playback X, submaster or SX button, the channel data for all the fixture brightness channels and the selected LTP attribute(s) of the "tagged" fixtures are output.

The fixture brightness channels are mixed in on a HTP basis.

The fixture colour, beamshape and position channels are output on an LTP basis.

Programming Fixtures

Fixtures are programmed by selecting the fixture(s), selecting the attribute, and then adjusting the parameter levels as required using the corresponding control wheels.

Fixture Page Selection

The 96 fixtures are divided into 4 pages of 24 fixtures.

The FIXTURE PAGE buttons are used to select the required page (A-D).

The FIXTURE SELECTION buttons then represent the 24 fixtures on the currently selected page.

Fixture Selection

The FIXTURE SELECTION buttons are used to select and deselect fixtures to control and program.

Each FIXTURE SELECTION button contains two lights. The yellow light is lit if the fixture is assigned. The red light is lit when the fixture is selected.

Any combination of assigned fixtures may be selected and programmed at the same time.

Selecting Individual Fixtures

Individual fixtures can be selected by pressing the FIXTURE SELECTION buttons. The last fixture selected is designated as the "Primary Fixture".

Selecting Multiple Fixtures

To select a group of consecutive fixtures in a single operation, press and hold down a FIXTURE SELECTION button and then press another FIXTURE SELECTION button.

For example - press and hold down FIXTURE SELECTION button 1 and then press FIXTURE SELECTION button 10. All the fixtures between 1 and 10 (inclusive) will be selected.

Selecting All Fixtures

All the assigned fixtures on all four pages can be selected at once by pressing the SELECT ALL button.

All the selected fixtures on all four pages can be deselected at once by pressing the CLEAR ALL button

The "Primary Fixture"

The WHEEL LCD can show up to three parameters for one fixture type at a time. One of the selected fixtures is designated as the "Primary Fixture".

The last fixture selected is designated as the "Primary Fixture", and the red light in its FIXTURE SELECTION button flashes slowly to indicate this.

The fixture parameters displayed on the WHEEL LCD for the currently selected attribute and wheel group refer to the "Primary Fixture".

Tagging Fixtures

When the desk is in <u>Partial</u> mode, it is necessary to "tag" the fixtures which you wish to be recorded into the memory data.

When a fixture is "tagged" the yellow light in the FIXTURE SELECTION button <u>flashes</u>.

If there are tagged fixtures on other pages, the lights in the corresponding FIXTURE PAGE buttons will flash.

Tagging only applies to a fixture's <u>LTP parameters</u> (colour, beamshape and position). Brightness parameters for fixtures are <u>always</u> recorded whether the fixture is "tagged" or not.

Manual Tagging

To manually tag a fixture, <u>press and hold down</u> the FIXTURE SELECTION button for approx. 1 second. The yellow light in the button <u>flashes</u> when the fixture is tagged.

To untag a fixture, <u>press and hold down</u> the FIXTURE SELECTION button for approx. 1 second. The yellow light in the button stops flashing when the fixture is untagged.

Tagging Multiple Fixtures

To tag a group of consecutive fixtures in a single operation, <u>press and hold</u> down a FIXTURE SELECTION button and then <u>press and hold down</u> another FIXTURE SELECTION button for approx 1 second.

For example - press and hold down FIXTURE SELECTION button 1 and then press and hold down FIXTURE SELECTION button 6. All the fixtures between 1 and 6 will be tagged.

Tagging All Fixtures

All the assigned fixtures on all four pages can be tagged at once by pressing and holding the SELECT ALL button for approx. 1 second.

All the tagged fixtures on all four pages can be untagged at once by pressing and holding the CLEAR ALL button for approx. 1 second.

Automatic Tagging

If a fixture is selected, adjusting any of its LTP parameters using the control wheels, HOME button, FROG button or by referencing a palette, will automatically tag the fixture.

Selecting an Attribute

Once a fixture (or fixtures) has been selected, the required attribute can be chosen using the BRIGHTNESS, COLOUR, BEAMSHAPE or POSITION buttons. These buttons are mutually exclusive. The red lights in the buttons indicate which is currently selected.

Control Wheels and LCD

When a fixture (or fixtures) and attribute have been selected, the corresponding fixture parameters are assigned to the three control wheels.

The fixture parameter names and their current output values are displayed on the WHEEL LCD.

If there is more than one group of parameters for the selected fixture and attribute, the red light in the WHEEL GROUP button is lit. Pressing the WHEEL GROUP button will cycle through the parameter groups.

On the WHEEL LCD, Brightness parameter values are displayed as a percentage (0% - 100%); Colour, Beamshape and Position parameter values are shown as DMX (0-255).

If a fixture parameter is 16 bit (uses two DMX channels) then the parameter value is displayed as two separate DMX values, with the first representing the MSB (coarse) and the second the LSB (fine) components.

A fixture's brightness parameter (intensity or dimmer) is always assigned to the first finger wheel.

Colour and beamshape parameters are assigned to wheel groups and wheels according to the fixture data.

With position, the Pan parameter is always assigned to the "thumb" wheel and the Tilt parameter to the "first finger" wheel.

The movement effect parameters are displayed as additional Position parameters in separate wheel groups.

Controlling Brightness

Each assigned fixture can have a maximum of one brightness parameter (usually called dimmer or intensity).

The fixture brightness parameters are set using the control wheels. This sets a "virtual" fader level for each fixture.

The "virtual" fader level for each fixture is displayed in the PSI section of the monitor screen (see section 7).

The fixture brightness levels, defined by these "virtual" faders, are mixed in on a HTP basis with any other fixture brightness levels resulting from the Playback X, submasters or SX buttons.

Therefore to ensure that only the <u>programmed</u> fixture brightnesses are output when playing back data on Playback X, submasters or SX buttons, all the "virtual" faders should be set to zero before running the show.

Programming Multiple Fixtures at the Same Time

Any combination of assigned fixtures may be selected at the same time.

If more than one fixture is selected, the Wheel LCD will show the parameter data for the "Primary Fixture".

If all the selected fixtures are of the <u>same type</u> - moving the control wheels will adjust the same parameter levels for all the selected fixtures.

However, if the selected fixtures are of <u>different fixture types</u>, the following rules will apply:

The control wheels will control the parameters displayed on the WHEEL LCD for the "Primary Fixture" (and any other selected fixtures of the same fixture type), and the <u>corresponding parameters</u> (if applicable) for selected fixtures of different types.

The <u>corresponding parameter</u> is defined as being the parameter which would appear on the same wheel in the same wheel group for the currently selected attribute.

Note that particularly with the colour and beamshape attributes, the corresponding parameters for different fixture types could be totally different functions on the fixtures themselves.

For example - Beamshape Group 1 wheel 1 may be a Gobo wheel on one fixture but a shutter/strobe on another fixture, focus on another etc.

When several fixtures are selected at the same time, adjusting a fixture parameter using a control wheel may result in different parameter values being set depending on the Fixture Editing Mode selected.

Fixture Editing Modes

The desk provides a number of fixture editing modes which are selectable from the front panel and apply when editing the parameters of <u>several fixtures at the same time</u>.

Absolute Mode

When a fixture parameter is adjusted using a control wheel, the parameter value for all the selected fixtures goes to the <u>same absolute DMX value</u>.

Relative Mode

When a fixture parameter is adjusted using a control wheel, the parameter value for all the selected fixtures will change by the <u>same amount</u>.

Fan-First Mode

When a fixture parameter is adjusted using a control wheel, the parameter value for each of the selected fixtures will change by a <u>different amount</u>, except for the first fixture, whose value will be locked.

Fan-Middle Mode

When a fixture parameter is adjusted using a control wheel, the parameter value for each of the selected fixtures will change by a <u>different amount</u>, except for the middle fixture, whose value will be locked.

Fan-Last Mode

When a fixture parameter is adjusted using a control wheel, the parameter value for each of the selected fixtures will change by a <u>different amount</u>, except for the last fixture, whose value will be locked.

Default Editing Modes

Each of the four attributes has its own default fixture editing mode as follows:

Brightness	Absolute
Colour	Absolute
Beamshape	Absolute
Position	Relative

Changing Fixture Edit Modes

To temporarily change the fixture editing mode for an attribute:

1. Press and hold down the required attribute button (BRIGHTNESS, COLOUR, BEAMSHAPE or POSITION).

    The Wheel LCD will change to show the current editing mode for the attribute (*Absolute, Relative, Fan-First, Fan-Middle, Fan-Last*).

2. Use the first finger control wheel to set the fixture editing mode as required. The mode is shown on the Wheel LCD and in the PSI section of the monitor screen.

3. Release the attribute button. The Wheel LCD returns to its normal display.

NOTE

Fixture Editing Modes

When programming a memory, the fixture edit mode for each attribute is reset to its default mode when the PROGRAM button is pressed.

When editing a memory, the fixture edit mode for each attribute is reset to its default mode when exiting edit mode.

Movement Effects

Movement effects can be added to any fixture which has both Pan and Tilt parameters.

The total movement effect is defined using six parameters (Effect, Size X, Size Y, Offset, Rotation and Speed).

These parameters can be used to provide a wide range of effects (circles, squares, diamonds, lines etc.)

The movement effect parameters appear as two additional groups of parameters under POSITION.

To add a movement effect to a fixture:

1. Select the required fixture(s) and the Position attribute.

2. Use the control wheels to set the Pan and Tilt parameters to the base position.

3. Press the WHEEL GROUP button to select the first three movement effect parameters.

4. Select the movement effect with the thumb wheel, then adjust the Size X and Size Y parameters using the other control wheels.

5. Press the WHEEL GROUP button to select the next three movement effect parameters.

6. Adjust the Offset, Rotation and Speed parameters as required using the control wheels.

The Home Function

The HOME button is used as a quick method for resetting all the parameters of the selected fixture(s) to their home values (ie. brightness to full, colour to white, no gobo or effects, shutter open, pan and tilt to mid position).

It is also possible to home parameters for a single attribute as follows:

1. Select the required fixture(s).

2. Press and hold down an ATTRIBUTE button (BRIGHTNESS, COLOUR, BEAMSHAPE, or POSITION).

3. Press the HOME button.

Copying Fixture Data

Fixture parameter data for a particular attribute can be copied from one fixture to another fixture as follows:

1. Set up the parameter levels for the "source" fixture as normal.

2. Select the destination fixture(s).

3. Press and hold down an ATTRIBUTE button (BRIGHTNESS, COLOUR, BEAMSHAPE, or POSITION).

4. Press the FIXTURE SELECTION button of the source fixture.

5. Release the ATTRIBUTE button.

Programming a Scene

1. When programming a scene ensure that the PLAYBACK X MASTER fader is at zero and the GRAND MASTER fader is at full.

2. Select an unprogrammed memory.

3. Set the levels of the fixture parameters to the required values.

4. Add movement effects to fixtures, if required.

5. If programming a **Partial** memory, ensure that the required fixtures are "tagged".

6. If programming a **Partial** memory, press and hold down the required attribute button(s).

7. Press the PROGRAM button to store the current output levels in the memory.

   The '*' next to the memory number on the LCD is replaced by an 's' to indicate the memory is now a programmed scene.

   The programmed memory becomes the *Current* memory and is output live on the DMX.

   The *Next* memory automatically increments, if the option has been set in Desk Setup.

NOTES

Partial Memories

The output levels of the fixture brightness channels are always recorded regardless of the fixture tagging and attribute selection.

To record only the brightness levels of the fixtures, all fixtures must be untagged prior to pressing the PROGRAM button.

To record all the LTP attributes for the tagged fixtures (colour, beamshape and position) simply press the PROGRAM button.

Memories

Programming a Chase

1. When programming a chase ensure that the PLAYBACK X MASTER fader is at zero and the GRAND MASTER fader is at full.

2. Select an unprogrammed memory.

3. Press and hold the MEMORY TYPE button for 1 second to change the memory type to Chase (as indicated by the red light next to the button).

   The LCD changes to show the current memory and step number being programmed as follows:

   ```
   Memory:  10
   Step:   <1*>
   (Set Modifiers)
   [Finish]
   ```

4. Set the fixture parameters to the required values.

5. Add movement effects to fixtures, if required.

6. If programming a **Partial** memory, ensure that the required fixtures are tagged.

7. If programming a Partial memory, press and hold down the required attribute button(s).

8. Press the PROGRAM button to store the current output levels in the first step of the chase.

9. The next step is automatically inserted into the chase. The LCD changes to show the next (unprogrammed) step:

   ```
   Memory:  10
   Step:   <2*>
   (Set Modifiers)
   [Finish]
   ```

10. Set the levels fixture parameters as described for the first step.

11. Press the PROGRAM button to save the output levels into the current step.

12. Repeat the above procedure until all the steps in the chase have been programmed.

13. Press the down arrow key to move to the *Col Action* field (see notes). Set the action to *Snap* or *Fade* as required.

14. Press the down arrow key to move to the *B/S Action* field (see notes). Set the action to *Snap* or *Fade* as required.

15. Press the down arrow key to move to the *Pos Action* field (see notes). Set the action to *Snap* or *Fade* as required.

16. Press the down arrow key to move to the *Shots* field. (see note). Set the value to the required number.

17. Press the down arrow key to move the flashing cursor onto the *Set Modifiers* field.

    The chase now runs live on the outputs according to the current modifiers. The *Step* number changes with the outputs.

    ```
    Memory:  10
    Step:   <12>
    (Set Modifiers)
    [Finish]
    ```

18. Adjust the Direction, Attack and Drive modifiers using the front panel buttons.

    The red lights next to each of the modifier buttons indicate the current settings.

19. Adjust the Speed modifier using the SPEED control.

20. Press the down arrow key to move the cursor onto the *Finish* button. Press the ENTER key to return to the Memories screen.

    The '*' next to the memory number on the LCD is replaced by a 'c' to indicate the memory is now a programmed chase.

    The programmed chase memory becomes the *Current* memory and is output on the playback X.

    The *Next* memory automatically increments, if the option has been set in Desk Setup.

NOTES

Programming Chases

The chase also runs live when the cursor is on the Col Action, B/S Action, Pos Action or Shots field on the main LCD.

When running the chase live and adjusting the modifiers, the PLAYBACK X MASTER fader should be at full.

In a Partial chase, the "tagged" fixtures and attribute selection applies to ALL the steps in the chase.

Beat Drive

The Beat Drive option is indicated on the front panel by having both the BASS and MAN lights lit.

When programming a chase memory, set the Drive modifier to Beat, and then set the actual beat speed by tapping the STEP button in the Playback X section.

Modifying Scenes

This section deals with modifying programmed scene memories.

The fixture data for the whole memory can be overwritten, or individual fixtures can be edited live or blind, as required.

The up and down fade times, LTP fade time, LTP actions (if applicable), dwell time and trigger can all be adjusted from the Memories screen.

Overwriting a Scene Memory

1. Select a programmed scene memory.

2. Modify the parameter levels of the assigned fixtures, as required.

3. Add or modify movement effects, if required.

4. If programming in **Partial** mode, ensure that all the required fixtures are tagged.

5. If programming in **Partial** mode, press and hold down the required attribute button(s).

6. Press the PROGRAM button to store the current output levels in the memory. A warning message is displayed on the LCD:

```
***** WARNING ******
Memory is programmed
Overwrite memory ?
[YES]  {NO}
```

7. Press the ENTER key to select the *YES* button. The contents of the memory are overwritten with the current output values.

8. Alternatively, select the *NO* button and press the ENTER key. The contents of the memory are left unaltered.

Editing Channel Data Live

1. Select a programmed scene memory.

2. Press the EDIT button. The light in the EDIT button is lit to show that Edit has been selected.

    The contents of the selected scene memory are faded up and output live on the DMX.

    Any outputs resulting from the current memory on Playback X are faded out. Any outputs from submasters and SX buttons are mixed in as normal.

    To ensure that only the selected memory is output, all submaster and SX outputs should be zero.

    The LCD display changes to the following, for example:

```
Edit Memory:  23
Adjust Fixture
Parameters, then
press Edit.
```

3. Modify the fixture parameter values and movement effects, as required.

4. Press the EDIT button to exit Edit mode.

5. **Full Mode** - the following warning is displayed on the LCD:

```
***** WARNING ******
   Data modified
   Save Changes ?
   {Yes}  {No}
```

6. Select the *Yes* or *No* button as required, then press ENTER.

7. **Partial Mode** - the following warning is displayed on the LCD:

```
*** DATA MODIFIED **
Attributes recorded:
C{Yes} B{ No} P{ No}
Save ? {Yes}  {No}
```

8. To save edits - use the up and down arrow keys and + and - keys or the attribute buttons on the front panel to change the attribute selection, if required. Press the ENTER button.

    The edited memory becomes the *Current* memory. Any outputs from the PRESET faders are faded back in. The light in the EDIT button goes out.

Editing Channel Data Blind

1. Select a programmed scene memory.

2. Press the PREVIEW button. The light in the PREVIEW button is lit.

3. Press the EDIT button. The light in the EDIT button is lit.

4. Edit the fixture parameters, as required (see Edit Live).

5. Press the EDIT button to exit edit blind mode.

Editing Fade Times etc.

1. Select a programmed scene memory.

2. Use the up or down arrow keys to select the required fade time on the Memories screen.

```
Current:   1   s
Next:   <  2   s>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>v
```

3. Use the + and - keys to adjust the fade time, as required.

4. Use the up and down arrow keys to select the *LTP Fade* time or one of the LTP actions (*Colour*, *Beamshape* or *Position*). Use the + and - keys to adjust the value as required.

5. Use the up and down arrow keys to select the *Dwell* or *Trigger* field. Use the + and - keys to adjust the value as required.

Memories

Modifying Chases

This section deals with modifying programmed chase memories.

Editing chase memories is performed on two different levels:

The first level of editing is for inserting, overwriting or deleting steps and adjusting the chase modifiers.

The second level is for editing the channel data of a single chase step.

Entering Edit Mode Live

1. Select a programmed chase memory.

2. Press the EDIT button. The light in the EDIT button flashes.

   The first step of the selected memory is faded up and output live on the DMX (ensure that the Playback X MASTER is at full).

   Any outputs resulting from the *Current* memory on Playback X are faded out.

   Any outputs from the preset faders, submasters and SX buttons are mixed in as normal.

   Therefore to ensure that only the selected memory is output live, all submasters and SX buttons should be set to zero.

   The main LCD shows:

   ```
   Edit Memory:  23
   Step:          <1>
   (Set Modifiers)
   [Finish]
   ```

3. Use the + and - keys to select the required step. The selected step is output live on the DMX.

Entering Edit Mode (Blind)

1. Select a programmed chase memory.

2. Press the PREVIEW button on the front panel.

3. Press the EDIT button on the front panel.

   The main LCD shows:

   ```
   Edit Blind Mem:123
   Step: < 1 >
   Col Action: <Snap>
   B/S Action: <Snap> v
   ```

Inserting a Step

1. Select a programmed chase and enter Edit mode (see earlier).

2. Use the + and - keys to select the step before where you wish to insert the new step.

   For example, to insert a step after step 4, select step 4:

   ```
   Edit Memory:  23
   Step:          <4>
   (Set Modifiers)
   [Finish]
   ```

3. Press the INSERT key. A new unprogrammed step is inserted after the current step. In the above example the LCD would now display:

   ```
   Edit Memory:  23
   Step:          <5*>
   (Set Modifiers)
   [Finish]
   ```

4. Set the levels of the fixture channels as required.

5. Add movement effects, if required.

6. Press the PROGRAM button to save the output data.

   The '*' is removed from the step number to indicate it is now programmed. Any original steps in the chase after the inserted step are renumbered accordingly.

NOTES

Partial Memories

When entering Edit Mode, the yellow lights in the FIXTURE SELECTION buttons will indicate the fixtures which are programmed ("tagged") in the memory.

Inserting Steps

The INSERT button can only be used to insert a step after the current step.

If an attempt is made to insert a step into a chase which already has the maximum number of steps programmed, an error message is displayed on the LCD.

Editing Channel Data

1. Select a programmed chase and enter Edit mode (see earlier).

2. Use the + and - keys to select the step to edit.

3. Press the EDIT button. The LED in the EDIT button changes to on to show that the Edit channel function has been selected.

   The LCD shows the following:

   ```
   Edit Step:  1
   Adjust Fixture
   Parameters, then
   press Edit.
   ```

4. Modify the fixture parameter levels and movement effects, as required.

5. Press the EDIT button to exit Edit channel mode.

6. **Full Mode** - the LCD shows:

   ```
   ***** WARNING ******
      Data modified
      Save Changes ?
       {Yes}   {No}
   ```

7. Select the *Yes* or *No* button as required, then press ENTER.

8. **Partial Mode** - the following warning is displayed on the LCD:

   ```
   *** DATA MODIFIED **
   Attributes recorded:
   C{Yes} B{ No} P{ No}
   Save ? {Yes}   {No}
   ```

9. To save edits - use the up and down arrow keys and + and - keys or the attribute buttons on the front panel to change the attribute selection, if required. Press the ENTER button.

   The light in the EDIT button changes to flashing and the LCD returns to the memory step:

   ```
   Edit Memory:  23
   Step:          <1>
   (Set Modifiers)
   [Finish]
   ```

Overwriting a Step

1. Select a programmed chase and enter Edit mode (see earlier).

2. Use the + and - keys to select the step to be overwritten.

3. Set the levels for the fixtures, as required.

4. If programming in **Partial** mode, ensure that the required fixtures are tagged.

5. If programming in **Partial** mode, press and hold down the required attribute button(s).

6. Press the PROGRAM button to save the current output levels into the step. A warning message is displayed on the LCD:

```
***** WARNING ******
Step is programmed
overwrite step ?
[YES]   {NO}
```

7. Press the ENTER key to select the *YES* button. The contents of the step will be overwritten with the current output values.

    Alternatively, select the *NO* button and press the ENTER key. The contents of the step are left unaltered.

Deleting a Step

1. Select a programmed chase and enter Edit mode (see earlier).

2. Use the + and - keys to select the step to be deleted. For example, to delete step 4, select step 4 as shown below:

```
Edit Memory: 23
Step:         <4>
(Set Modifiers)
[Finish]
```

3. Press and hold the CLEAR button for 1 second. The selected step will be deleted from the chase. Any steps after the deleted step will be renumbered acccordingly.

    The LCD shows the previous step number, except when step 1 is deleted, when it flashes the step number and then displays step 1.

Editing Modifiers

1. Select a programmed chase and enter Edit mode (see earlier).

2. Press the down arrow key to move to the *Col Action* field. Use + or - keys to set to *Snap* or *Fade.*

3. Press the down arrow key to move to the *B/S Action* field. Use + or - keys to set to *Snap* or *Fade.*

4. Press the down arrow key to move to the *Pos Action* field. Use + or - keys to set to *Snap* or *Fade.*

5. Press the down arrow key to move to the *Shots* field. Use + or - keys to set the number of shots.

6. Press the down arrow key to move to the *Set Modifiers* field.

    The chase runs live (if editing live) on the outputs according to the current modifier values. The step number on line 2 of the LCD changes with the outputs.

```
Edit Memory:  23
Step:        <1>
(Set Modifiers)
[Finish]
```

7. Adjust the Direction, Attack and Drive modifiers using the front panel buttons.

8. To adjust the Speed modifier, first move the SPEED control to the programmed speed (the red light stops flashing and remains on).

9. Once the current speed has been picked up, move the SPEED control to the required value.

Exiting Edit Mode

1. To exit edit mode, use the down arrow key to move the cursor on the LCD to *Finish*.

```
Edit Memory:  23
Step:         <1>
(Set Modifiers)
[Finish]
```

2. Press the ENTER button on the front panel. The light in the EDIT button stops flashing.

    If editing blind - press the PREVIEW button.

    The LCD returns to the Memories screen, and the edited memory becomes the *Current* memory.

Editing Fade Times etc.

1. Select a programmed chase.

2. Use the up or down arrow keys to select the required fade time on the Memories screen.

```
Current:   11  s
Next:   <  12  c>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>v
```

3. Use the + and - keys to adjust the fade time, as required.

4. Use the up and down arrow keys to select the LTP Fade time or an LTP action.

5. Use the + and - keys to adjust the value as required.

6. Use the up and down arrow keys to select *Dwell Time* or *Trigger*.

7. Use the + and - keys to adjust the value as required.

Changing Memory Type

The type of a programmed memory can be changed from a scene to a chase or vice versa.

Select a programmed memory and press and hold the MEMORY TYPE button for approx. 1 second.

When a scene is changed to a chase: the fixture channel levels are copied into step 1 of the chase. The chase modifers are set to default values (Forwards, Snap, Auto, 60bpm).

When a chase is changed to a scene: the fixture channel levels of the first step in the chase are copied into the scene. All other chase steps are lost.

NOTE

Editing Chase Modifiers

When running the chase live and editing the modifiers, the Playback X MASTER fader should be at full.

The red light next to the SPEED control is used to indicate if the control is above, below or at the programmed chase speed:

Slow Flash - below programmed speed
Light On - at programmed speed
Fast Flash - above programmed speed.

Memories

Jumps in the Memory Stack

The Jump function provides the facility to jump to a specified memory when the current memory is complete.

The Jump data is displayed on the Memories screen on both the main LCD and monitor (if fitted).

Programming a Jump

1. Select the memory which is the start point of the jump.
2. Use the up or down arrow keys to select the *Jump* field.
3. Use the + or - keys to select the memory number to jump to.

Editing a Jump

1. Select the memory which is the start point of the jump.
2. Use the up or down arrow keys to select the *Jump* field.
3. Use the + or - keys to select a different memory number.

Deleting a Jump

1. Select the memory which is the start point of the jump.
2. Use the up or down arrow keys to select the *Jump* field.
3. Use the + or - keys to set the *Jump* field to *None*.

Inserting Memories

The desk provides the facility to insert up to a maximum of <u>nine</u> point memories between two whole number memories (eg memories 3.1, 3.2 … 3.9 between memories 3 and 4).

Memories are inserted one at a time, and can only be inserted <u>after</u> the currently selected memory.

Inserting a Memory

1. Select a memory on the Memories screen.
2. Press the INSERT button on the front panel.

    The Insert Memory screen is displayed on the LCD. The default number is the next highest insert memory number:

    ```
    *** Insert Memory **
    Number : <  1.1>


       [OK]     {CANCEL}
    ```

3. Use the + and - keys to select a different insert number, if required.
4. Press the ENTER button. The LCD returns to the Memories screen, showing the new <u>unprogrammed</u> insert memory:

    ```
    Current:   2    s
    Next:    <  1.1 *>
    Fade Up:  <00:03.0>
    Fade Down:<00:03.0>v
    ```

5. The new insert memory can then be programmed as normal.
6. To insert another memory, for example between 1.1 and 2, select memory 1.1 and press the INSERT button. Repeat the above procedure.

Figure 3 - 2 : Memory Controls

Copying Memories

The COPY button is used to copy a complete memory from one location to another.

The function performed (Copy To or Copy From) is dependent on the status of the selected memory as described in the sections below.

If there is not sufficient memory to perform the copy function a warning message is displayed on the LCD.

Copying to a Memory

1. Select an unprogrammed memory.

2. Press the COPY button on the front panel. The LCD display changes to the following:

```
Copy Memory
From:  <1>
To:    <n*>
[OK] {Cancel}
```

3. Use the + and - keys to select a source memory to copy from. Unprogrammed memory numbers will be skipped over.

4. Press the ENTER button to confirm the copy operation. The source memory is copied into destination memory, and the LCD returns to the Memories screen.

Copying from a Memory

1. Select a programmed memory.

2. Press the COPY button on the front panel. The LCD display changes to the following:

```
Copy Memory
From:  <1>
To:    <n*>
[OK] {Cancel}
```

3. Use the + and - keys to select the destination memory to copy to. Unprogrammed memories will be indicated with a '*'.

4. Press the ENTER button to confirm the copy operation.

   If the destination memory is unprogrammed, the source memory will be copied into the destination memory, and the LCD returns to the Memories screen.

5. If the destination memory is programmed, a warning message is displayed on the LCD:

```
***** WARNING ******
Memory is programmed
Overwrite memory ?
[YES]  {NO}
```

Press the ENTER button to select the *YES* option and overwrite the memory.

Memories

Previewing Memories

Previewing a memory allows the user to examine the fixture data for a memory without affecting the outputs.

Previewing a Scene Memory

1. Select a <u>programmed</u> scene memory.

2. Press the PREVIEW button. The light in the PREVIEW button comes on, and the LCD shows the preview screen.

3. The programmed value of each fixture parameter is shown. They are displayed as fixture number, parameter name and DMX value. For example:

```
Preview Memory 23
Fix  1 Cyan    255
Fix  1 Magenta 128
Fix  1 Yellow    0 v
```

4. To exit preview mode, press the PREVIEW button on the front panel. The light in the PREVIEW button goes out and the LCD returns to the Memories screen.

Previewing a Chase Memory

1. Select a <u>programmed</u> chase memory.

2. Press the PREVIEW button. The light in the PREVIEW button comes on and the LCD changes to the preview screen.

3. Use the + and - keys to select the required step.

4. The programmed value of each fixture parameter is shown. These are displayed as fixture number, parameter name and DMX value. For example:

```
PrevMem 23  Step< 1>
Fix 1 Cyan      255^
Fix 1 Magenta   128
Fix 1 Yellow      0v
```

5. To exit preview mode, press the PREVIEW button on the front panel. The light in the PREVIEW button goes out and the LCD returns to the Memories screen.

NOTES

Previewing Chases

The only active 'gadget' on the Preview Chase Memory screen is the step number. Pressing the up and down arrow keys will scroll up or down the fixture channel list, but the step number will remain active. The + and - keys will still change the step number, without affecting the channels displayed on the LCD.

If a fixture is <u>not</u> programmed in a partial memory, then the parameter values are displayed as "---" on the Preview screen.

Naming Memories

A text description (name) can be given to a <u>programmed</u> memory, if required. The memory name only appears on the Memories screen on the <u>monitor.</u>

1. Ensure that the main LCD is showing one of the base screens (Memories, Submasters,Outputs).

2. Press the F2 FUNCTION key. The LCD shows the following:

```
**** Name Item *****
Select type of item
to name ...
      [Cancel]
```

3. Press the MEMORIES button. The LCD shows:

```
**** Name Item *****
Select Memory Number
Number: <xxx>
   [OK]  {Cancel}
```

4. Select the required memory by using the + and - buttons, then press the ENTER button. The main LCD shows the memory:

```
**** Name Item *****
Memory xxx
<_                 >
   [OK] {Cancel}
```

5. Use the up and down keys to move the cursor, and the + and - keys to enter the text (or use external keyboard, if fitted).

6. Press the ENTER key to complete the naming action. The LCD returns to the previous screen.

Clearing Memories

Select a <u>programmed</u> memory. Press and hold the CLEAR button for approx. 1 second.

The memory is cleared and returns to being unprogrammed (indicated by a '*' next to memory number on the LCD).

If the cleared memory had been transferred to a submaster, then the submaster is automatically cleared.

If the *Current* memory is cleared, the *Current* memory goes to memory zero.

Figure 3 - 3: Playback X Controls

Playback of Memories

This section describes how to play back the programmed memories on the memory stack.

The memories can be output in ascending numerical order by using the GO button, or a particular memory can be selected and then output.

Setting up for Playback

Press the MEMORIES button on the front panel to display the Memories screen on the LCD:

```
Current:   1    s
Next:    <  2    s>
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
```

The LCD indicates the *Current* and *Next* memories, plus the *Fade Up* and *Fade Down* times of the next memory.

Selecting the Next Memory

Use the up and down arrow keys to move the flashing cursor (<>) onto the *Next* memory field:

```
Current:    1 s
Next:      <2 s>
Fade Up:  <00:03.0>
Fade Down: <00:03.0>
```

Use the + and - keys to select the next memory to be output.

Starting the Show

Set the Playback X MASTER and GRAND MASTER faders to full. Set the OVERRIDE control to its central position. Ensure Blackout is <u>not</u> active.

Select the first programmed memory and press the GO button. The memory will fade up on the outputs according to its programmed fade times.

Using the Go Button

To output the *Next* memory, as indicated on the Memories screen, press the GO button.

This initiates a crossfade to the *Next* memory. When the GO button is pressed the *Current* and *Next* memories are incremented automatically.

The outputs fade to the next memory according to its programmed fade times and LTP actions. During the fade the light next to the GO button is on.

Using the Override Control

The OVERRIDE control is used to slow down or speed up the fade between the current and next memories.

Turn the OVERRIDE control anti-clockwise to slow down the crossfade, clockwise to speed it up.

Using the Pause Button

The PAUSE button is used to pause a crossfade between the current and next memories.

The red light in the PAUSE button flashes when the crossfade has been paused. Pressing the PAUSE button again releases the pause.

Using the Master Fader

The Playback X MASTER controls the maximum output levels of brightness fixture channels <u>only</u> in the memories.

Using the Step Button

When the *Current* memory is a chase with a <u>manual drive</u>, the STEP button will manually step through the chase.

When the *Current* memory is a chase with a <u>beat drive</u>, tapping the STEP button twice will set the beat speed.

Memories

Live Adjustment of Chase Modifiers

It is possible to adjust the modifiers of chases running on the Playback X, either globally or individually.

Any live adjustments that are made to chases are <u>temporary</u> changes and do not change the programmed values of the modifiers in the memories.

Global Adjustment of Chase Modifiers

Global live adjustment of chase modifiers affects <u>all chases</u> that are currently running on the Playback X, Submasters and SX buttons.

The lights next to each modifier button indicate the selected option.

Direction - Press the DIRECTION button on the front panel to select the Direction modifier of <u>all</u> the chases.

Attack - Press the ATTACK button on the front panel to select the Attack modifier of <u>all</u> the chases.

Colour Action - Press and hold the COLOUR button, then press the ATTACK button on the front panel to select the colour action modifier of <u>all</u> the chases.

Beamshape Action - Press and hold the BEAMSHAPE button, then press the ATTACK button on the front panel to select the beamshape action modifier of all the chases.

Position Action - Press and hold the POSITION button, then press the ATTACK button on the front panel to select the position action modifier of all the chases.

Drive - Press the DRIVE button on the front panel to select the Drive modifier of all the chases.

Speed - Use the SPEED control to 'pick up' the current speed of the chase and then adjust the chase speed by turning the control anticlockwise to slow down or clockwise to speed up.

If several chases are running with different speeds, it is necessary to 'pick up' each chase in turn by moving the SPEED control to a position that matches its speed.

Individual Adjustment of Chase Modifiers

Individual live adjustment of chase modifiers only affects the <u>selected chases</u> running on the Playback X, Submasters and SX Buttons.

Entering Live Adjustment Mode:
To initiate individual live adjustment of chases - press the F3 button on the front panel. The light in the F3 button will be lit.

Chase Selection - Playback X
Press the MEMORIES button on the front panel. The LED in the MEMORIES button will <u>flash</u>.

Adjusting the Chase Modifiers:
Once the chase(s) have been selected, the DIRECTION, ATTACK and DRIVE buttons and the SPEED control will be used to adjust the chase modifiers live.

This uses the same method as described for global adjustment (see above) but will only affect the selected chases.

Exiting Live Adjustment Mode:
To end individual live adjustment of chases press the F3 button on the front panel. The LED in the F3 button will go out.

NOTES

Selecting an Unprogrammed Memory

If an unprogrammed memory is selected and the GO button pressed, an error message will be displayed on the LCD.

Remote Switches

Pressing a configured Remote switch is equivalent to pressing the GO button on the front panel, or selecting a specific memory then pressing the GO button.

Timecode Triggers

A memory with a timecode trigger will be triggered when the incoming SMPTE or MIDI timecode signal passes the specified start time.

A memory with a timecode trigger can also be triggered manually by selecting the memory and pressing the GO button, or remotely from a remote switch.

Chase Memories on the Playback X

When a chase memory is run on the playback X, it starts when the memory is triggered, and then runs for the programmed number of shots, or continuously, if the Shots parameter = zero.
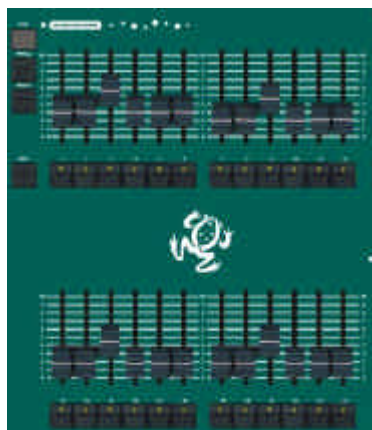
Figure 4 - 1 : Submaster Controls

Introduction

The Mambo Frog lighting desk provides 20 pages of 24 submasters, giving a total of 480 submasters.

The submasters are referenced by a page number followed by the submaster number (eg 1-1, 1-2).

The PAGE UP and PAGE DOWN buttons on the front panel are used to select the required submaster page.

There is always an active page which is indicated by the seven segment display on the front panel.

Each submaster may be loaded with channel data or a transferred memory.

Memories can be transferred with or without their fade times.

The channel data or memory on the submaster may be full or partial.

A page overlay feature is provided on the submasters, allowing data from submasters on different pages to be output at the same time.

The submasters may be named, if required.

For news, views and the latest software visit our dedicated Frog web site at www.frogsupport.com

Submasters

LCD Display - Submasters

Programming a submaster with channel data, editing, copying, previewing and deleting submasters are all performed via the Submasters screen on the main LCD.

To display the Submasters screen on the LCD, press the SUBMASTERS button on the front panel. The LCD displays the following data :

```
Submaster: < 1-1   *>
Contents:   Empty
```

The *Submaster* field shows the currently selected submaster in the format page - submaster (eg 1-1).

A submaster status character is displayed after the submaster number (* = unprogrammed, d = channel data, c = transferred chase memory, s = transferred scene memory).

The *Name* field contains the name of the submaster. When a memory is transferred to a submaster, its name is copied into this field.

The *Contents* field displays *Empty* if the submaster is unprogrammed, *Ch Data* if the submaster is loaded with channel data, or *Mem n* if memory n has been transferred onto the submaster.

The *Shots* field is only displayed and editable if the submaster contains a transferred <u>chase</u> memory. This field contains the number of shots (0-255).

The *Fade Up* field contains the HTP fade up time for the submaster.

The *Fade Down* field contains the HTP fade down time for the submaster.

The *LTP Fade* field contains the LTP fade time for the submaster. This time is used for fixture colour, beamshape and position data if the corresponding action is set to fade.

The *Colour* field contains the action of the fixture colour parameters after being triggered (Snap or Fade).

The *Beamshape* field contains the action of the fixture beamshape parameters after being triggered (Snap or Fade).

The *Position* field contains the action of the fixture position parameters after being triggered (Snap or Fade).

The *LTP Trig Lev* field is displayed on the LCD, if the LTP Trigger is enabled in Desk Setup. This field indicates the fader level at which the fixture LTP parameters are triggered on the submaster.

Selecting a Submaster

Most operations with submasters begin by selecting the required submaster.

Press the SUBMASTERS button to display the Submasters screen on the Main LCD:

```
Submaster: < 2-3   *>
Contents:   Empty
```

When the cursor is on the *Submaster* field, the + and - keys select the next or previous submaster respectively.

If selecting the previous or next submaster changes the page, the seven segment display on the front panel changes automatically.

Alternatively, a submaster can be selected by using the PAGE UP or PAGE DOWN keys to select the required page and then pressing the SUBMASTER FLASH button.

If the submaster contains channel data or a transferred memory, pressing the SUBMASTER FLASH button to select the submaster will flash or solo the data.

Channel Data on Submasters

Fixture channel data can be loaded directly onto a submaster. The channel data may be full or partial.

Full Channel Data

In **Full Mode** - All the fixture channels are recorded onto the submaster.

Any fixture channels which are not specifically set will be recorded at their current output values.

Partial Channel Data

In **Partial Mode** - All the fixture brightness channels are recorded onto the submaster.

The selected LTP attribute(s) of the "tagged" fixtures are also recorded onto the submaster.

LTP channels for "untagged" fixtures are not recorded.

Output

When channel data is loaded onto a submaster, the output is determined by the Fade Up, Fade Down, LTP Fade and Colour, Beamshape and Position actions defined for the submaster.

Loading Channel Data

1. Select an <u>unprogrammed</u> submaster.

2. Set the fixture parameter levels to the required values.

3. If programming in **Partial** mode, ensure the required fixtures are "tagged".

4. If programming in **Partial** mode, press and hold down the required attribute button(s).For example, to record just the colour parameters, hold down the COLOUR button.

5. Press the PROGRAM button to store the current output levels on the submaster.

    In **Partial** mode, the tagged fixtures are automatically untagged.

    The *Contents* field changes to *Ch Data*. For example:

    ```
    Submaster: < 1-1  d>
    Name:
    Contents:  Ch Data
    Fade Up:  <00:03.0>v
    ```

6. Move to the *Fade Up* field and adjust value as required.

7. Move to the *Fade Down* field and adjust value as required.

8. Move to the *LTP Fade* field and adjust value as required.

9. Move to the *Colour* field and adjust action as required.

10. Move to the *Beamshape* field and adjust action as required.

11. Move to the *Position* field and adjust action as required.

12. Move to the *LTP Trig Lev* field and adjust value as required.

Overwriting Channel Data

1. Select a submaster loaded with channel data.

2. Adjust the fixture parameter values, as required.

3. If programming in **Partial** mode, ensure the required fixtures are "tagged".

4. If programming in **Partial** mode, press and hold down the required attribute button(s).

5. Press the PROGRAM button to store the current output levels on the submaster. A warning message is displayed:

    ```
    ***** WARNING ******
    Submaster programmed
    Overwrite submaster?
      {YES}    {NO}
    ```

6. Press the ENTER key to select the *YES* button. The contents of the submaster are overwritten with the current output values.

NOTES

Partial Channel Data

The output levels of the fixture brightness channels are <u>always</u> recorded regardless of the fixture tagging and attribute selection.

To record only the brightness levels of the fixtures, all fixtures must be <u>untagged</u> prior to pressing the PROGRAM button.

To record the brightness and all the LTP attributes for the tagged fixtures (colour, beamshape and position) simply press the PROGRAM button.

Submasters

Editing Channel Data Live

1. Select a submaster loaded with channel data and then press the EDIT button. The light in the EDIT button is lit.

    The channel data on the selected submaster is output live on the DMX. Ensure that the PLAYBACK X MASTER fader is at <u>full</u>.

    Any outputs resulting from the Playback X are faded out.

    Any outputs from other submasters and SX buttons are still mixed in as normal.

    To ensure that <u>only</u> the channel data from the selected submaster is output live, all submaster faders and SX outputs should be at <u>zero</u>.

2. Adjust the fixture parameter levels, as required.

3. Press the EDIT button to exit Edit mode. The light in the EDIT button goes out.

4. **Full Mode** - the following warning is displayed on the LCD:

    ```
    ***** WARNING ******
       Data modified
       Save Changes ?
       {Yes}   {No}
    ```

5. Select the *Yes* or *No* button as required, then press ENTER.

6. **Partial Mode** - the LCD shows:

    ```
    *** DATA MODIFIED **
    Attributes recorded:
    C{Yes} B{ No} P{ No}
    Save ? {Yes}   {No}
    ```

7. Use the cursor keys and + and - keys or the attribute buttons on the front panel to change the attribute selection, if required. Press the ENTER button.

Editing Channel Data Blind

1. Select a submaster programmed with channel data.

2. Press the PREVIEW button and then the EDIT button. The lights in the two buttons are lit.

3. Edit the fixture parameter data as required.

4. Press the EDIT button to exit edit blind mode.

5. Press the PREVIEW button to return to the Submasters screen.

Transferring Memories

Any <u>programmed</u> memory from the memory stack can be transferred onto a submaster.

A memory can be transferred with or without its programmed fade times.

The desk software distinguishes between pressing (and releasing) either of the TRANSFER buttons, and pressing and holding down one of the TRANSER buttons.

This action determines which of the two methods of transferring memories is actioned.

Transfer Method 1

This method is used to transfer a memory or sequence of consecutive memories onto submasters in a quick and simple operation.

No warnings are provided before overwriting submasters which may already contain channel data or a transferred memory.

Transfer Method 2

This method is used to transfer a single memory onto a submaster by using the main LCD interface.

Warnings are provided on the LCD before overwriting submasters which already contain channel data or a transferred memory.

Transferring a Memory (1)

1. Press the MEMORIES button to display the Memories screen.

2. Select a <u>programmed</u> memory.

3. <u>Press and hold down</u> the TRANSFER WITH TIME or TRANSFER NO TIME button on the front panel.

4. Use the PAGE UP or PAGE DOWN button to select the required submaster page.

5. Press the appropriate SUBMASTER FLASH button. The selected memory will be transferred onto the corresponding submaster.

6. The *Next* memory on the Memories screen will automatically increment to the next <u>programmed</u> memory.

7. To transfer this memory onto a submaster, select the required submaster page, then press the appropriate SUBMASTER FLASH button as before.

8. Repeat this procedure for each memory to be transferred.

9. When all the required memories have been transferred, release the TRANSFER WITH TIME or TRANSFER NO TIME button on the front panel.

NOTES

Editing Partial Channel Data

In Partial mode, when a submaster is edited the yellow lights in the FIXTURE SELECTION buttons indicate the fixtures which are "tagged" and recorded in the data.

Transferring a Memory (2)

1. Press the MEMORIES button to display the Memories screen on the main LCD.

2. Select a programmed memory.

3. Press and release the TRANSFER WITH TIME (or TRANSFER NO TIME) button on the front panel. The LCD Display changes to the following:

```
 Transfer With Time
Memory No: < 23   s>
Submaster: < 1-1  *>
   [OK]     {CANCEL}
```

4. Use the + and - keys or the PAGE UP, PAGE DOWN and SUBMASTER FLASH buttons to select a submaster to transfer the memory to.

5. Select the *OK* button by pressing the ENTER key.

   If the selected submaster is unprogrammed, the memory will be transferred onto the submaster and the LCD return to the Memories screen.

6. If the selected submaster is loaded with channel data or has a memory transferred onto it already, a warning message is displayed on the LCD:

```
***** WARNING ******
Submaster programmed
Overwrite submaster?
   {Yes}     {No}
```

7. To overwrite the submaster, select the *YES* button by pressing the ENTER key. The LCD returns to the Memories screen.

8. To cancel the transfer operation, select the *NO* button, then press the ENTER key. The LCD returns to the Transfer screen.

Editing Transferred Memories

Editing a submaster which has a transferred memory results in editing the actual memory.

1. Select a submaster with a transferred memory.

2. Press the EDIT button on the front panel. A warning message is displayed on the LCD:

```
****** WARNING *****
About to Edit Memory
Continue ?
[OK]      {CANCEL}
```

3. Press the ENTER button to select OK and enter edit mode for the actual memory transferred onto the submaster.

NOTES

Transferring Memories - Method 1

When the TRANSFER WITH TIME or TRANSFER NO TIME button is being held down, the normal function of the SUBMASTER FLASH buttons is disabled (ie they do not flash or solo).

When a memory is transferred using this method, any channel data or memory which may already be on the submaster is overwritten – no warning is given.

If the user presses and holds one of the TRANSFER buttons, then releases it without transferring a memory, the transfer operation is cancelled automatically.

Transferring Memories - Method 2

If the user presses and releases one of the TRANSFER buttons, the LCD will display the appropriate Transfer screen as described above. The following special cases apply to this operation:

If the user selects the Cancel button and presses the ENTER key, the transfer operation is cancelled.

If the user presses the same TRANSFER button, the transfer operation is cancelled.

If the user presses the other TRANSFER button, the current transfer operation is cancelled and the new transfer operation actioned (ie the LCD screen changes from With Time to No Time or vice versa).

Submasters

Copying Submaster Data

The COPY button is used to copy submaster data (channel data or transferred memory number and times) from one location to another.

The function performed (Copy To or Copy From) is dependent on the status of the selected submaster as described in the sections below.

Copying to a Submaster

1. Press the SUBMASTERS button to display the Submasters screen on the main LCD.

2. Select an <u>unprogrammed</u> submaster.

3. Press the COPY button. The LCD changes to the following:

```
   Copy Submaster
From:        < 1-1  s>
To:          < 1-12 *>
   [OK]     {Cancel}
```

4. Use the + and - keys or the PAGE UP, PAGE DOWN and SUBMASTER FLASH buttons to select a submaster to copy from.

5. Press the ENTER button to confirm the copy operation. The data from the source submaster will be copied into the destination submaster. The LCD returns to the Submaster screen.

   If there are no programmed submasters to copy from, an error message is displayed on the LCD.

Copying from a Submaster

1. Press the SUBMASTERS button to display the Submasters screen on the main LCD.

2. Select a <u>programmed</u> submaster.

3. Press the COPY button. The LCD display changes to the following:

```
   Copy Submaster
From:        < 1-1  s>
To:          < 3-1  *>
   [OK]     {Cancel}
```

4. Use the + and - keys or the PAGE UP, PAGE DOWN and SUBMASTER FLASH buttons to select a submaster to copy to. (unprogrammed submasters are indicated with a '*').

5. Press the Enter button to confirm the copy operation.

   If the destination submaster is unprogrammed, the submaster data is copied, and the LCD returns to the Submasters screen.

6. If the destination submaster is programmed with channel data or a transferred memory, a warning message is displayed on the LCD:

```
***** WARNING ******
Submaster programmed
overwrite submaster?
   {Yes}  {No}
```

7. Press the ENTER button to select the *YES* option and overwrite the submaster, or select the *NO* option and press ENTER to return to the Copy Submaster screen.

Previewing Submasters

Previewing a submaster allows the user to examine the fixture channel data loaded onto the submaster or contained in the transferred memory, without affecting the outputs.

Previewing a Submaster with Channel Data

1. Select a submaster loaded with channel data.

2. Press the PREVIEW button on the front panel. The light in the PREVIEW button comes on and the LCD changes to the Preview Submaster screen.

3. The programmed value for each fixture parameter is shown on the LCD. These are displayed as fixture number, parameter name and DMX value. For example:

```
   Preview Sub 2-3
    (Channel Data)
Fix 1 Cyan       255^
Fix 1 Magenta    128v
```

4. To exit preview mode, press the PREVIEW button on the front panel. The light in the PREVIEW button goes out and the LCD returns to the Submasters screen.

Previewing a Submaster with Transferred Scene

1. Select a submaster with a transferred scene memory.

2. Press the PREVIEW button on the front panel. The light in the PREVIEW button comes on and the LCD changes to the Preview Submaster Screen.

3. The programmed value for each fixture parameter is shown on the LCD. These are displayed as fixture number, parameter name and DMX value. For example:

```
  Preview Sub 2-3
    (Memory 23)
Fix 1 Cyan       255^
Fix 1 Magenta    128v
```

4. To exit preview mode, press the PREVIEW button. The light in the PREVIEW button goes out and the LCD Display returns to the Submasters screen.

Previewing a Submaster with Transferred Chase

1. Select a submaster with a transferred chase memory.

2. Press the PREVIEW button on the front panel. The light in the PREVIEW button comes on and the LCD changes to the Preview Submaster Screen.

3. Use the + and - keys to select the required step.

4. The programmed value for each fixture parameter will be shown on the LCD. These are displayed as fixture number, parameter name and DMX value. For example:

```
  Preview Sub 2-4
Memory 24    <Step 1>
Fix 1 Magenta    128^
Fix 1 Yellow     255v
```

5. To exit preview mode, press the PREVIEW button. The light in the PREVIEW button goes out and the LCD display returns to the Submasters screen.

Naming Submasters

A text description (name) can be given to a <u>programmed</u> submaster.

The submaster name only appears on the <u>monitor screen</u>.

1. Ensure that the main LCD is showing one of the base screens (Memories, Submasters,Outputs).

2. Press the F2 FUNCTION key. The LCD shows the following:

```
**** Name Item *****
Select type of item
to name …
      [Cancel]
```

3. Use the PAGE UP, PAGE DOWN and SUBMASTER FLASH buttons to select a submaster. The LCD shows the following:

```
**** Name Item *****
Submaster 2-3
<_               >
     [OK] {Cancel}
```

4. Use the up and down keys to move the cursor, and the + and - keys to enter the text (or use external keyboard, if fitted).

5. Press the ENTER key to complete the naming action. The LCD returns to the previous base screen.

Clearing Submasters

The CLEAR button is used to clear the currently selected submaster. (i.e. remove any loaded channel data or transferred memory).

Select a programmed submaster.

<u>Press and hold</u> the CLEAR button for 1 second. The submaster will be cleared and return to being unprogrammed (indicated by *Empty* in the *Contents* field on the Submaster screen).
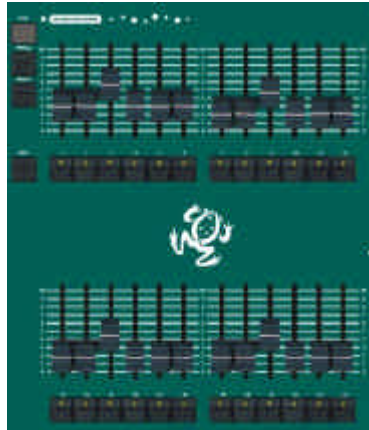
Figure 4 - 2 : Submaster Controls

Outputting Data from Submasters

The submaster data (channel data or transferred memory) is output by raising the submaster fader to the required level.

Fixture LTP channel data will only be output if the appropriate option has been set in Desk Setup.

Submasters with Channel Data

If the submaster contains channel data the outputs from the generic channels are controlled manually if the fade times are zero, or timed if the fade times are non-zero.

The output level is directly related to the position of the submaster fader.

If the channel data contains fixture data, the outputs from the submaster will be as follows:

The Brightness fixture channels will fade up and down in the same way as the generic channels (either manual or timed depending on the fade times).

If the LTP Trigger is enabled - The Colour, Beamshape and Position fixture channels will snap or fade to their programmed levels, when the submaster reaches the LTP Trigger Level, depending on the LTP actions set for the submaster.

If the LTP Trigger is disabled - No Colour, Beamshape or Position fixture channel data will be output.

Submasters with Scene Memories

If the submaster fade times are **zero**, the outputs from the fixture brightness channels will be controlled manually. The output level is directly related to the submaster fader level.

If the submaster fade times are **non-zero**, the outputs of the fixture brightness channels will fade up and down according to the fade times.

While the outputs from the submaster are subject to a timed fade, the light in the SUBMASTER FLASH button is lit.

If the LTP Trigger is enabled, the Colour, Beamshape and Position fixture channels are triggered when the submaster fader reaches the LTP Trigger Level.

The Colour, Beamshape and Position fixture channels will snap or fade in the LTP fade time, depending on the LTP action defined for the submaster.

Submasters with Chase Memories

When a chase memory is transferred onto a submaster, it does not run immediately, but is 'parked' on step 1 of the chase.

When the submaster fader is raised above the LTP Trigger Level, the chase will start running.

When the submaster fader is brought back down to **zero**, the chase will stop running (unless it has already completed by running n times).

The fixture brightness parameters are mixed in with all other fixture brightness outputs from the Playback X, submasters and SX buttons on a HTP basis.

The LTP channels in the chase (Colour, Beamshape, Position) are only output if the LTP Trigger is enabled and the submaster fader is raised above the LTP trigger level.

Chase Drive Modifiers

Auto - the chase runs at the programmed speed.

Vari - the chase runs at the programmed speed, with additional step triggers being provided by the bass beat of the incoming audio signal.

Bass - the step triggers are provided by the bass beat of the incoming audio signal.

Manual - the STEP button in the Submaster section is used to manually step through the chase.

Beat - the STEP button in the Submaster section is used to set the beat speed of the chase.

Live Adjustment of Chase Modifiers

It is possible to adjust the modifiers of chases running on submasters. This can be done globally or individually.

Any live adjustments that are made to chases are temporary changes and do not change the programmed values of the modifiers in the chase memories.

Global Adjustment of Chase Modifiers

Global adjustment of chase modifiers affects **all chases** that are currently running on the Playback X, Submasters and SX buttons.

The lights next to each modifier button indicate the selected option.

Direction - Press the DIRECTION button on the front panel to select the Direction modifier of all the chases.

Attack - Press the ATTACK button on the front panel to select the Attack modifier of all the chases.

Colour Action - Press and hold the COLOUR button, then press the ATTACK button on the front panel to select the colour action modifier of all the chases.

Beamshape Action - Press and hold the BEAMSHAPE button, then press the ATTACK button on the front panel to select the beamshape action modifier of all the chases.

Position Action - Press and hold the POSITION button, then press the ATTACK button on the front panel to select the position action modifier of all the chases.

Drive - Press the DRIVE button on the front panel to select the Drive modifier of all the chases.

Speed - Use the SPEED control to 'pick up' the current speed of the chase and then adjust the chase speed by turning the control anticlockwise to slow down or clockwise to speed up.

If several chases are running with different speeds, it is necessary to 'pick up' each chase in turn by moving the SPEED control to a position that matches its speed.

Individual Adjustment of Chase Modifiers

Individual adjustment of chase modifiers only affects the selected chases running on the submasters.

Entering Live Adjustment Mode:
To initiate individual live adjustment of chases - press the F3 button on the front panel. The light in the F3 button will be lit.

Chase Selection - Submasters:
Press the SUBMASTERS button on the front panel. The light in the SUBMASTERS button will flash.

Any lights in the SUBMASTER FLASH buttons which were previously lit indicating page overlay will go out. The SUBMASTER FLASH buttons now act as submaster selection buttons.

Select the submaster(s) containing the chase(s) as required. The lights in the SUBMASTER FLASH buttons flash to indicate the selected chases.

Adjusting the Chase Modifiers:
Once the chase(s) have been selected, the DIRECTION, ATTACK and DRIVE buttons and the SPEED control will be used to adjust the chase modifiers live.

This uses the same method as described for global adjustment (see above) but will only affect the selected chase(s).

Exiting Live Adjustment Mode:
To end individual live adjustment of chases press the F3 button on the front panel. The light in the F3 button goes out.

Submasters

Page Overlay on Submasters

It is possible to output the channel data or memory data from several submasters from <u>different pages</u> simultaneously, provided that they are not controlled by the same physical SUBMASTER FADER.

For example - you can output data from submasters 1-1, 2-2, 3-3 at the same time but not from submasters 1-1, 2-1 and 3-1 as they are all controlled by the submaster 1 fader.

If the submaster page is changed while any of the submaster faders are up, or any of the SUBMASTER FLASH buttons are being held down, the fader or button <u>remains on the original page</u> and the outputs for the previous submaster are held.

The new channel data or memory associated with the fader or button is not output until the submaster fader is returned to zero, or the SUBMASTER FLASH button is released. This feature is known as Page Overlay.

While data being output from a submaster is <u>not</u> from the current page, the light in the corresponding SUBMASTER FLASH button flashes.

The light in the SUBMASTER FLASH button stops flashing when the correct page is returned to, using the PAGE UP or PAGE DOWN buttons.

Submaster Flash Functions

The SUBMASTER FLASH buttons can be used to flash or solo the channel data or memory data on a submaster.

The FLASH FUNCTION button is used to select the required flash function (OFF, FLASH or SOLO).

The red lights next to the FLASH FUNCTION button indicate the currently selected flash function.

Flashing Submasters

1. Set the flash function to Flash using the FLASH FUNCTION button.

2. Press and hold down a SUBMASTER FLASH button.

   The **Brightness** fixture channels are flashed to their programmed levels (assuming that the GRAND MASTER fader is at full).

   The **Colour, Beamshape** and **Position** channels are automatically triggered and snap to their programmed levels.

Soloing Submasters

1. Set the flash function to Solo using the FLASH FUNCTION button.

2. Press and hold down a SUBMASTER FLASH button.

   The **Brightness** fixture channels are flashed to their programmed levels (assuming that the GRAND MASTER fader is at full).

   All other **Brightness** channel data being output from other submasters, SX buttons or Playback X is reduced to zero.

   The **Colour, Beamshape** and **Position** channels are automatically triggered and snap to their programmed levels.

Figure 5 - 1: SX Controls

Introduction

The **Mambo Frog** lighting desk provides 48 SX Buttons which are used for outputting data.

Each SX button may be loaded with channel data or a transferred memory.

The channel data or transferred memory may be full or partial.

Memories can be transferred to SX buttons with or without their fade times.

Each SX button has its own editable action (Flash, Solo or Go) which determines how the data is output.

The fade up, fade down, LTP fade, LTP actions and LTP trigger levels can be set individually on the SX buttons.

The SX MASTER fader controls the Brightness outputs from the SX buttons.

The SX buttons may also be named, if required.

For news, views and the latest software visit our dedicated Frog web site at www.frogsupport.com

Figure 5 - 2: SX Controls

LCD Display - SX Screen

Programming an SX button, editing, copying, previewing and deleting functions are all performed via the SX screen on the main LCD.

To display the SX screen on the LCD, press the SX button on the front panel. The LCD shows:

```
SX Number: <  1   d>
Name:
Contents:  Ch Data
Fade Up:   <00:03.0>v
```

The *SX Number* field shows the currently selected SX button (1 - 48).

An SX status character is displayed after the SX number
(* = unprogrammed, d = channel data, c = transferred chase memory, s = transferred scene memory).

The *Name* field contains the name of the SX button. When a memory is transferred to a submaster, its name is copied into this field.

The *Contents* field displays *Empty* if the SX button is unprogrammed, *Ch Data* if the SX button is loaded with channel data, or *Mem n* if memory n has been transferred onto the button.

The *Shots* field is only displayed and editable if the SX button contains a transferred chase memory. This field contains the number of shots (0-255).

The *Action* field contains the action for the SX button (*Flash, Solo* or *Go*).

The *Fade Up* field contains the HTP fade up time for the SX button.

The *Fade Down* field contains the HTP fade down time for the SX button.

The *LTP Fade* field contains the LTP fade time for the SX button. This time is used for fixture colour, beamshape and position data if the corresponding action is set to fade.

The *Colour* field contains the action of the fixture colour parameters after being triggered (Snap or Fade).

The *Beamshape* field contains the action of the fixture beamshape parameters after being triggered (Snap or Fade).

The *Position* field contains the action of the fixture position parameters after being triggered (Snap or Fade).

The *LTP Trig Lev* field is displayed on the LCD, if the LTP Trigger is enabled in Desk Setup. This field indicates the level at which the fixture LTP parameters are triggered.

Selecting an SX Number

Most operations with the SX buttons begin by selecting the required SX number.

Press the SX button to display the SX screen on the LCD:

```
SX Number: <  1  *>
Contents:  Empty
```

When the cursor is on the *SX Number* field, the + and - keys select the next or previous SX number respectively.

Alternatively, an SX number can be selected by pressing the appropriate SX SELECTION button.

If an SX SELECTION button already contains channel data or a transferred memory, pressing that button will output the data as normal, according to the button *Action.*

Channel Data on SX Buttons

Fixture channel data can be loaded directly onto an SX button.

The fixture channel data can be full or partial, which is determined by the *Program Mode* option in *Desk Setup*.

The Action, Fade Up, Fade Down, LTP Fade, Ltp Actions and LTP Trigger Level can all be adjusted as required.

Full Channel Data

The output levels of all the fixture parameters are recorded and stored in the channel data on the SX button.

When the channel data on the SX button is played back, the data for all fixtures is output; the brightness channels are mixed on a HTP basis; the colour, beamshape and position channels on an LTP basis.

Partial Channel Data

All the fixture brightness channels are recorded onto the SX button.

The selected LTP attribute(s) of the "tagged" fixtures are also recorded onto the SX button.

LTP channels for "untagged" fixtures are not recorded.

When the channel data on the SX button is played back, the data for the "tagged" fixtures is output; the brightness channels are mixed on a HTP basis, the colour, beamshape and position channels on an LTP basis.

Loading Channel Data

1. Select an unprogrammed SX button.

2. Set the fixture parameter levels to the required values.

3. If programming in **Partial** mode, ensure that the required fixtures are "tagged".

4. If programming in **Partial** mode, press and hold down the required attribute button(s).For example, press COLOUR to record fixture colour parameters only.

5. Press the PROGRAM button to store the current output levels on the SX button.

    In **Partial** mode, the tagged fixtures are automatically untagged.

    The *Contents* field changes to *Ch Data*. For example:

    ```
    SX Number:< 1  d  >
    Contents:  Ch Data
    Fade Up:  <00:03.0>
    Fade Down:<00:03.0>v
    ```

6. Select the *Action* field on the LCD and adjust as required.

7. Select the *Fade Up* field on the LCD and adjust as required.

8. Select the *Fade Down* field on the LCD and adjust as required.

9. Select the *LTP Fade* field on the LCD and adjust as required.

10. Select the *Colour* field on the LCD and set to Snap or Fade.

11. Select the *Beamshape* field on the LCD and set to Snap or Fade.

12. Select the *Position* field on the LCD and set to Snap or Fade.

13. Select the *LTP Trig Lev* field on the LCD and adjust as required.

Overwriting Channel Data

1. Select an SX button loaded with channel data.

2. Adjust the fixture parameter values, as required.

3. If programming in **Partial** mode, ensure the required fixtures are "tagged".

4. If programming in **Partial** mode, press and hold down the required attribute button(s).

5. Press the PROGRAM button to store the current output levels on the SX button. A warning is displayed on the LCD:

    ```
    ***** WARNING ******
    SX Button programmed
    Overwrite SX Button?
       {YES}    {NO}
    ```

6. Press the ENTER key to select the *YES* button. The contents of the SX button are overwritten with the current output values.

SX Buttons

Editing Channel Data Live

1. Select an SX button loaded with channel data and press the EDIT button. The light in the EDIT button comes on.

    The channel data on the SX button is output live on the DMX. Any outputs from the Playback X are faded out. Any outputs from submasters and other SX buttons are mixed in as normal.

    To ensure that only the channel data from the selected SX button is output live, all submaster faders and other SX button outputs should be at <u>zero</u>.

    The LCD shows the following:

    ```
    Edit SX Button 12
    Adjust Fixture
    Parameters, then
    press Edit.
    ```

2. Adjust the fixture parameter levels, as required.

3. Press the EDIT button to exit.

4. **Full Mode:** The LCD shows:

    ```
    ***** WARNING ******
       Data modified
       Save Changes ?
        {Yes}   {No}
    ```

5. Select the *Yes* or *No* button as required, then press ENTER.

6. **Partial Mode**: the LCD shows:

    ```
    *** DATA MODIFIED **
    Attributes recorded:
    C{Yes} B{ No} P{ No}
    Save ? {Yes}   {No}
    ```

7. Use the cursor keys and + and - keys to change the attribute selection, if required, then press the ENTER button.

Editing Channel Data Blind

1. Select a submaster programmed with channel data.

2. Press the PREVIEW button and then the EDIT button. The lights in the two buttons are lit.

3. Edit the fixture parameter data as required.

4. Press the EDIT button to exit edit blind mode.

5. Press the PREVIEW button to return to the Submasters screen

Transferring Memories

Any <u>programmed</u> memory from the memory stack can be transferred onto an SX button.

A memory can be transferred with or without its programmed fade times.

The desk software distinguishes between pressing (and releasing) either of the TRANSFER buttons, and pressing and holding down one of the TRANSER buttons.

This action determines which of the two methods of transferring memories is actioned.

Transfer Method 1

This method is used to transfer a memory or sequence of consecutive memories onto SX buttons in a quick and simple operation.

<u>No warnings</u> are provided before overwriting SX buttons which already contain channel data or a transferred memory.

Transfer Method 2

This method is used to transfer a single memory onto an SX button by using the main LCD interface.

Warnings are provided on the LCD before overwriting SX buttons which already contain channel data or a transferred memory.

Transferring a Memory (1)

1. Press the MEMORIES button to display the Memories screen on the LCD.

2. Select a <u>programmed</u> memory.

3. <u>Press and hold down</u> the TRANSFER WITH TIME (or TRANSFER NO TIME) button on the front panel.

4. Press the appropriate SX SELECTION button. The selected memory will be transferred onto the corresponding SX button.

5. The *Next* memory on the Memories screen will be automatically incremented.

6. To transfer this memory onto an SX button, press the appropriate SX SELECTION button as before.

7. Repeat this procedure for each memory to be transferred.

8. When all the required memories have been transferred, release the TRANSFER WITH TIME (or TRANSFER NO TIME) button on the front panel.

Transferring a Memory (2)

1. Press the MEMORIES button to display the Memories screen on the main LCD.

2. Select a <u>programmed</u> memory.

3. <u>Press and release</u> the TRANSFER WITH TIME (or TRANSFER NO TIME) button on the front panel. The LCD Display changes to the following:

```
 Transfer With Time
Memory No: < 23  s>
Submaster: < 1-1 *>
   [OK]   {CANCEL}
```

4. Press the SX button and use the + and - keys, or press one of the SX SELECTION buttons to select the SX button to transfer the memory to. The LCD shows:

```
 Transfer With Time
Memory No: < 23  s>
SX Button: <  1  *>
   [OK]   {CANCEL}
```

5. Select the *OK* button by pressing the ENTER key.

   If the selected SX button is <u>unprogrammed</u>, the memory will be transferred onto the SX button and the LCD return to the Memories screen.

6. If the selected SX button is loaded with channel data or has a memory transferred onto it already, a warning message is displayed on the LCD:

```
***** WARNING ******
SX Button programmed
Overwrite SX Button?
   {Yes}    {No}
```

7. To overwrite the SX button, select the *YES* button by pressing the ENTER key. The LCD returns to the Memories screen.

8. To cancel the transfer operation, select the *NO* button, then press the ENTER key. The LCD returns to the Transfer screen.

Editing Transferred Memories

Editing an SX button which has a transferred memory results in editing the actual memory.

1. Select an SX button with a transferred memory.

2. Press the EDIT button on the front panel. A warning message is displayed on the LCD:

```
****** WARNING *****
About to Edit Memory
Continue ?
[OK]     {CANCEL}
```

3. Press the ENTER button to select OK and enter edit mode for the actual memory transferred onto the SX button.

NOTES

Transferring Memories - Method 1

When the TRANSFER WITH TIME or TRANSFER NO TIME button is being <u>held down</u>, the normal output function of the SX SELECTION buttons is disabled (ie they do <u>not</u> flash, solo or Go).

When a memory is transferred using this method, any channel data or memory which may already be on the SX button is overwritten – no warning is given.

If the user presses and holds one of the TRANSFER buttons, then releases it <u>without</u> transferring a memory, the transfer operation is cancelled automatically.

Transferring Memories - Method 2

If the user presses and releases one of the TRANSFER buttons, the LCD will display the appropriate Transfer screen as described above. The following special cases apply to this operation:

If the user selects the Cancel button and presses the ENTER key, the transfer operation is cancelled.

If the user presses the <u>same</u> TRANSFER button, the transfer operation is cancelled.

If the user presses the <u>other</u> TRANSFER button, the current transfer operation is cancelled and the new transfer operation actioned (ie the LCD screen changes from With Time to No Time or vice versa).

SX Buttons

Copying SX Button Data

The COPY button is used to copy SX data (channel data or transferred memory number and times) from one location to another.

The function performed (Copy To or Copy From) is dependent on the status of the selected SX button as described in the sections below.

Copying to an SX Button

1. Press the SX button to display the SX screen on the main LCD.

2. Select an <u>unprogrammed</u> SX button.

3. Press the COPY button. The LCD changes to the following:

```
    Copy SX Button
From:        < 11    s>
To:          < 31    *>
    [OK]     {Cancel}
```

4. Use the + and - keys or the SX SELECTION buttons to select an SX button to copy from.

5. Press the ENTER button to confirm the copy operation. The data from the source SX button will be copied into the destination SX button. The LCD returns to the SX screen.

    If there are no programmed SX buttons to copy from, an error message is displayed on the LCD.

Copying from an SX Button

1. Press the SX button to display the SX screen on the main LCD.

2. Select a <u>programmed</u> SX button.

3. Press the COPY button. The LCD display changes to the following:

```
    Copy SX Button
From:        < 11    s>
To:          < 31    *>
    [OK]     {Cancel}
```

4. Use the + and - keys or the SX SELECTION buttons to select an SX button to copy to. (unprogrammed SX buttons are indicated with a '*').

5. Press the Enter button to confirm the copy operation.

    If the destination SX button is unprogrammed, the SX button data is copied, and the LCD returns to the SX screen.

6. If the destination SX button is programmed with channel data or a transferred memory, a warning message is displayed on the LCD:

```
***** WARNING ******
SX Button programmed
overwrite SX Button?
    {Yes}  {No}
```

7. Press the ENTER button to select the *YES* option and overwrite the SX button, or select the *NO* option and press ENTER to return to the Copy SX Button screen.

Previewing SX Buttons

Previewing an SX button allows the user to examine the fixture data loaded onto the SX button or contained in the transferred memory, without affecting the outputs.

Previewing an SX Button with Channel Data

1. Select an SX button loaded with channel data.

2. Press the PREVIEW button on the front panel. The light in the PREVIEW button comes on and the LCD changes to the following, for example:

```
   Preview SX 23
   (Channel Data)
Fix A1 Cyan      255
Fix A1 Magenta   128v
```

3. To exit preview mode, press the PREVIEW button on the front panel. The light in the PREVIEW button goes out and the LCD returns to the SX screen.

Previewing an SX Button with a Transferred Scene

1. Select an SX button with a transferred scene memory.

2. Press the PREVIEW button on the front panel. The light in the PREVIEW button comes on and the LCD changes to the following:

```
   Preview SX 23
    (Memory 23)
Fix A1 Cyan      255
Fix A1 Magenta 128v
```

3. To exit preview mode, press the PREVIEW button. The light in the PREVIEW button goes out and the LCD returns to the SX screen.

Previewing an SX Button with a Transferred Chase

1. Select an SX button with a transferred chase memory.

2. Press the PREVIEW button on the front panel. The light in the PREVIEW button comes on and the LCD changes to the following:

```
  Preview SX 24
Memory 24   <Step 1>
Fix A1 Magenta  255
Fix A1 Yellow   100v
```

3. Use the + and - keys to select the required step.

4. Use the up and down arrow keys to scroll up and down the list of fixture channels.

5. To exit preview mode, press the PREVIEW button. The light in the PREVIEW button goes out and the LCD returns to the SX screen.

Naming SX Buttons

A text description (name) can be given to a underlined programmed SX button.

The SX button name only appears on the underlined monitor screen.

1. Ensure that the main LCD is showing one of the base screens (Memories, Submasters, SX or Outputs).

2. Press the F2 FUNCTION key. The LCD shows the following:

```
**** Name Item *****
Select type of item
to name …
      [Cancel]
```

3. Use one of the SX SELECTION buttons to select an SX number. The LCD shows the following:

```
**** Name Item *****
SX Button 23
<_                  >
    [OK] {Cancel}
```

4. Use the up and down keys to move the cursor, and the + and - keys to enter the text (or use an external keyboard, if fitted).

5. Press the ENTER key to complete the naming action. The LCD returns to the previous screen.

Clearing SX Buttons

The CLEAR button is used to clear the currently selected SX button. (i.e. remove any loaded channel data or transferred memory).

Select a programmed SX button.

Press and hold the CLEAR button for approximately 1 second.

The SX button will be cleared and return to being unprogrammed (indicated by *Empty* in the *Contents* field on the SX screen).

SX Buttons

Outputting Data from SX Buttons

The SX button data (fixture channel data or transferred memory data) is output by pressing the SX SELECTION buttons on the front panel.

The actual outputs will depend on the SX button Action (Flash, Solo or Go), the Fade Up, Fade Down, LTP Fade, LTP Actions, LTP Trigger Level and the SX MASTER fader level.

Flash Action

Press and hold down the required SX SELECTION button.

The **Brightness** channels in the channel or memory data are flashed to their programmed levels (assuming that the SX MASTER and GRAND MASTER faders are both set to full).

The **Colour, Beamshape** and **Position** channels in the channel or memory data will be triggered automatically and snap to their programmed levels (assuming the LTP trigger is enabled for SX buttons).

Solo Action

Press and hold down the required SX SELECTION button.

The **Brightness** channels in the channel or memory data are flashed to their programmed levels (assuming that the SX MASTER and GRAND MASTER faders are both set to full).

All other **Brightness** channel data being output from Playback X, submasters or other SX buttons is reduced to zero.

The **Colour, Beamshape** and **Position** channels in the channel or memory data will be triggered automatically and snap to their programmed levels (assuming the LTP trigger is enabled for SX buttons).

Go Action

The Go action on the SX buttons is essentially a 'timed flash'.

The first press of the SX SELECTION button raises the internal master for the button from zero to full in the *Fade Up* time defined for the SX button.

The second press of the SX SELECTION button lowers the internal master for the button from full to zero in the *Fade Down* time defined for the SX button.

Subsequent presses of the SX SELECTION button toggle between fading up and fading down.

While the internal master is fading up or down, the light in the SX SELECTION button flashes to indicate that the outputs are fading.

When the internal master reaches full, the light in the SX SELECTION button remains on.

Channel Data on SX Buttons

If the SX button contains channel data then the outputs will be as follows:

The **Brightness** fixture channels will fade up and down according to the internal master for the SX button.

For Flash and Solo actions the internal master effectively snaps to full (100%) on pressing the button, and snaps to zero on releasing the button.

For the Go action the internal master fades up and down according to the fade times for the SX button.

If the LTP Trigger is enabled - The **Colour, Beamshape** and **Position** fixture channels will <u>snap</u> to their programmed levels, when the internal master reaches the LTP Trigger Level.

If the LTP Trigger is disabled - No **Colour, Beamshape** or **Position** channel data will be output.

Scene Memories on SX Buttons

If the SX button contains a transferred scene memory then the outputs will be as follows:

The **Brightness** fixture channels in the memory fade up and down according to the internal master for the SX button.

Flash or **Solo** action - the internal master effectively snaps to full (100%) on pressing the button, and snaps to zero on releasing the button.

Go action - the internal master fades up and down according to the fade times for the SX button.

If the *Action* is set to Go - the Colour, Beamshape and Position channels are triggered and snap or fade to their programmed levels according to the LTP fade and LTP action data for the SX button, when the internal master reaches the LTP trigger level.

Chase Memories on SX Buttons

When a chase memory is transferred onto an SX button, it does not run immediately, but is 'parked' on step 1 of the chase.

When the internal master rises above the LTP Trigger Level, the chase will start running.

When the internal master returns to **zero**, the chase will stop running (unless it has already completed by running n times).

The fixture brightness parameters are mixed with the Playback X, submasters and SX buttons on a HTP basis.

The LTP channels in the chase (Colour, Beamshape, Position) are only output if the LTP Trigger is enabled and the internal rises above the LTP trigger level.

Chase Drive Modifiers

Auto - the chase runs at the programmed speed.

Vari - the chase runs at the programmed speed, with additional step triggers being provided by the bass beat of the incoming audio signal.

Bass - the step triggers are provided by the bass beat of the incoming audio signal.

Manual - the STEP button in the SX section is used to manually step through the chase.

Beat - the STEP button in the SX section is used to set the beat speed of the chase.

Live Adjustment of Chase Modifiers

It is possible to adjust the modifiers of chases running on SX buttons. This can be done globally or individually.

Any live adjustments that are made to chases are temporary changes and do not change the programmed values of the modifiers in the chase memories.

Global Adjustment of Chase Modifiers

Global adjustment of chase modifiers affects all chases that are currently running on the Playback X, Submasters and SX buttons.

The lights next to each modifier button indicate the selected option.

Direction - Press the DIRECTION button on the front panel to select the Direction modifier of all the chases.

Attack - Press the ATTACK button on the front panel to select the Attack modifier of all the chases.

Colour Action - Press and hold the COLOUR button, then press the ATTACK button on the front panel to select the colour action modifier of all the chases.

Beamshape Action - Press and hold the BEAMSHAPE button, then press the ATTACK button on the front panel to select the beamshape action modifier of all the chases.

Position Action - Press and hold the POSITION button, then press the ATTACK button on the front panel to select the position action modifier of all the chases.

Drive - Press the DRIVE button on the front panel to select the Drive modifier of all the chases.

Speed - Use the SPEED control to 'pick up' the current speed of the chase and then adjust the chase speed by turning the control anticlockwise to slow down or clockwise to speed up.

If several chases are running with different speeds, it is necessary to 'pick up' each chase in turn by moving the SPEED control to a position that matches its speed.

Individual Adjustment of Chase Modifiers

Individual adjustment of chase modifiers only affects the selected chases running on the SX buttons.

Entering Live Adjustment Mode:
To initiate individual live adjustment of chases - press the F3 button on the front panel. The light in the F3 button will be lit.

Chase Selection - SX Buttons:
Press the SX button on the front panel. The light in the SX button will flash

Any lights in the SX SELECTION buttons which were previously lit indicating output will go out. The SX SELECTION buttons now act as simply selection buttons.

Select the SX button(s) containing the chase(s) as required. The lights in the SX SELECTION buttons flash to indicate the selected chases.

Adjusting the Chase Modifiers:
Once the chase(s) have been selected, the DIRECTION, ATTACK and DRIVE buttons and the SPEED control will be used to adjust the chase modifiers live.

This uses the same method as described for global adjustment (see above) but will only affect the selected chase(s).

Exiting Live Adjustment Mode:
To end individual live adjustment of chases press the F3 button on the front panel. The light in the F3 button will go out.
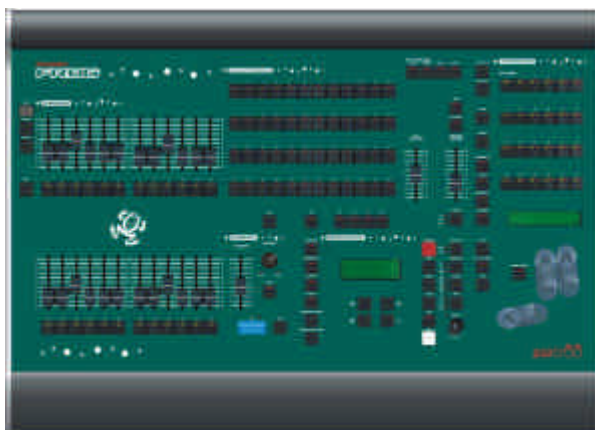
Figure 6 - 1: Mambo Frog Lighting Desk

Introduction

In Super User mode, the desk provides a number of functions for setting up the desk, assigning fixtures, patching, saving and loading show data to disk, clearing data etc.

It is only possible to enter Super User Mode from one of the 'base' screens on the LCD (Memories, Submasters, SX or Outputs).

Entering Super User

Press and hold down the + and - keys on the front panel together, and then press the ENTER key. The LCD shows the Super User screen:

```
**** SUPER USER ****
{Desk Setup}
{Floppy Disk}
{Clear/Reset}      v
```

The Super User screen contains the following options:

- *Desk Setup*
- *Floppy Disk*
- *Clear/Reset*
- *Illumination*
- *Set Recovery Mode*
- *Set Date & Time*
- *Set Lock Code*
- *Desk Information*
- *Reset DMX Outputs*
- *Exit Super User*

Use the up and down arrow keys to select an option. Press the ENTER key to display the screen for that option.

For news, views and the latest software visit our dedicated Frog web site at www.frogsupport.com

Super User

Desk Setup

Select the *Desk Setup* option from the Super User screen and press the ENTER key. The *Desk Setup* screen is shown on the main LCD:

```
**** DESK SETUP ****
{Desk Defaults}
{Assign Fixtures}
{Pan/Tilt Options} v
```

The following Desk Setup options are available:

- *Desk Defaults*
- *Assign Fixtures*
- *Pan/Tilt Options*
- *Patch Functions*
- *Program Mode*
- *Remote Switches*
- *Frog Screen*
- *Timecode Setup*
- *Exit Desk Setup.*

Use the up and down arrow keys to select the required option, then press the ENTER key to activate that option.

Desk Defaults

Select the *Desk Defaults* option from the Desk Setup screen and press the ENTER key. The Desk Defaults screen is displayed on the main LCD:

```
** DESK DEFAULTS ***
{Memory}
{Submaster}
{SX}
```

Use the up and down arrow keys to move the cursor through the fields. Select the required option and press the ENTER key.

Memory Defaults

Select the *Memory* option from the Desk Defaults screen and press the ENTER key. The Memory Defaults screen is displayed on the main LCD:

```
* MEMORY DEFAULTS  *
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
LTP Fade: <00:03.0>v
```

Use the up and down arrow keys to move the cursor through the fields.

Use the + and - keys to adjust the value in the selected field.

Fade Up - The default HTP fade up time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

Fade Down - The default HTP fade down time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

LTP Fade - The default LTP fade time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

Colour - The default action for the colour fixture channels when outputting a memory. Range: Snap or Fade; Default = Fade.

Beamshape - The default action for the beamshape fixture channels when outputting a memory.Snap or Fade; Default = Fade

Position - The default action for the position fixture channels when outputting a memory. Snap or Fade; Default = Fade

Dwell - The default dwell time. Range: 00:00.0 to 99:59.9; Default = 00:00.0.

Trigger - The default trigger. Go, Auto or Time; Default = Go.

Auto Increment - Automatic increment of Next memory when programming. Range: On or Off; Default = Off.

Exit - Select to return to the Desk Defaults screen.

Submaster Defaults

Select the *Submaster* option from the Desk Defaults screen and press the ENTER key. The Submaster Defaults screen is displayed on the main LCD:

```
*SUBMASTER DEFAULTS*
Sub Data: <Gen&Fix>
LTP Trigger:  <On >
LTP Trig Lev: < 20>v
```

Use the up and down arrow keys to move the cursor through the fields.

Use the + and - keys to adjust the value in the selected field.

LTP Trigger - Determines if the submasters will trigger the LTP channels or not.Range On or Off ; Default = On.

LTP Trig Level - The default LTP trigger level. Range 0 – 100%; Default = 5%.

Fade Up - The default HTP fade up time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

Fade Down - The default HTP fade down time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

LTP Fade - The default LTP fade time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

Colour - The default action for the colour fixture channels when triggered. Range: Snap or Fade; Default = Fade.

Beamshape - The default action for the beamshape fixture channels when triggered. Range: Snap or Fade; Default = Fade

Position - The default action for the position fixture channels when triggered. Range: Snap or Fade; Default = Fade

Exit - Select to return to the Desk Defaults screen.

SX Defaults

Select the *SX* option from the Desk Defaults screen and press the ENTER key. The SX Defaults screen is displayed on the main LCD:

```
*** SX DEFAULTS ****
Fade Up:  <00:03.0>
Fade Down:<00:03.0>
LTP Fade: <00:03.0>v
```

Use the up and down arrow keys to move the cursor through the fields.

Use the + and - keys to adjust the value in the selected field.

Fade Up - The default HTP fade up time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

Fade Down - The default HTP fade down time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

LTP Fade - The default LTP fade time. Range 00:00.0 to 99:59.9; Default = 00:03.0.

Colour - The default action for the colour fixture channels when triggered. Range: Snap or Fade; Default = Fade.

Beamshape - The default action for the beamshape fixture channels when triggered. Range: Snap or Fade; Default = Fade

Position - The default action for the position fixture channels when triggered. Range: Snap or Fade; Default = Fade.

LTP Trigger - Determines if the SX buttons will trigger the LTP channels or not.Range On or Off ; Default = On

LTP Trig Level - The default LTP trigger level. Range 0 – 100%; Default = 5%.

Exit - Select to return to the *Desk Defaults* screen.

Assign Fixtures

The Mambo Frog has four pages of 24 fixtures (total 96 fixtures). The pages are labelled A - D. Fixtures are identified by their page letter and fixture number (eg A12, B3, C10, D17).

This function allows each of the fixtures to be assigned to a particular fixture type (eg. Martin MAC 250).

It also provides methods for viewing the current fixture assignments, and unassigning fixtures.

The desk stores 20 popular fixture personalities internally (see later).

All other fixture types are available for assignment from the fixture library file on floppy disk.

The latest Zero 88 fixture library for the Frog series of desks can be obtained from the Zero 88 or Frog Support Forum websites.

The Assign Fixture Screen

Select the *Assign Fixtures* option from the *Desk Setup* screen and press the ENTER key. The Assign Fixture screen is displayed on the LCD:

```
ASSIGN FIX:<   A 1*>
<                   >
<                   >
[ASSIGN]   {EXIT}
```

The flashing cursor is displayed on the Fixture number field (as shown above).

Use the + and - keys or the FIXTURE PAGE and FIXTURE SELECTION buttons to select the required fixture.

If the selected fixture is not assigned, an asterisk (*) is displayed next to the fixture number, and no data is displayed in the second and third rows of the LCD, as in the example above.

If the down arrow key is pressed once, the second and third rows of the LCD show the manufacturer and fixture type which was last assigned (if any).

For example, if fixture A1 had been assigned to a High End Systems Cyberlight (M1), then fixture A2 is selected, and the down arrow key is pressed, the LCD would show:

```
ASSIGN FIX:<   A 2*>
<High End Systems   >
<Cyberlight (M1)    >
[ASSIGN]   {EXIT}
```

If the selected fixture is assigned, the LCD shows the manufacturer and fixture name in rows three and four of the LCD. See example below:

```
ASSIGN FIX:<    A 3 >
<Martin             >
<MAC 500 (Mode 2)   >
[ASSIGN]   {EXIT}
```

Pressing the down arrow key once moves the flashing cursor to the fixture list field (lines 2 and 3 of the LCD):

```
ASSIGN FIX:<   A 3 >
<Martin             >
<MAC 500 (Mode 2)   >
[ASSIGN]   {EXIT}
```

The fixture list field contains a "blank", the 20 common fixture types, any fixture types loaded from disk, and a *Select Fixture from Floppy* option.

The + and - keys are used to scroll through the fixture list and other options.

To exit the Assign Fixture screen, select the *EXIT* button as shown below, then press the ENTER key.

```
ASSIGN FIX:<   A 3 >
<Martin             >
<MAC 500 (Mode1)    >
[ASSIGN]   {EXIT}
```
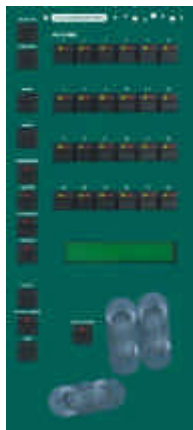
Figure 6 - 2: Fixture Controls

Assigning Common Fixtures

This section describes how to assign a fixture to one of the 20 common fixture types permanently stored on the desk.

1. Select the *Assign Fixtures* option from the Desk Setup screen and press the ENTER key.

    The Assign Fixture screen is displayed on the LCD:

    ```
    ASSIGN FIX:<   A 1*>
    <             >
    <             >
    [ASSIGN]  {EXIT}
    ```

2. Use the + and - keys or the FIXTURE SELECTION buttons on the front panel to select an unassigned fixture.

3. Press the down arrow key once to move the cursor to the fixture list field (lines 2 and 3 on the LCD).

4. Use the + and - keys to move through the list of 20 common fixture types to select a fixture type (see note for list of common fixture types). For example:

    ```
    ASSIGN FIX:<   A 1*>
    <Martin          >
    <MAC 500 (Mode 4) >
    [ASSIGN]  {EXIT}
    ```

5. Press the down arrow key to select the *Assign* button, then press the ENTER key.

    The fixture type is assigned to the fixture, the * is removed, and the cursor returns to the fixture number field as shown below:

    ```
    ASSIGN FIX:<   A 1 >
    <Martin          >
    <MAC 500 (Mode 4)  >
    [ASSIGN]  {EXIT}
    ```

6. To assign fixture A2 – press the + key or FIXTURE SELECTION button 2 on the front panel. Assuming fixture A2 is unassigned, the LCD shows:

    ```
    ASSIGN FIX:<   A 2*>
    <             >
    <             >
    [ASSIGN]  {EXIT}
    ```

7. To assign the same fixture type, ie. Martin MAC 500 (Mode 4), press the down arrow key twice to select the *Assign* button, then press the ENTER button.

8. To assign a different fixture type, press the down arrow key to move the cursor to the fixture list field. Use the + and - keys to select the required fixture type, move the cursor onto the *Assign* button, then press ENTER button.
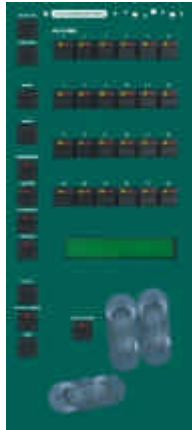
Figure 6 - 3: Fixture Controls

Assigning Fixture Types from Floppy Disk

This section describes how to assign a fixture to one of the fixture types stored on an external floppy disk.

Ensure that a floppy disk containing valid fixture type data is inserted into the floppy disk drive before carrying out this procedure.

1. Select the *Assign Fixtures* option from the Desk Setup screen and press the ENTER key. The Assign Fixture screen is displayed:

    ```
    ASSIGN FIX:<   A 8*>
    <                  >
    <                  >
    [ASSIGN]  {EXIT}
    ```

2. Use the + and - keys or the FIXTURE SELECTION buttons on the front panel to select an unassigned fixture.

3. Press the down arrow key once to move the cursor to the fixture list field (lines 2 and 3 on the LCD).

4. Use the + and - keys to move through the list of 20 common fixture types until the *Select Fixture from Floppy Disk* option is displayed on the LCD:

    ```
    ASSIGN FIX:<   A 8*>
    <Select Fixture    >
    <from Floppy Disk  >
    [ASSIGN]  {EXIT}
    ```

5. Press the ENTER button. The desk reads the floppy disk and looks for valid fixture type files. The LCD shows:

    ```
    ********************
    *   Reading Disk   *
    *   Please Wait    *
    ********************
    ```

    If there is no disk in the drive, there is an error reading the disk, or no fixture type files are found, an error message is displayed.

6. If more than one fixture type file is found on the disk, you will be asked to select a file:

    ```
    Select File to Load:
    <      filename    >
    <      size, date  >
    [OK] {Cancel}
    ```

7. Use the + and - keys to select a file then press the ENTER key.

8. If there is a single fixture type file on the disk, it will be opened and loaded automatically.

9. When the fixture type file is loaded, the LCD shows:

    ```
    ASSIGN FIX:<   A 8*>
    < Manufacturer A   >
    <                  >
    [ASSIGN] {CANCEL}
    ```

    The cursor is displayed on the manufacturer field (line 2).

10. Use the + and - keys to select the required manufacturer.

11. Press the down arrow key to move the flashing cursor to the fixture type field (line 3):

    ```
    ASSIGN FIX:<   A 8*>
    <High End          >
    <Fixture Type A    >
    [ASSIGN] {CANCEL}
    ```

12. Use the + and - keys to select the required fixture type.

13. Press the down arrow key to select the *Assign* button, then press the ENTER button. The LCD returns to the Assign Fixture screen:

    ```
    ASSIGN FIX:<   A 8 >
    <High End          >
    <Cyberlight (M1)   >
    [ASSIGN]  {EXIT}
    ```

NOTE

Assigning Fixtures from Floppy Disk

When a fixture type is loaded from floppy disk and assigned to a fixture, it is stored temporarily on the desk and added to the fixture list.

When the Clear to Default operation is performed only the 20 common fixtures are kept on the desk, any loaded from floppy disk are cleared.

Reassigning Fixtures

This section describes how to reassign a fixture which is already assigned.

1. Select the *Assign Fixtures* option from the Desk Setup screen. Press the ENTER key. The Assign Fixture screen is displayed on the LCD.

2. Use the + and - keys or FIXTURE SELECTION buttons on the front panel to select an assigned fixture. For example:

```
ASSIGN FIX:<   A 8 >
<High End         >
<Cyberlight (M1)  >
[ASSIGN] {EXIT}
```

3. Press the down arrow key once to move the cursor to the fixture list field (lines 2 and 3 on the LCD):

```
ASSIGN FIX:<   A 8 >
<High End         >
<Cyberlight (M1)  >
[ASSIGN] {EXIT}
```

4. Use the + and - keys to move through the fixture list and select a different fixture type.
(To reassign the fixture to a type on floppy disk see page 6-5).

   As soon as the fixture type is changed, an 'M' is displayed next to the fixture number:

```
ASSIGN FIX:<   A 8M>
<Martin           >
<MAC 500 (Mode 4) >
[ASSIGN] {EXIT}
```

5. To assign the new fixture type, press the down arrow key to select the *Assign* button, then press the ENTER key.

   The selected fixture type is assigned to the fixture, the 'M' is removed from the fixture number, and the flashing cursor returns to the fixture number field:

```
ASSIGN FIX:<   A 8 >
<Martin           >
<MAC 500 (Mode 4) >
[ASSIGN] {EXIT}
```

Unassigning Fixtures

This section describes how to unassign (or clear) a fixture which is assigned.

1. Select the *Assign Fixtures* option from the Desk Setup screen. Press the ENTER key. The Assign Fixture screen is displayed on the LCD.

```
ASSIGN FIX:<   A 8 >
<Martin           >
<MAC 500 (Mode 4) >
[ASSIGN] {EXIT}
```

2. Use the + and - keys or FIXTURE SELECTION buttons on the front panel to select the fixture to be unassigned.

3. Press the CLEAR button on the front panel.

   Or

   Press the down arrow key to move the cursor to the fixture list field. Use the + or - keys to select the 'blank' fixture type, then press the ENTER key.

   The fixture will be unassigned (cleared) and the LCD show the following:

```
ASSIGN FIX:<   A 8*>
<                 >
<                 >
[ASSIGN] {EXIT}
```

Viewing Fixture Assignments

This section describes how to view the current fixture assignments.

1. Select the *Assign Fixtures* option from the Desk Setup screen. Press the ENTER key. The Assign Fixture screen is displayed on the LCD.

```
ASSIGN FIX:<   A 8 >
<Martin           >
<MAC 500 (Mode 4) >
[ASSIGN] {EXIT}
```

2. Use the + and - keys or the FIXTURE SELECTION buttons on the front panel to select the required fixture.

Exit Assign Fixtures

This section describes how to exit the Assign Fixture screen.

1. Use the arrow keys to select the EXIT button on the LCD:

```
ASSIGN FIX:<   A 8 >
<Martin           >
<MAC 500 (Mode 4) >
[ASSIGN] {EXIT}
```

2. Press the ENTER key on the front panel. The LCD returns to the Desk Setup screen.

NOTES

Reassigning Fixtures

A fixture can also be reassigned in two stages by first unassigning it (see page 6-6) and then assigning it (see pages 6-4 and 6-5).

Warning - Reassigning a fixture will affect the data in programmed memories, submasters and SX buttons. The original fixture channel data will be removed and replaced by the default values for each parameter in the new fixture type, with the exception of the brightness parameters which are set to zero.

Unassigning Fixtures

If a fixture type loaded from floppy disk is no longer assigned to any fixture, then the fixture type is removed from the fixture list.

Pan/Tilt Options

Select the *Pan/Tilt Options* option from the Desk Setup screen and press the ENTER key. The Pan/Tilt Options screen is displayed on the LCD:

```
Fixture No:    <A 1>
Pan Reverse:  < No>
Tilt Reverse: < No>
Pan/Tilt Swap:< No>v
```

The Pan Reverse, Tilt Reverse and Pan/Tilt Swap can be set for each assigned fixture, as required.

Use the + and - keys or the fixture selection buttons on the front panel to select a fixture number.

Use the up and down arrow keys to select the field required.

Use the + and - keys to select Yes or No as required.

If an assigned fixture does not have pan/tilt parameters (eg colour scroller), the Pan/Tilt Options screen shows the following:

```
Fixture No:    <A11>
Pan/Tilt Options
Not Applicable
[Exit]
```

If a fixture is not assigned, the Pan/Tilt Options screen shows the following:

```
Fixture No:    <A12>
    Fixture Not
    Assigned
[Exit]
```

Press the ENTER key to return to the *Desk Setup* screen.

Patch Functions

Select the *Patch Functions* option from the *Desk Setup* screen and press the ENTER key. The *Patch Functions* screen is displayed on the LCD:

```
** PATCH FUNCTIONS *
{Manual Patch}
{Auto Patch}
{Clear DMX Patch}   v
```

Use the up and down arrow keys to select the required option, then press the ENTER key to activate that option.

Manual Patch Screen

The Manual Patch screen on the main LCD serves several purposes:

- To allow the user to manually patch, modify or unpatch individual fixtures
- To display the current DMX patch for the assigned fixtures (ie. show the DMX address that each fixture is currently patched to).

Manual Patch - Fixtures

To manually patch each of the assigned fixtures to the DMX:

1. Select the *Manual Patch* option from the Patch Functions screen. The assigned fixtures are listed on the LCD as shown below:

```
*** MANUAL PATCH ***
Fixture A 1: <    >^
Fixture A 2: <    >
Fixture A 3: <    > v
```

2. Use the up and down arrow keys or the FIXTURE SELECTION buttons on the front panel to select a fixture to be patched.

   The red light in the FIXTURE SELECTION button and the cursor on the LCD indicate the selected fixture.

3. Use the + and - keys to set the DMX address. Press the CLEAR button to unpatch the fixture.

4. When all the required fixtures have been patched, press the ENTER key to exit the *Manual Patch* window.

Auto Patch

This function allows the user to patch all or selected fixtures to the DMX in a single operation.

1. Select the *Auto Patch* option from the Patch Functions screen and press the ENTER key. The LCD shows the following:

```
**** AUTO PATCH ****
{All Channels}
{Selected Channels}
{Exit}
```

Patching All Fixtures

This operation will patch all the assigned fixtures to the DMX.

1. Select the *All Channels* option from the Auto Patch screen and press the ENTER key. The LCD shows the following:

```
Auto Patch All:
Enter DMX, select OK
DMX address: <    >
[OK] {Cancel}
```

2. Use the + and - keys to enter the required DMX start address.

3. Press the down arrow key to select the *OK* button, then press the ENTER key.

   All the assigned fixtures will be patched to the DMX starting at the specified address. The LCD returns to the *Auto Patch* screen.

Patching Selected Fixtures

This operation allows the user to patch underlined selected fixtures to the DMX.

1. Select the *Selected Channels* option from the Auto Patch screen and press the ENTER key. The LCD shows the following:

```
Select channels,
Enter DMX, select OK
DMX address: <   >
[OK] {Cancel}
```

2. Use the FIXTURE SELECTION buttons to select the fixture(s) to be patched. The red lights in the FIXTURE SELECTION buttons indicate the selected fixtures.

3. Use the + AND - keys to enter the required DMX start address.

4. Press the ENTER key. The selected fixtures will be patched to the DMX starting at the specified address. The LCD returns to the Auto Patch screen.

Clear DMX Patch

This function clears the existing DMX patch, by unpatching all the fixtures.

1. Select the *Clear DMX Patch* option from the Patch Functions screen. The LCD shows:

```
CLEAR DMX PATCH
Select OK to clear
the DMX patch
[OK] {Cancel}
```

2. Press the ENTER key. All fixtures are unpatched. The LCD returns to the *Patch Functions* screen.

Exit Patch Functions

1. Select the *Exit* option from the *Patch Functions* screen.

2. Press the ENTER key. The LCD returns to the *Desk Setup* screen.

NOTES

Fixtures on the Mambo Frog Desk

Fixtures are identified by their page and fixture number (eg A12, B23, C15, D24).

Selecting Fixtures on the Mambo Frog

When selecting fixtures on the Mambo Frog, select the page using the FIXTURE PAGE buttons, then the individual fixture using the FIXTURE SELECTION buttons.

Composite Fixtures

When manually patching a composite fixture (eg lamp and scroller), the two different parts of the fixture which require separate DMX addresses, appear on separate lines of the LCD. For example:

```
*** MANUAL PATCH ***
Fixture A 2:  <160>^
Fix A 3 Lamp: <170>
Fix A 3 Scr:  <171>v
```

Autopatching

If autopatching would overlap any fixtures already patched, a warning message is displayed on the LCD.

The user is given the option of unpatching the overlapping fixtures and continuing with the autopatch, or cancelling the operation.

If the selection to be autopatched includes generic fixtures, composite fixtures and normal moving fixtures, they will be patched in the following order:

1. Generic Fixtures.
2. Brightness parts of composite fixtures.
3. Other parts of composite fixtures.
4. Other (non-composite) fixtures.

Program Mode

This option allows the user to choose between the two program modes available on the desk:

Full Mode - All fixtures will be automatically programmed into palettes, memories, submasters and SX button data.

Partial Mode - Only those fixtures which have been "tagged" are programmed into palettes, memories, submaster and SX button data.

Selecting Program Mode

1. Select the *Program Mode* option from the Desk Setup screen and press the ENTER key. The Program Mode screen is displayed on the LCD:

```
*** PROGRAM MODE ***
Mode: <Partial>

[EXIT]
```

2. Use the + and - keys to select *Full* or *Partial* mode as required.

3. Press the ENTER key to exit the Program Mode screen.

4. If palettes, memories or submaster data have already been programmed, and the program mode is changed, a warning is displayed:

```
***** WARNING ******
This may modify show
data - continue ?
[OK]  {Cancel}
```

Select the *OK* or *Cancel* button as required, then press the ENTER button. The LCD returns to the Desk Setup screen.

Remote Switches

This option allows the user to globally enable or disable the remote switches and to configure each of the six remote switches, as required.

The configuration options for each remote switch are as follows:

- *None = No Action*
- *Go = GO button push*
- *Go Mem = Go to Memory*

Enabling and Configuring the Remote Switches

1. Select the *Remote Switches* option from the *Desk Setup* screen and press the ENTER key.

    The *Remote Switches* screen is displayed on the LCD:

    ```
    *  REMOTE SWITCHES *
    Enabled:    < Yes  >
    Switch No: <  2   >
    Action:     <Go Mem>v
    ```

2. Use the up and down arrow keys to move the cursor through the fields as required.

3. Use the + and - keys to adjust the value in the selected field.

4. Press the ENTER key to exit the *Remote Switches* screen and return to the *Desk Setup* screen.

Frog Screen

This option allows the user to configure each of the 130 soft buttons in the Play Memories section of the Frog Screen as required.

The configuration options for each Frog Screen Button are as follows:

- *None = No Action*
- *Go = GO button push*
- *Go Mem = Go to Memory*

Configuring the Frog Screen Buttons

1. Select the Frog Screen option from the Desk Setup screen and press the ENTER key. The Frog Screen Buttons screen is displayed on the LCD:

    ```
    FROG SCREEN BUTTONS
    Button No: <  1   >
    Action:    <Go Mem>
    Memory:    <   1s >v
    ```

2. Use the up and down arrow keys to move the cursor through the fields as required.

3. Use the + and - keys to adjust the value in the selected field as required.

4. Press the ENTER key to exit the Frog Screen Buttons screen and return to the Desk Setup screen.

Timecode Setup

This function allows the user to set up the SMPTE or MIDI timecode source and frame rate. This is used when a show file created on a Frog series desk is transferred and then played back on a Frog Box, using SMPTE or MIDI timecode signals to trigger memories.

1. Select the *Timecode Setup* option from the Desk Setup screen and press the ENTER key. The Timecode Setup screen is displayed on the LCD:

    ```
    ** TIMECODE SETUP **
    Status:    <Enabled>
    Source:    < SMPTE >
    Frames/Sec:<  25   >
    ```

2. Use the up and down arrow keys to move the cursor through the editable fields.

3. Use the + and - keys to select the required options in the Status, Source and Frames/Sec fields.

4. Press the ENTER key to exit the Timecode Setup screen and return to the Desk Setup screen.

Exit Desk Setup

1. Select the *Exit Desk Setup* option from the Desk Setup screen.

2. If any changes have been made to the Desk Setup, a warning message is displayed on the LCD:

    ```
    ***** WARNING ******
    Desk Setup Modified
       Save Changes ?
      [OK] {Cancel}
    ```

3. Press the ENTER key to save the changes, or select the *Cancel* button and press ENTER to lose the changes. The LCD returns to the Super User screen.

    If no changes have been made to the Desk Setup, no warning is displayed and the LCD returns to the Super User screen.

Floppy Disk Functions

Select the *Floppy Disk* option from the Super User screen and press the ENTER key. The Floppy Disk screen is shown on the LCD:

```
**** FLOPPY DISK ***
{Load Show}
{Save Show}
{Format Disk}v
```

The Floppy Disk options are:

- *Load Show*
- *Save Show*
- *Format Disk*
- *Load CFT*
- *Exit.*

Use the up and down arrow keys to select the required option, then press the ENTER key to activate that option.

Load Show

This function allows the user to load a previously saved show onto the desk from a floppy disk.

1. Ensure that a disk containing show files is inserted into the floppy disk drive.

2. Select the *Load Show* option from the Floppy Disk screen. The desk reads the floppy disk and searches for valid show files. The LCD shows the following:

```
***** LOAD SHOW ****
<    Show01.isf    >
<   10KB 5/2/2001  >
  [Load[   {Cancel}
```

If the disk contains several shows, use the + and - keys to select the required show.

3. Press the ENTER key to load the show onto the desk. While the show is loading, the LCD shows:

```
 Loading Show01
  Please Wait …
    xx% Done.
     [Cancel]
```

4. When the show is loaded successfully, the LCD shows:

```
  show01 Loaded

      [OK]
```

5. Press the ENTER key to return to the Floppy Disk screen.

Save Show

This function allows the user to save the current show onto a floppy disk.

1. Ensure that a formatted disk is inserted into the floppy disk drive.

2. Select the *Save Show* option from the Floppy Disk screen. The LCD shows the following:

```
***** SAVE SHOW ****

Show No: < 1*>
  [SAVE]    {Cancel}
```

An asterisk (*) is displayed next to the show number if the file does not exist on the floppy disk. The *Show No* defaults to the first available show on the disk.

3. Use the + and - keys to select the required show number (01 - 99).

4. Press the ENTER key to save the show to floppy disk.

5. If the show already exists on the floppy disk, a warning is displayed on the LCD:

```
Show already exists
  Overwrite file ?

  [OK]    {Cancel}
```

6. Press the ENTER key to overwrite the file.

7. While the desk is saving the show to floppy disk the LCD shows:

```
  Saving Show01
  Please Wait …
    xx% Done.
     [Cancel]
```

8. When the show is loaded successfully, the LCD shows:

```
  Show01 Saved

      [OK]
```

9. Press the ENTER key to return to the Floppy Disk screen.

Format Disk

1. Ensure that a floppy disk is inserted into the disk drive.

2. Select the *Format Disk* option from the Floppy Disk screen. The LCD shows the following:

```
   FORMAT DISK
  Are you sure ?

 [OK]  {Cancel}
```

3. Press the ENTER key. The LCD shows:

```
 Formatting Disk
 Please Wait …
    xx% Done.
    [Cancel]
```

4. When the formatting is complete, the LCD will show:

```
  Disk Formatted.

      [OK]
```

5. Press the ENTER key to return to the Floppy Disk screen.

Load CFT

This function allows the user to replace the Common Fixture Type (CFT) file on the desk with a chosen CFT file from floppy disk.

1. Ensure that a disk containing one or more CFT files is inserted into the floppy disk drive.

2. Select the *Load CFT* option from the Floppy Disk screen. The desk will read the floppy disk and searches for valid CFT files.

   When the disk has been read the LCD shows the following, for example:

```
***** LOAD CFT *****
<     mytypes      >
< 10KB 23/12/2001  >
  [Load[   {Cancel}
```

3. If the disk contains several CFT files, use the + and - keys to select the required file.

4. Press the ENTER key to load the CFT file onto the desk. A warning is displayed on the LCD:

```
***** WARNING ******
Overwrite the Common
Fixture Types ?
   [Yes]   {No}
```

5. Press the ENTER key to continue with the operation.While the file is loading, the LCD shows:

```
 Loading CFT File
  Please Wait …
    xx% Done.
```

6. When the file is loaded successfully, the LCD shows:

```
Common Fixture Types
Loaded. Please reset
the desk to update
          [OK]
```

7. Press the ENTER key to return to the Floppy Disk screen.

8. Exit from Super User.

9. **Turn the desk off and back on to update the CFT file in the desk.**

Exit Floppy Disk Functions

1. Select the *Exit* option from the Floppy Disk screen.

2. Press the ENTER key. The LCD returns to the Super User screen.

NOTES

Show Files

Mambo Frog show files are identified by number only and are stored on the floppy disk as "Show01", "Show02" etc..

Show files are interchangeable between the different lighting desks in the Frog series. However, only <u>relevant</u> setup data, memories etc. will be loaded from the show file. Data which is not applicable to the desk will be ignored.

Load Show

If there is no disk in the drive, no showfiles on the disk, or the load fails for any reason, an error message is displayed on the LCD.

Save Show and Format Disk

If there is no disk in the drive, the disk is write protected, or the operation fails, an error message is displayed on the LCD.

Load CFT

If there is no disk in the drive, no CFT files on the disk, or the load fails for any reason, an error message is displayed on the LCD.

Super User

Clear/Reset Functions

Select the *Clear/Reset* option from the Super User screen and press the ENTER key. The LCD shows:

```
** CLEAR/RESET FNS *
{Clear Memories}
{Clear Submasters}
{Clear SX Buttons} v
```

The Clear/Reset options are:

- *Clear Memories*
- *Clear Submasters*
- *Clear SX Buttons*
- *Clear Palettes*
- *Clear Groups*
- *Clear All*
- *Clear to Default*
- *Exit*

Use the up and down arrow keys to select the required option, then press the ENTER key to activate that option.

Clear Memories

This function clears all the programmed memories on the desk and any submasters or SX buttons with transferred memories.

1. Select the *Clear Memories* option from the Clear/Reset screen, then press the ENTER key. The LCD shows the following:

```
CLEAR MEMORIES
Are you sure ?

[OK] {Cancel}
```

2. Press the ENTER key to confirm the clear operation.

Clear Submasters

This function clears all submasters.

1. Select the *Clear Submasters* option from the Clear/Reset screen, then press the ENTER key. The LCD shows:

```
CLEAR SUBMASTERS
Are you sure ?

[OK] {Cancel}
```

2. Press the ENTER key to confirm the clear operation.

Clear SX Buttons

This function clears all SX buttons.

1. Select the *Clear SX Buttons* option from the Clear/Reset screen, then press the ENTER key. The LCD shows:

```
CLEAR SX BUTTONS
Are you sure ?

[OK] {Cancel}
```

2. Press the ENTER key to confirm the clear operation.

Clear Palettes

This function clears all the programmed palettes on the desk.

1. Select the *Clear Palettes* option from the Clear/Reset screen, then press the ENTER key. The LCD shows the following:

```
CLEAR PALETTES
Are you sure ?

[OK] {Cancel}
```

2. Press the ENTER key to confirm the clear operation.

Clear Groups

This function clears all the fixture groups on the desk.

1. Select the *Clear Groups* option from the Clear/Reset screen, then press the ENTER key. The LCD shows the following:

```
CLEAR GROUPS
Are you sure ?

[OK] {Cancel}
```

2. Press the ENTER key to confirm the clear operation.

Clear All

This function clears all the memories, submasters, SX buttons, palettes and fixture groups on the desk.

1. Select the *Clear All* option from the Clear/Reset screen, then press the ENTER key. The LCD shows the following:

```
CLEAR ALL
Are you sure ?

[OK] {Cancel}
```

2. Press the ENTER key to confirm the clear operation.

Clear to Default

This function performs the following:

- The *Clear All* function (see above).
- Resets the Desk Setup parameters to their default values.
- Resets the lock code to 0000.
- Resets the Program Mode to Full.
- Loads the default setup.

1. Select the *Clear to Default* option from the Clear/Reset screen, then press the ENTER key. The LCD shows the following:

```
CLEAR TO DEFAULT
Are you sure ?

[OK] {Cancel}
```

2. Press the ENTER key to confirm the operation.

Exit Clear/Reset Functions

Select the *Exit* option from the Clear/Reset screen, then press the ENTER key. The LCD returns to the Super User screen.

Illumination

This function allows the user to adjust the brightness and contrast of the LCD(s) on the desk.

The Illumination options are:

- *Main LCD Brightness*
- *Main LCD Contrast*
- *Wheel LCD Brightness*
- *Wheel LCD Contrast*
- *Exit.*

Setting the Illumination

1. Select the *Illumination* option from the Super User screen and press the ENTER key. The LCD screen shows the following:

```
*** ILLUMINATION ***
Main LCD B: <100%>
Main LCD C: <100%>
Wheel LCD B:<100%> v
```

2. Use the up and down arrow keys to select the required option.

3. Use the + and - keys to adjust the level as required (0 – 100%).

4. To exit the Illumination screen, press the ENTER key. The LCD returns to the Super User screen.

Set Recovery Mode

This function allows the user to switch Recovery mode on or off.

For further details on Recovery Mode see chapter 7.

Setting the Recovery Mode

1. Select the *Set Recovery Mode* option from the Super User screen and press the ENTER key. The LCD shows the following:

```
*** SET RECOVERY ***
Recovery: <On >

[Exit]
```

2. Use the + and - keys to set recovery to *On* or *Off.*

3. Press the ENTER key to exit the Set Recovery screen and return to the Super User screen.

Set Date & Time

The Set Date and Time function allows the user to set the date and time on the desk.

Setting the Date and Time

1. Select the *Set Date & Time* option from the Super User screen, then press the ENTER key. The LCD shows the following:

```
** SET DATE & TIME *
Date: <dd:mm:yyyy>
Time: <hh:mm:ss>
[SET] {CANCEL}
```

2. Use the up and down arrow keys to select the field to adjust.

   The *Date* consists of three fields (day, month, year).

   The *Time* consists of three fields (hours, minutes, seconds).

3. Use the + and - keys to adjust the selected field.

4. Press the ENTER key to set the date and time to the values shown on the LCD. The LCD returns to the Super User screen.

Super User

Set Lock Code

This function allows the user to set the lock code for the desk. See page 7-3 for details on the lock function.

Setting the Lock Code

1. Select the *Set Lock Code* option from the Super User screen and press the ENTER key. The following is displayed on the LCD:

```
Enter current lock
code using submaster
flash buttons:
[OK] {Cancel}
```

2. Enter the current 4 digit lock code using SUBMASTER FLASH buttons 1 - 10.

    As each digit is entered, it appears on line 3 of the LCD. For example, if the code was 1234:

```
Enter current lock
code using submaster
flash buttons: 1234
[OK] {Cancel}
```

3. Press the ENTER key. If the correct code is entered, the following is displayed on the LCD:

```
Enter new lock
code using submaster
flash buttons:
[OK] {Cancel}
```

    If an incorrect code is entered, an error message is displayed on the LCD.

4. Enter a new 4 digit lock code using the SUBMASTER FLASH buttons. As each digit is entered, it appears on line 3 of the LCD.

5. Press the ENTER key. A confirmation message is displayed on the LCD:

```
New Lock Code Set

[OK]
```

6. Press the ENTER key to clear the message and return to the Desk Setup screen.

Desk Information

This Super User function provides the following desk information on the main LCD screen:

- SERIAL NUMBER

The full serial number of the desk.

- SOFTWARE VERSION

The version of the operating system software installed in the desk.

- BIOS VERSION

The version number of the BIOS in the desk.

- BATTERY STATUS

The status of the internal battery. This normally shows "OK". If it says "Fail" contact your dealer or Zero 88.

- CURRENT SHOW

The show number and date if the show on the desk was originally loaded from floppy disk.

Reading the Desk Information

1. Select the *Desk Information* option from the Super User screen and press the ENTER key. The LCD shows the following:

```
* DESK INFORMATION *
Serial Number      ^
xxxxxxx xxxxxxxx   v
[EXIT]
```

2. Use the up or down arrow keys to cycle through the various desk information described above.

3. Press the ENTER key to exit the Desk Information screen and return to the Super User screen.

Reset DMX

This function resets the DMX outputs for a few seconds, then returns them to their previous output values.

Resetting the DMX

1. Select the *Reset DMX* option from the Super User screen and press the ENTER key. The LCD shows the following:

```
***** RESET DMX ****
Do you wish to
reset the DMX?
    {OK}  {Cancel}
```

2. Press the ENTER key to reset the DMX, or select the *Cancel* button and press ENTER to cancel. The LCD returns to the Super User screen.

Exiting Super User

Select the *Exit Super User* option from the Super User screen, as shown below:

```
**** SUPER USER ****
{Illumination}     ^
{Set Date & Time}
{Exit Super User}
```

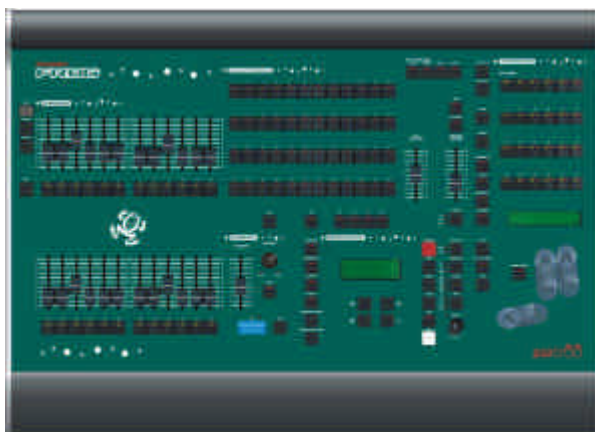Press the ENTER key. The LCD returns to the Memories screen.

Figure 7 - 1: Mambo Frog Lighting Desk

Introduction

This chapter covers the following features and miscellaneous items which are available on the Mambo Frog lighting control desk:

- Viewing Outputs
- Lock Function
- FROG Function
- Palettes
- Fixture Groups
- Monitor Screens
- External Keyboard
- Recovery Mode
- Upgrading Software

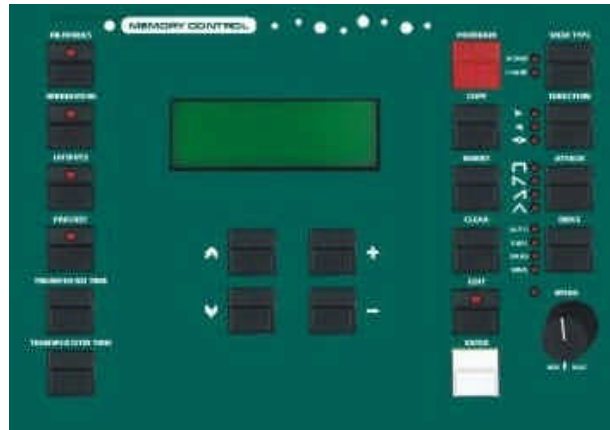For news, views and the latest software visit our dedicated Frog web site at www.frogsupport.com

Figure 7 - 2: Front Panel - Memory Control Section

Viewing Outputs

The OUTPUTS button allows the user to view the current desk channel outputs (fixture channels), or the DMX channel outputs (universe A or B) on the main LCD display.

Fixtures are referenced by page and fixture number, eg A1, A2 etc.

Desk Channel Outputs

1. Press the OUTPUTS button on the front panel. The LCD display changes to the following:

```
View O/P <Desk Chan>
FixA 1 Cyan     128 ^
FixA 1 Magenta 255
FiXA 1 Yellow    0 v
```

2. The current output values for the fixture parameters are shown. They are displayed as fixture number, parameter name and DMX value.

3. Use the up and down arrow keys to view the current outputs of the various fixture channels.

DMX Outputs

1. Press the OUTPUTS button on the front panel. The LCD display changes to the following:

```
View O/P <Desk Chan>
FixA 1 Cyan     128 ^
FixA 1 Magenta 255
FiXA 1 Yellow    0 v
```

2. Use the + or - keys to select *DMX A* or *DMX B,* as required. The LCD display changes to the following:

```
View O/P <   DMX A   >
        1        255
        2        128
        3        200 v
```

3. Use the up and down arrow keys to view the current outputs on the DMX channels (1 - 512) for the selected universe.
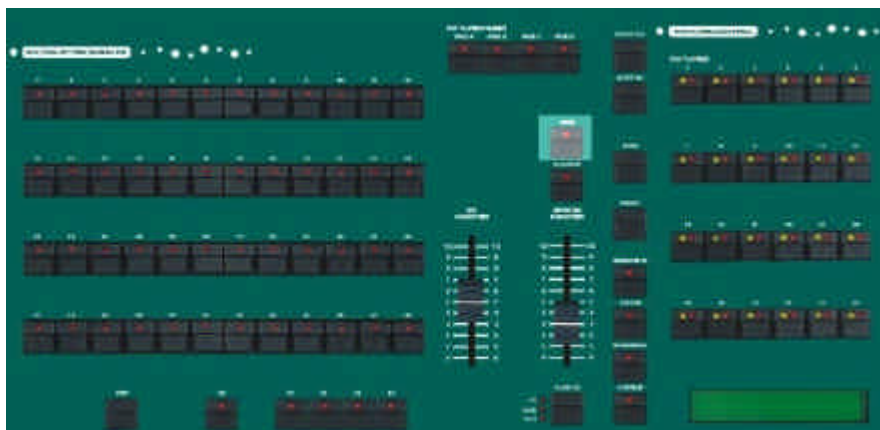
Figure 7 - 3: Section of Front Panel with Lock Button highlighted

Lock Function

When the desk is locked, all of the editing facilities are disabled. None of the desk setup, memory, submaster or SX data can be modified.

Programmed memories can be run as normal from the memory stack using the Playback X controls.

Programmed submasters or SX buttons output their data as normal.

Programmed palettes can still be output when the desk is locked.

The editing facilities can only be enabled by unlocking the desk.

The SUBMASTER FLASH buttons are used to enter the 4 digit code required when locking or unlocking the desk. During these operations, the normal flash functions are disabled.

The default lock code for the Mambo Frog desk is 0000. The lock code can be changed in Super User.

Each desk also has its own unique code which will unlock the desk. Contact your dealer or Zero 88 for further information.

Locking the Desk

1. To lock the desk, press the LOCK button on the front panel. The LCD shows the following:

```
**** LOCK DESK *****
Enter code using s/m
flash buttons:
[OK] {Cancel}
```

2. Enter the current lock code using the SUBMASTER FLASH buttons (submaster 10 represents 0).

    As each digit is entered, a '*' is displayed on the LCD:

```
**** LOCK DESK *****
Enter code using s/m
flash buttons: ****
[OK] {Cancel}
```

3. Press the ENTER key to complete the operation.

    If the correct code is entered, the desk is locked and the light in the LOCK button is illuminated.

    If the wrong lock code is entered, an error message is displayed on the LCD.

Unlocking the Desk

1. To unlock the desk, press the LOCK button on the front panel. The LCD shows the following:

```
*** UNLOCK DESK ****
Enter code using s/m
flash buttons:
[OK] {Cancel}
```

2. Enter the current lock code using the SUBMASTER FLASH buttons (submaster 10 represents 0).

    As each digit is entered, a '*' is displayed on the LCD:

```
*** UNLOCK DESK ****
Enter code using s/m
flash buttons: ****
[OK] {Cancel}
```

3. Press the ENTER key to complete the operation.

    If the correct code is entered, the desk is unlocked and the light in the LOCK button is turned off.

    If the wrong code is entered, an error message is displayed on the LCD.

Other Features

FROG Function

The Fixture Random Output Generator (FROG) function is a special feature which affects the colour, beamshape and position fixture channel outputs.

The user can choose which fixture channels will output random FROG values by selecting the required fixture(s) and attribute (Colour, Beamshape or Position).

The FROG function only applies to the LTP fixture channels and does not affect the brightness channels.

The FROG function can be used as a "live" feature to generate random outputs on selected fixture channels.

It is also possible to set up fixture channels to output random FROG values rather than specific values, when programming fixture channel data in memories, submasters or SX buttons.

Therefore, when the memory or channel data is output, the specially marked channels will output a random FROG value rather than a specific programmed value.

The attributes Colour and Beamshape can be set to snap or fade between their FROG values, and have their minimum and maximum values adjusted, if required.

With Position, the action and minimum and maximum FROG values can be set separately for Pan and Tilt.

The FROG function can be set to automatic, with an adjustable speed, manual, with an adjustable fade time, or Sound to Light, where the trigger is provided by the bass beat of an audio signal.

Manual mode allows the user to step through the FROG values using the STEP button on the front panel.

FROG Output Values

The desk generates 16 different FROG values for each of the three LTP attributes (Colour, Beamshape and Position).

These FROG values apply to all fixtures and will therefore give different results with different fixture types.

The default minimum and maximum FROG values for each attribute have been designed, as far as possible, to avoid activating Reset or Lamp on/off functions and extreme positions.

The minimum and maximum FROG values for each attribute can be adjusted by the user, if required.

All LTP fixture channels (including control channels etc.) can be set to output FROG values, if required.

When a fixture channel is outputting FROG values, it goes through the 16 pre-defined values in a random order.

Each fixture parameter has its own independent FROG value chosen at random from the 16 values for the corresponding attribute.

However, fixtures of the same type will all output the same FROG values on corresponding channels.

For example - If a fixture has CMY mixing, each of the colour parameters (Cyan, Magenta, Yellow) would output its own FROG value. If all three colour channels were outputting FROG values this would give a total of 4096 different possible colour combinations.

If the corresponding channels for several fixtures of the same type were outputting FROG values, they would all be outputting the same colours, gobos, positions etc.

FROG Function Parameters

The following parameters control the behaviour of fixture channels which are outputting FROG values.

Mode - *Manual*, *Auto, Sound to Light.*

Speed - In *Auto* mode, the *Speed* determines the rate at which each new FROG value is output (1 - 100).

Fade Time - In *Manual* or *Sound to Light* mode, the *Fade Time* defines the time taken to fade to the next FROG value when the STEP button is pressed, or a bass beat is received from the audio signal (0 - 10 secs).

Colour Action - *Snap* or *Fade* - Colour channel behaviour going from one FROG value to the next.

Colour Minimum - the minimum FROG value for Colour (0-255).

Colour Maximum - the maximum FROG value for Colour (0-255).

Beamshape Action - *Snap* or *Fade* - Beamshape channel behaviour going from one FROG value to the next.

Beamshape Minimum - the minimum FROG value for Beamshape (0-255).

Beamshape Maximum - the maximum FROG value for Beamshape (0-255).

Pan Action - *Snap* or *Fade* - behaviour of Pan when going from one FROG value to the next.

Pan Minimum - the minimum FROG value for Pan (0-255).

Pan Maximum - the maximum FROG value for Pan (0-255).

Tilt Action - *Snap* or *Fade* - behaviour of Tilt when going from one FROG value to the next.

Tilt Minimum - the minimum FROG value for Tilt (0-255).

Tilt Maximum - the maximum FROG value for Tilt (0-255).

FROG Function - LCD Display

The FROG function parameters described in the previous section are adjustable from the FROG Function screen on the main LCD.

The FROG function parameters are stored as part of the show data.

To display the FROG Function screen press the FROG SCREEN button on the front panel. The red light in the FROG SCREEN button comes on.

The FROG Function screen contains all the FROG function parameters.

Use the up and down arrow keys to select a FROG function parameter.

Use the + and - keys to adjust the selected FROG function parameter.

For example:

```
*** FROG FUNCTION **
Mode:       < Auto >
Speed:      < 100  >
Col Action:< Snap >v
```

Pressing the + or - key would switch the Mode between *Manual, Auto* and *Sound to Light.*

Press the down arrow key several times to move the flashing cursor onto another FROG function parameter, for example:

```
*** FROG FUNCTION **
Col Action:< Snap >^
Col Min:   <  100 >
Col Max:   <  170 >v
```

Pressing the + or - key would toggle the Colour Action between *Snap* and *Fade*.

To exit the FROG Function screen and return to the Memories, Submasters or Outputs screen on the LCD, press the FROG SCREEN button on the front panel. The light in the FROG SCREEN button goes out.

Setting Fixture Channels to Output FROG Values

The method for setting fixture channels to output FROG values is as follows:

1. Use the FIXTURE PAGE and FIXTURE SELECTION BUTTONS to select the required fixture(s). The red lights in the buttons indicate the selected fixture(s).

2. Press one of the attribute selection buttons (COLOUR, BEAMSHAPE or POSITION) to select the required attribute.

    The red lights in the buttons show which attribute is selected.

3. Press the FROG button. This sets all the channels for the selected fixture(s) and attribute to output their current FROG values.

    The Wheel LCD changes to show *FROG* under each parameter name instead of its normal value.

The subsequent outputs of the affected channels is then determined by the FROG function parameters.

The affected channels will continue to output their FROG values until told to do otherwise (by pressing the GO button, raising a submaster containing channel data or a memory above its LTP trigger level, or stopped manually with the control wheel - see below).

For example - select fixtures 1,2 and 3, select POSITION, then press the FROG button. All the Position channels for fixtures 1,2 and 3 will output their FROG values.

To set other channels for the selected fixtures to output FROG values - press a different attribute selection button, then press the FROG button.

To set channels from other fixtures to output FROG values - repeat the above procedure.

To stop a fixture channel from outputting FROG values - select the required fixture and attribute, then move the corresponding control wheel. The WHEEL LCD will return to showing the normal output value for the channel.

Programming Fixture Channel Data

Fixture channels may be set to output FROG values instead of a normal fixed value when programming memories or channel data onto submasters or SX buttons.

Set the required fixture channels to output FROG values using the method described earlier, before pressing the PROGRAM button to save the data to the memory, submaster or SX button.

Editing Fixture Channel Data

Fixture channels may be changed from normal values to FROG values or vice versa when editing memories or channel data on submasters or SX buttons.

The required fixture channels are set to normal values or FROG values using the methods described earlier.

Previewing Fixture Channels

When previewing a scene memory, chase memory or channel data on a submaster or SX button, the programmed value for each fixture parameter is shown on the LCD.

If the channel has been programmed as a FROG value rather than a specific value, the LCD will show *FRG* instead of the normal value.

Example 1 - Previewing a Scene:

```
Preview Memory 23
FixA 1 Cyan      FRG^
FixA 1 Magenta   FRG
FixA 1 Yellow    FRGv
```

Example 2 - Previewing a Chase:

```
PrevMem 49 Step < 1>
FixA 1 Cyan      FRG^
FixA 1 Magenta   FRG
FixA 1 Yellow    FRGv
```

Example 3 - Previewing a Submaster:

```
   Preview Sub 5-7
    (Channel Data)
FixA 1 Cyan      FRG^
FixA 1 Magenta   FRGv
```

Other Features

Palettes

The Mambo Frog desk provides three palette libraries (Colour, Beamshape and Position), each containing 48 user-programmable palettes.

A palette contains fixture channel levels for a single attribute (eg Colour).

The fixture channel data in palettes can be full or partial; determined by the *Program Mode* option in *Desk Setup*.

In *Full Mode*, all fixture parameters are recorded and stored in the palette.

In *Partial Mode,* only the fixture parameters for the tagged fixtures are recorded and stored in the palette.

Palettes can be referenced from memories, submasters or SX buttons containing channel data.

Editing a palette therefore affects all the memories, submasters and SX buttons which reference that palette.

Palettes can also be output live for quick hands-on control of fixtures (eg select fixtures A1-A6 and change them all to red).

Initially, or after being cleared, palettes will be "unprogrammed". This applies in both Full and Partial Mode.

Programming a Palette

The following method describes how to program a Colour palette. The same method applies to programming Beamshape and Position palettes.

1. Use the FIXTURE PAGE and FIXTURE SELECTION buttons to select the required fixture(s).

2. Press the COLOUR button. The WHEEL LCD shows the appropriate colour parameters.

3. Use the control wheels to adjust the fixture channels to the required levels.

4. Repeat steps 1 - 3 for additional fixtures, if required.

5. If programming in Partial mode, ensure that all the fixtures to be programmed in the palette are "tagged".

6. Press and hold down the COLOUR button. The red lights in the PALETTE SELECTION buttons indicate which palettes are already programmed (if any).

7. Press and hold down the required palette selection button for approximately 1 second.

8. If the selected palette is **empty** the light in the button comes on. Release the COLOUR and palette selection buttons. The palette is now programmed.

9. If the selected palette is **programmed** the light in the button flashes and the LCD shows the following:

    ```
    Colour Palette xx


    {PRG} {CLR}  [CANCEL]
    ```

10. Release the COLOUR and PALETTE SELECTION buttons. To program the palette, press the PROGRAM button on the front panel, or use the cursor keys to select the *PRG* button and press the ENTER key

Naming a Palette

A text description (name) can be given to a programmed palette, if required. The palette name only appears on the monitor screen.

1. Ensure that the main LCD is showing one of the base screens (Memories, Submasters,Outputs).

2. Press the F2 FUNCTION key. The LCD changes to the following:

    ```
    **** Name Item *****
    Select type of item
    to name ...
          [Cancel]
    ```

3. Select the required attribute by pressing the COLOUR, BEAMSHHAPE or POSITION button. The LCD changes to the following:

    ```
    **** Name Item *****
    Select colour
    palette to name ...
          [Cancel]
    ```

4. Select the required palette by pressing the corresponding PALETTE SELECTION button.The selected palette is shown on the main LCD:

    ```
    **** Name Item ****
     Colour Palette 23
    <_                 >
       [OK] {Cancel}
    ```

5. Use the up and down keys to move the cursor, and the + and - keys to enter the text (or use external keyboard, if fitted).

6. Press the ENTER key to complete the naming action. The LCD returns to the previous screen.

Programming Fixtures

Once a palette has been programmed, it can be used (or referenced) when programming memories, submaster or SX button channel data.

The following method describes how to reference a Colour palette. The same method applies to Beamshape and Position palettes.

1. Select an unprogrammed memory, submaster or SX button as required.

2. Use the FIXTURE PAGE and FIXTURE SELECTION buttons to select the required fixture(s).

3. Press and hold down the COLOUR attribute button. The red lights in the PALETTE SELECTION buttons indicate the programmed palettes.

4. Press the required PALETTE SELECTION button. This sets all the channels for the for the selected fixtures and attribute to reference the selected palette.

   The palette reference (eg "P12") is displayed under the parameter names on the WHEEL LCD in place of the normal DMX values.

5. Repeat steps 1 - 4 for additional fixtures and attributes, as required.

6. Press the PROGRAM button to save the channel data into the memory, submaster or SX button.

Notes

Programming in Partial Mode

When a fixture's parameters are associated with a palette, the fixture is automatically "tagged".

Fixture parameters which reference a palette can be dereferenced by moving the corresponding control wheel.

When referencing a palette, the parameters of any selected fixtures not programmed in the palette will remain at their current output values.

Editing Fixture Channel Data

Fixture channels may be changed from normal values to palette references or vice versa when editing memories or channel data on submasters or SX buttons.

The required fixture channels are set to normal values or palette references using the methods described earlier.

Previewing Fixture Channels

When previewing a scene memory, chase memory or channel data on a submaster or SX button, the programmed value for each fixture parameter is shown on the LCD.

If a channel has a palette reference rather than a specific value, the LCD will show the palette number instead of the normal DMX value.

Example 1 - Previewing a Scene:

```
 Preview Memory 23
FixA 1 Cyan      P12^
FixA 1 Magenta   P12
FixA 1 Yellow    P12v
```

Example 2 - Previewing a Chase:

```
PrevMem 49 Step < 1>
FixA 1 Cyan      P17^
FixA 1 Magenta   P17
FixA 1 Yellow    P17v
```

Example 3 - Previewing a Submaster:

```
  Preview Sub 5-7
   (Channel Data)
FixA 1 Cyan      P10^
FixA 1 Magenta   P10v
```

Example 4 - Previewing an SX button:

```
  Preview SX 48
   (Channel Data)
FixA 1 Cyan      P14^
FixA 1 Magenta   P14v
```

Outputting Palettes Live

The following method describes how to output a Colour palette live. The same method applies to Beamshape and Position palettes.

1. Use the FIXTURE PAGE and FIXTURE SELECTION buttons to select the required fixture(s).

2. Press and hold down the COLOUR button. The red lights in the PALETTE SELECTION buttons indicate the programmed palettes.

3. Press the required PALETTE SELECTION button. This sets all the channels for the selected fixture(s) and attribute to the palette values.

Palette Lock

Hold down F1 and press the COLOUR, BEAMSHAPE or POSITION button. This locks the CHANNEL FLASH buttons to operate as palette selection buttons. The light in F1 is lit.

Press COLOUR, BEAMSHAPE or POSITION to swap between the different palettes.

Press F1 to unlock the palettes.

Clearing a Palette

1. Press and hold down the appropriate attribute button. The red lights in the PALETTE SELECTION buttons indicate which palettes are already programmed (if any).

2. Press and hold down the required PALETTE SELECTION button for approx. 1 second, until the red light in the button flashes, and the LCD changes to the following:

```
 Colour Palette xx


{PRG} {CLR}  [CANCEL]
```

3. Release the attribute and PALETTE SELECTION buttons. To clear the palette, press the CLEAR button on the front panel, or use the cursor keys to select the *CLR* button and press the ENTER key

Other Features

Fixture Groups

The Mambo Frog desk provides 48 user programmable fixture groups.

Each group can be programmed with any combination of fixtures.

Fixture groups may be given a name (text description), if required.

Details of which fixtures have been programmed into the fixture groups can be seen on the monitor screen.

Programming a Fixture Group

1. Use the FIXTURE PAGE and FIXTURE SELECTION buttons to select the required fixtures.

2. Press and hold down the GROUP button. The red lights in the GROUP SELECTION buttons indicate the programmed groups.

3. Press and hold down the required GROUP SELECTION button for approximately 1 second.

4. If the fixture group is **empty** the light in the button comes on. Release the GROUP and group selection buttons. The fixture group is now programmed.

5. If the fixture group is already **programmed** the light in the button flashes and the LCD shows the following:

```
    Fixture Group xx


{PRG} {CLR}  [CANCEL]
```

6. Release the GROUP and GROUP SELECTION buttons. To program the group, press the PROGRAM button on the front panel, or use the cursor keys to select the *PRG* button and press the ENTER key

Naming a Fixture Group

A text description (name) can be given to a programmed fixture group. The fixture group name only appears on the monitor screen.

1. Ensure that the main LCD is showing one of the base screens (Memories, Submasters,Outputs).

2. Press the F2 FUNCTION key. The LCD changes to the following:

```
**** Name Item *****
Select type of item
to name ...
        [Cancel]
```

3. Press the GROUP button. The LCD changes to the following:

```
**** Name Item *****
Select fixture group
to name ...
        [Cancel]
```

4. Select the required fixture group by pressing the corresponding GROUP SELECTION button.The selected group is shown on the main LCD, for example:

```
**** Name Item *****
  Fixture Group 12
<_                 >
    [OK] {Cancel}
```

5. Use the up and down keys to move the cursor, and the + and - keys to enter the text (or use external keyboard, if fitted).

6. Press the ENTER key to complete the naming action. The LCD returns to the previous screen.

Selecting a Fixture Group

When fixture groups have been programmed, they can be used as a quick way of selecting fixtures when programming palettes, memories etc.

Selecting a group using the following method will deselect any currently selected fixtures and select the fixtures in the chosen group.

1. Press and hold down the GROUP button. The red lights in the GROUP SELECTION buttons indicate the programmed groups.

2. Press the required GROUP SELECTION button.

3. Release the GROUP button.

Clearing a Fixture Group

1. Press and hold down the GROUP button. The red lights in the GROUP SELECTION buttons indicate which groups are already programmed (if any).

2. Press and hold down the required GROUP SELECTION button for approx. 1 second, until the red light in the button flashes, and the LCD changes to the following:

```
    Fixture Group xx


{PRG} {CLR}  [CANCEL]
```

3. Release the GROUP and GROUP SELECTION buttons. To clear the group, press the CLEAR button on the front panel, or use the cursor keys to select the *CLR* button and press the ENTER key
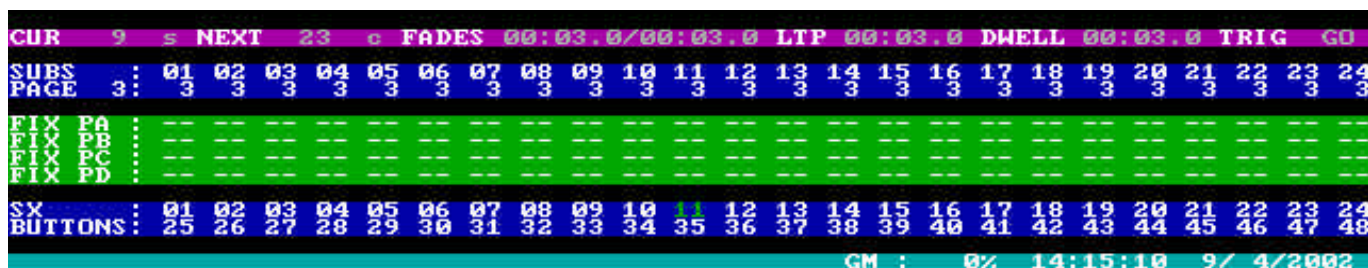
Figure 7 - 4 : Playback Status and Information (Monitor)

Monitor Displays

The Mambo Frog lighting desk has a video output socket fitted which is used for displaying various data and information on a monitor screen.

The monitor display is text only and has a resolution of 80 characters wide by 50 lines high.

The monitor screen is for the display of information only; the desk software is driven and controlled by the controls on the front panel.

Selection and Navigation

In normal operation the monitor display will "follow" the Main LCD on the front panel and display the corresponding screen or popup window.

Locking Monitor Screens

The FUNCTION button F1 is used as the "Monitor Functions" button.

The main monitor screens can be selected and locked by holding down the F1 button and then pressing one of front panel buttons shown below:

MEMORIES - Memories Screen

SUBMASTERS - Submasters Screen

SX - SX Buttons Screen

OUTPUTS - Outputs Screen

FIXTURE SEL- Fixture O/P Screen

COLOUR* - Palette Screen (Col)

BEAMSHAPE* - Palette Screen (B/S)

POSITION* - Palette Screen (Pos)

GROUP - Fixture Groups Screen

When the monitor screen is locked, the red light in the F1 button is lit, and "SCR LOCKED" is displayed in the PSI section of the monitor screen.

Pressing the F1 button again unlocks the monitor screen.

* Locking any of the palette screens on the monitor also locks the SX SELECTION buttons to operate as palette selection buttons.

Status and Information

The bottom section of the monitor screen always shows the following Playback Status and Information (PSI).

Playback X - The current and next memory numbers, fade times, dwell time and trigger for the next memory.

Submasters - Current page number, and indication of what is active on each physical submaster. The colour of the page number below each submaster indicates its status:

Level = 0	Grey
Level Fading Up/Down	Red
Level > 0 (current page)	Green
Level > 0 (overlaid)	Orange

Fixture "Virtual" Presets - The current level of the "virtual" preset fader for each of the fixtures.

SX Buttons - The colour of the SX button number indicates its status:

Output Level Zero	Grey
Output Level Fading	Red
Output Level Full	Green

Fixture Edit Modes - The current fixture edit modes for the attributes.

Grand Master - The current level of the GRAND MASTER fader (in %).

Blackout - When blackout is active, the text "BLACKOUT" is displayed flashing in the Grand Master field.

Monitor Screen Lock - When the monitor screen is locked, the text "SCR LOCKED" is displayed.

Clock - The current time and date in the format HH:MM:SS DD/MM/YYYY.

Figure 7 - 5 : Memories Screen (Monitor)

Memories Screen

The Memories screen on the monitor shows a section of the memory stack (approximately 30 memories).

Each line of the monitor display shows the data for a single memory (number, name, shots, fade times, LTP actions, dwell time, trigger and jump).

The Shot field contains "SC" for a programmed scene, "Cxxx" for a programmed chase, where xxx is the number of shots (0 - 255) and blank if the memory is unprogrammed.

If the LTP attribute is programmed in the memory, the LTP action field shows Snap (S) or Fade (F), otherwise the field is left blank.

The Trigger field shows if the memory trigger is Go (Go), Automatic (Auto), Real Time (R/T HH:MM:SS), SMPTE Timecode (SHH:MM:SS:FF) or MIDI Timecode (MHH:MM:SS:FF).

Any jumps programmed into the memory stack are shown in the Jump column on the Memories screen.

The *Current* memory is highlighted by a green bar and the *Next* memory is highlighted by a yellow bar.

The Memories screen on the monitor "follows" the *Next* memory as shown on the main LCD.

Submasters Screen

The Submasters screen on the monitor shows the data for all submasters on the current page.

The current page is indicated by the PAGE display on the front panel.

Each line of the monitor display shows the data for a single submaster (number, name, contents, shot, HTP and LTP fade times, LTP actions and LTP trigger level).

The Contents field shows if the submaster is unprogrammed (EMPTY), loaded with channel data (CH DATA), or has a transferred memory (MEM x).

The Shot field is only applicable if the submaster contains a transferred chase memory.

If the LTP attribute is programmed in the channel data or transferred memory, the LTP action field shows snap (S) or Fade (F), otherwise the field is blank.

The LTP TL field shows the LTP Trigger Level for the individual submaster.

SX Buttons Screen

The SX Buttons screen on the monitor shows the data for the SX buttons on the desk.

Each line of the monitor display shows the data for a single SX button (number, name, contents, shots, action, fade times, LTP actions and LTP trigger level).

If the LTP attribute is programmed in the channel data or transferred memory, the LTP action field shows snap (S) or fade (F), otherwise, the field is left blank.

If the outputs from an SX button are fading up, fading down or on full, then the corresponding line of the SX screen is highlighted by a green bar.

Preview Screen

The Preview screen is displayed on the monitor whenever a memory, submaster or SX button is previewed.

This monitor screen is not lockable.

The format of the data is the same as the Desk Channel Outputs screen, except that it shows the programmed levels of the fixture channels rather than the output levels.

Fixture channels which are unprogrammed, set to FROG values, or reference a palette are shown as "---", "FRG" and "Pnn" respectively.
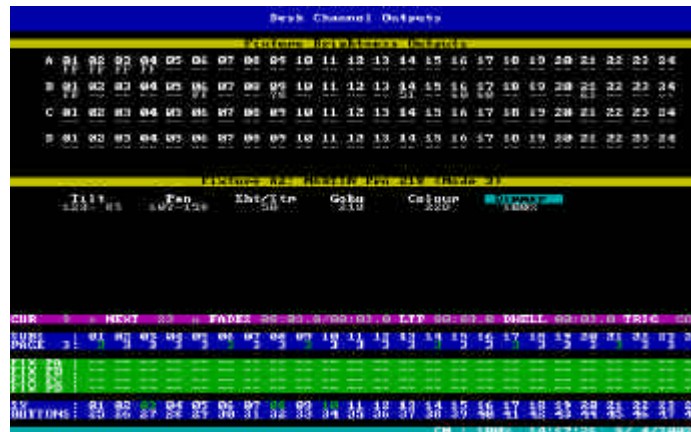
Figure 7 - 6: Desk Channel Outputs Screen (Monitor)

Outputs Screen

The Outputs screen on the monitor shows either the desk channel outputs (fixture channels), or the DMX outputs depending on the current option shown on the main LCD.

DMX Outputs

This screen shows the current output levels for DMX channels 1 - 512 for either universe A or universe B.

The DMX output levels are colour coded as follows:

Level rising   Green background
Level falling   Red background
Level static   Grey text.

Desk Channel Outputs

The Desk Channel Outputs screen is divided into two main sections as described below:

Fixture Brightness Outputs - This section shows the current output levels of the fixture brightness channels, displayed as a percentage. The output levels are colour coded as follows:

Level rising   Green background
Level falling   Red background
Level static   Grey text

Primary Selected Fixture - This section shows the current output levels for all the parameters of the "Primary" selected fixture. If no fixtures are currently selected, this section is blank.

The Brightness parameter is shown as a percentage; all other parameters are shown as DMX values (0-255).

If a fixture parameter is 16 bit, it is shown on the monitor screen as coarse and fine values (eg 123-100).

The fixture parameters currently assigned to the control wheels are highlighted on the monitor screen.

Fixture Outputs Screen

This screen shows all the fixture parameter output values for 12 consecutive fixtures starting at the fixture number specified by the user.

For example, press and hold F1 then press FIXTURE PAGE A followed by FIXTURE SELECTION button 7. The Fixture Outputs Screen will show the parameter output values for fixtures A07 - A18 inclusive.

The output values of **Brightness** parameters are displayed as a percentage. All brightness parameters are displayed as "Dimmer" regardless of their actual name in the fixture data.

The output values of **Colour, Beamshape** and **Position** parameters are displayed as DMX values (0-255).

Any 16-bit parameters are split over two lines, the first line showing the Coarse (or MSB) value, the second line showing the Fine (or LSB) value.

The fixture parameters are grouped into their respective attributes and displayed in the following order:

Brightness (dimmer), Position, Colour, Beamshape.

Each attribute has a different background colour on the monitor screen.

Other Features

Figure 7 - 7: Auto Patch Screen (Monitor)

Super User Screens

This section covers the monitor screens corresponding to the various functions within Super User.

These screens are not lockable.

Where a screen is not defined for a particular section within Super User, the monitor screen displays the same data as the main LCD.

Memory Defaults Screen

This screen is displayed on the monitor when in the Memory Defaults section of Desk Setup. The screen shows all the current memory default values.

Submaster Defaults Screen

This screen is displayed on the monitor when in the Submaster Defaults section of Desk Setup. The screen shows all the current submaster default values.

SX Defaults Screen

This screen is displayed on the monitor when in the SX Defaults of Desk Setup. The screen shows all the current SX default values.

Assign Fixtures Screen

This screen is displayed on the monitor when the user is in the *Assign Fixtures* section of *Desk Setup*.

The screen shows the fixture type currently assigned to each fixture.

Manual Patch Screen

This screen is displayed on the monitor when the user is in the *Manual Patch* section of *Desk Setup*.

The screen shows the DMX address that each fixture is patched to.

Auto Patch Screen

This screen is displayed on the monitor when the user is in the *Auto Patch* section of *Desk Setup*.

A coded DMX map shows the status of each DMX address as follows:

Ann	Page A fixture patched
Bnn	Page B fixture patched
Cnn	Page C fixture patched
Dnn	Page D fixture patched
---	Address not patched

A red coloured block indicates where the selected fixtures will be patched according to the start address shown on the main LCD.

Load Show Screen

This screen is displayed when the user is doing a *Load Show* operation.

The screen shows a list of valid show files found on the floppy disk, together with their size (in kBytes) and dates.

Save Show Screen

This screen is displayed when the user is doing a *Save Show* operation.

The screen shows a list of valid show files found on the floppy disk, together with their size (in kBytes) and dates.

Illumination Screen

This screen is displayed on the monitor when the user is in the *Illumination* section of Super User.

This screen shows the current brightness and contrast levels of the Main LCD and Wheel LCD.

Desk Information Screen

This screen is displayed on the monitor when the user is in the *Desk Information* section of Super User.

This screen shows the desk serial number, operating software and BIOS versions, battery status and current show.
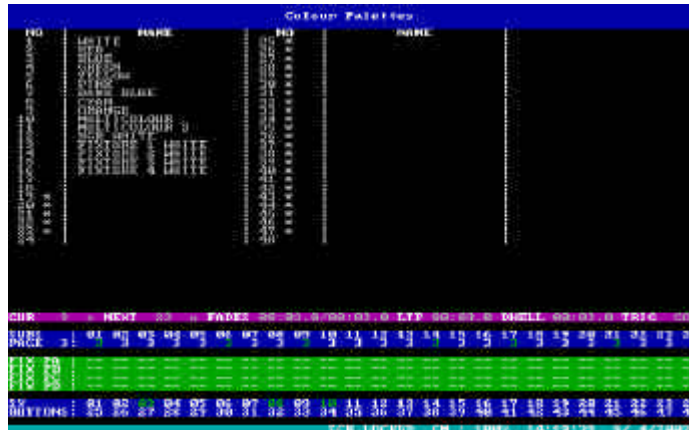
Figure 7 - 8: Colour Palettes Screen (Monitor)

FROG Function Screen

This screen is displayed on the monitor when the FROG Function screen is displayed on the Main LCD.

This screen is <u>not</u> lockable.

This screen shows the current FROG Function parameters (Mode, Speed, Colour Action, Colour Minimum etc.).

Palette Screens

There is a separate palette screen on the monitor for each of the attributes (Colour, Beamshape and Position).

To <u>display and lock</u> a palette screen on the monitor, hold the F1 button down and then press the COLOUR, BEAMSHAPE or POSITION button.

This action also locks the SX SELECTION buttons on the front panel to operate as the corresponding palette selection buttons.

To display a palette screen <u>temporarily</u> on the monitor, <u>hold down</u> the COLOUR, BEAMSHAPE or POSITION button. The palette screen will disappear on release of the attribute button.

The palette screen shows the number and name of the palettes for the selected attribute.

Unprogrammed palettes have an asterisk (*) displayed next to their palette number.

Fixture Groups Screen

There is no equivalent Fixture Groups screen on the Main LCD.

To <u>display and lock</u> the Fixture Groups screen on the monitor, hold the F1 button down and then press the GROUP button.

To display the Fixture Groups screen <u>temporarily</u> on the monitor, hold down the GROUP button. The Fixture Groups screen disappears on release of the GROUP button.

The Fixture Groups screen shows the number and name of the groups together with the fixtures that are selected in each group.

The "Primary" fixture in the group is indicated by a 'P', the other fixtures in the group are indicated by an 'X'.

Unprogrammed fixture groups have an asterisk (*) displayed next to their group number.

Holding down F1 and pressing the up or down arrow key will switch between displaying groups 1-24 and groups 25-48 on the monitor screen.

Only the fixtures for the <u>current page</u> are displayed on the monitor. To view the fixtures for a different page press the appropriate FIXTURE PAGE button on the front panel.

Other Features

External Keyboard

The following functionality is provided:

The up and down cursor keys mimic the up and down arrow keys on the front panel.

The right and left cursor keys mimic the + and - keys on the front panel.

The carriage return and Enter keys mimic the ENTER key on the front panel.

The 'Space', 'A' - 'Z', '0' - '9', '-', '/', '(', and ')' keys are used when entering names for memories, submasters etc.

Numeric Entry

The external keyboard can be used to enter numeric data providing that the cursor is on an <u>editable numeric field</u> on the Main LCD. The following general rules apply for numeric entry:

- Either set of numeric keys on the external keyboard may be used.
- The backspace key deletes the last digit entered.
- All numeric entry <u>must</u> be completed by pressing the Enter or Carriage Return key.
- The '.' key is used to separate values in multi-part numeric fields (eg fade times).
- Invalid numbers will be ignored; the numeric field on the LCD returns to its original value.
- Keyboard input is ignored if the cursor is moved off the numeric field.
- The Esc key aborts numeric entry; the numeric field on the LCD returns to its original value.

Fade Times

On the Main LCD fade times are divided into three separate sections (minutes, seconds, tenths).

If the cursor is on <u>any</u> of the three sections, a time can be entered from the external keyboard.

Fade times may be entered in seconds only, seconds and tenths, or minutes, seconds and tenths, as required, eg

0.5 Enter	0.5 seconds
3 Enter	3.0 seconds
7.5 Enter	7.5 seconds
1.30.0 Enter	1 min 30 seconds
25.0.0 Enter	25 minutes.

Real Times

On the Main LCD real times are divided into three separate sections (hours, minutes, seconds).

If the cursor is on <u>any</u> of the three sections, a time can be entered from the external keyboard.

Real times use the 24 hour clock and are entered in hours, minutes and seconds, for example:

7.30.0 Enter	7:30 am
12.0.0 Enter	12:00 noon
16.45.0 Enter	4:45 pm
0.0.0 Enter	12:00 midnight.

Timecode Times

On the Main LCD SMPTE or MIDI timecode times are divided into four separate sections (hours, minutes, seconds and frames).

If the cursor is on any of the four sections, a time can be entered from the external keyboard.

Timecode times use the 24 hour clock and are entered in hours, minutes, seconds and frames, for example:

7.30.0.0 Enter	7:30 am
12.0.0.0 Enter	12:00 noon
16.45.0.0 Enter	4:45 pm
0.0.0.0 Enter	12:00 midnight

Recovery Mode

Recovery Mode determines how the desk performs when switched off and on, either deliberately or accidently.

Recovery is enabled or disabled in Super User (see page 6-13).

Recovery Disabled

When Recovery is disabled, the desk will come up showing the Memories screen on the main LCD, with *Current* memory = 0 and *Next* memory = 1 (or the first programmed memory). There will be no outputs from Playback X.

Page 1 of the submasters will be displayed with no page overlays.

There will be no SX outputs.

Recovery Enabled

When Recovery is enabled, the desk will come up showing the last base screen (Memories, Submasters, SX or Outputs) which was displayed on the LCD before the desk was turned off.

The previous position in the memory stack is reinstated, ie, the *Current* and *Next* memories are as before; with the outputs from Playback X corresponding to the *Current* memory. If the *Current* memory is a chase, this will be restarted from step 1.

The submasters will come up on the page that they were previously on, complete with any overlays that were in operation at the time.

The outputs from any SX buttons with Go actions which had completed their fade up will be restored.

Upgrading Software

Upgrades to the operating system software are provided on floppy disk.

Full instructions on how to upgrade the software in the desk will be provided with the upgrade disk.
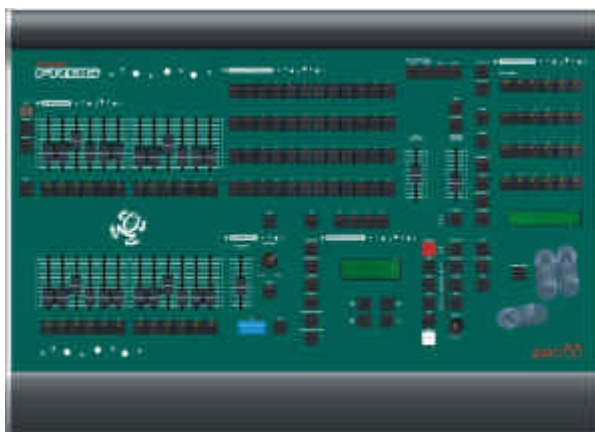
Figure 8 - 1: Mambo Frog Lighting Desk

Introduction

This chapter covers the various inputs and outputs to the desk:

- Desk Power Supply
- Audio Input
- Desk Light
- Remote Switches
- External Data Storage
- DMX Output
- Keyboard
- Video output

For news, views and the latest software visit our dedicated Frog web site at www.frogsupport.com

Technical Specification

Desk Power Supply

An inline external power supply unit is used to power the desk.

Mains Voltage:

230V +10%, -17% (190V - 253V)
120V +10%, -17% (100V - 132V)

Supply 5V @ 5A and 12V @ 1A

Audio Input

Stereo Input >10 k , 100mV to 10V

Connections:

Tip   Left Channel
Ring   Right Channel
Sleeve   0V Signal Ground
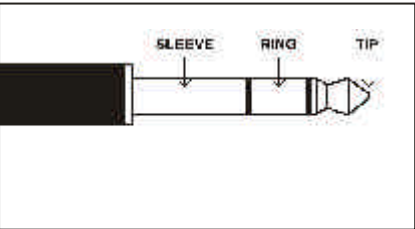
Figure 8 - 2: Stereo Jack Plug

Desk Light

Single 3 pin XLR socket, 12V, maximum 5W.

Connections:

Pin 1   Not Connected
Pin 2   0V
Pin 3   +12V
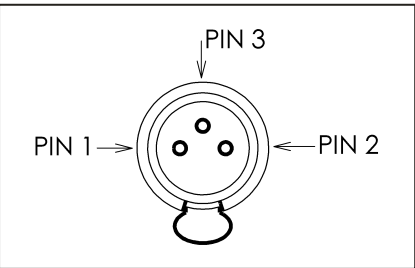
Figure 8 - 3: Desk Light Connector

Remote Switches

An 8 pin DIN connector providing up to six remote switches. Short pin to 0V to simulate a button push.

WARNING - Do NOT connect anything to undefined pins.

Connections:

Pin 1   Remote Switch 6
Pin 2   Remote Switch 1
Pin 3   Remote Switch 2
Pin 4   Remote Switch 3
Pin 5   Remote Switch 4
Pin 6   Remote Switch 5
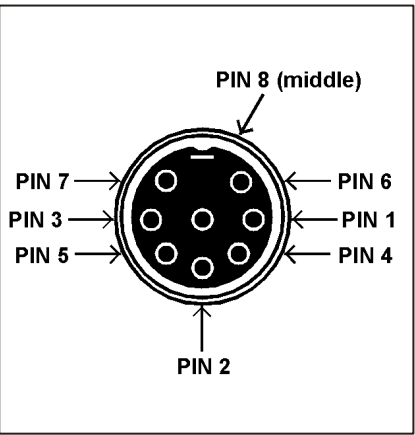Pin 7   Undefined
Pin 8   0V Common Ground

Figure 8 - 4: Remote Switches

External Data Storage

Floppy Disk drive 3.5" PC compatible formatted to 1.44Mb (HD DS).

Floppy disks are used for saving and loading show files, loading fixture data and upgrading the operating system software on the desk.

DMX Output

Double 5 pin XLR, isolated, with voltage protection and data output indicators. Data on channels 1 - 512.

Socket 1 - Universe A
Socket 2 - Universe B.

Connections:

Pin 1   Signal Ground (0V)
Pin 2   DMX Drive Complement (1-)
Pin 3   DMX Drive True (1+)
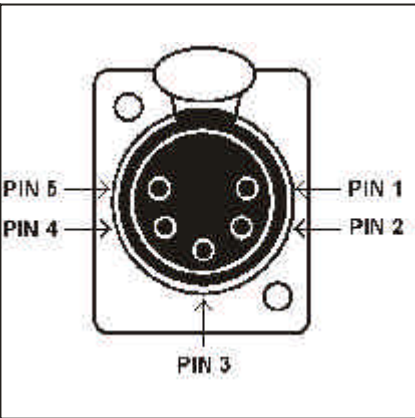Pin 4   Not Connected
Pin 5   Not Connected

Figure 8 - 5: DMX Connector

Keyboard

PC standard UK keyboard via PS/2 connector.

Video Output

15 pin D-type SVGA connector.