



PaTPad

OPERATOR MANUAL



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1.0 PRODUCT DESCRIPTION

The **PaTPad** is an invaluable tool on the **maXim** lighting control desk for the patching, programming and control of Fixtures (moving lights). The **PaTPad** is an option on L, XL and XXL **maXims** and is standard on the **maXim** MP. This manual describes all **PaTPad** operations and includes some brief descriptions of other **maXim** operations. For complete descriptions of other **maXim** operations refer to the **maXim** Operators Manual.

The **PaTPad** consists of a touch screen with an overlay that divides the touch screen into separate areas. The small areas are *virtual buttons* and the long areas are *displayer scroll bars*. The touch screen is transparent. Underneath the *virtual buttons* are multicolour LEDs that indicate the status of each button. Underneath the *displayer scroll bars* are LED alpha-numeric read-outs that indicate the current function or value of each displayer.

The touch screen can be operated with either your finger or a stylus such as those available for hand held computing devices. The 6 parameter displayers act like control wheels and can be either moused (scrolled) or they can be tapped.



The **PaTPad** is divided into four main areas:

Selected Fixture Displayer.

15 Control buttons.

6 Parameter Displayer scroll bars. (equivalent to 6 control wheels)

4 Parameter Matrix (PM) Selector buttons for each parameter displayer.

Each row of four Parameter Matrix (PM) buttons allow you to select the parameter that will be controlled by the Parameter Displayer beside it, allowing up to a total of 24 parameters to be controlled per Fixture.

LSC Lighting maintains a “maXim discussion web” at;

www.lscighting.com.au/forum/default.htm

Log on to the forum if you have comments about the maXim, if you want advice, or if you have created some cool effects and would like to share them with other users.

2.0 PROGRAMMING CONCEPTS

There are two basic situations in which Fixtures (moving lights) are used in a show:

- ?? A rehearsed show where every lighting cue is pre programmed and executed on cue.
- ?? A live and unrehearsed show where the lighting looks are created “on the fly”. This is also known as “ad lib” or “busking”.

The **maXim** with **PaTPad** provides all the tools to control fixtures in both situations.

2.1 REHEARSED / PRE PROGRAMMED.

In a rehearsed and pre programmed show, each lighting cue provides a *total lighting look* that has been recorded into the **maXim** using the [record scene] button. This type of show has usually had many rehearsals in which the lighting cues have been refined (edited). The lighting cues are the scenes and/or chases that you have recorded. The cues could be recorded in order into a stack for easy sequential playback on the stack master.

2.2 LIVE OR AD LIB

Many “one off” or live shows do not have rehearsals. The lighting looks are created “on the fly” using “building block” scenes that you record into the **maXim** prior to the show using the [store] or [store + level] buttons on the **PaTPad**. During the show, you combine different combinations of these “building block” scenes to create each total lighting “look”.

The difference between these “building block” (store button) scenes and the “complete” (record scene button) scenes of a fully programmed show are that “building block” scenes contain *Filtered* information (only specific parameters) for the Fixture(s) in that scene. Some scenes would only contain focus parameters. For example, one scene might only position the beams in a fan pattern, another positions them on some scenery and yet another might set the beams in a cross pattern. These scenes might also include intensity information but they will not contain any settings for any other parameters. Other scenes might only contain Fixture colour parameters, that is, one scene might set its Fixtures to yellow, another scene blue or another red. Other scenes might only select different gobos on the Fixtures to say “stars” or “dots”.

Fading up the playback containing the fan pattern will not change the gobo or the colour because the fan scene has been *Filtered* to only contain pan and tilt parameters. Fading up the red scene changes the Fixtures to red but does not change any other parameters because colour was the only *Filtered* parameter when the scene was stored. Fading up the blue scene only changes all of its Fixtures to blue. *Filters* are a powerful tool that you will often use on the **PaTPad**. Thus by playing back various scenes, you can create different combinations of focus (position), colour and beam (gobo). If, for example, you create **10** different focus (positional) scenes, **8** different colour scenes and **6** beam (gobo) scenes then you can instantly create **480** (10x8x6) different looks on stage by using different combinations of these **24** “building block” scenes.

Fixture parameters are played back on a LTP (Latest Takes Precedence) basis. This is fully explained in the “Glossary of Terms”, but in practice this means that as soon as a scene fader is raised above zero, the parameters in that scene are “triggered” (played back). They will go to their level in that scene (in their stored time) regardless of any further fader movement. So in the example above, to change the colour of some Fixtures, grab the fader of the “red” building block scene and simply raise it (from zero). The scene has been triggered and the Fixtures change to red. The fader can be returned to zero or it can be left in the up position to show you which scene you last triggered. Video 1 (channel view) also shows you the latest source for every parameter. To change to blue raise the “blue” scene fader from zero. To change to “star” gobos, raise the “star” scene fader from zero. To move

the focus to the cross pattern, raise the cross pattern scene fader from zero. Each scene that you trigger only changes the (*Filtered*) parameters that you stored in that scene. You only have to fully fade up a scene if it contains intensity levels for the Fixtures because intensity is always under fader control.

The [F/A] button below each scene fader can also be pressed to *momentarily* trigger the parameters in a scene. For example, if the look on stage is currently blue, pressing the [F/A] button for the red scene will change the look to red. Releasing the [F/A] button will restore the blue look.

You might record a chase where each step contains a different focus (position) scene. When the chase is faded up, the Fixtures move from position to position with each step of the chase. To make the chase blue, raise the blue scene fader from zero. To make the chase red, raise the red scene fader from zero. To momentarily change the chase to yellow, press the [F/A] button of the yellow scene. You could make a chase of only colour scenes and run it at the same time as the focus chase or only keep it faded down and momentarily reveal its chasing colours by pressing its [F/A] button. The possibilities are endless.

By organizing your “building block” scenes you can have a group of adjacent faders that contain different focus (positional) scenes, another group of faders with colour scenes and then another with beam (gobo) scenes. In other pages of memory you could have more focus scenes or chases. You organize your memories so that you can have instant hands on access to the scenes that you need.

Using these techniques it is very easy to ad-lib or busk a show.

2.3 COMBINATIONS OF REHEARSED AND LIVE

If you intend to fully program a show, it is still useful to create your “building block” scenes prior to the first rehearsal. You can then use them to *quickly* create looks on stage and then RECORD each look as a complete scene to be played back on cue. When you are running a fully programmed show, you can still use your “building block” scenes for any “ad lib” moments that might arise.

To re-cap, the **maXim** with **PaTPad** provides two methods of programming scenes into memory.

?? [record scene], (on the main **maXim** control panel) saves the entire output of the **maXim** into a scene. What you see is what you get.

?? [store], (on the **PaTPad**) saves only selected parameters of the Fixtures into a scene. You can select any parameters by using Filters. You can select any fixtures by using Hi-lights. Filters and Hi-lights are described in detail later in this manual.

[store + level] also saves only selected parameters of the Fixtures but includes all intensity levels on the output.

3.0 GLOSSARY OF TERMS

The following Terms are commonly used in this **PaTPad** Operator Manual. These Terms have been adopted by LSC at the best descriptions for functions and operations performed on the **PaTPad**; and may not be terms universally adopted on similar equipment.

FIXTURE. When you are using the *maXim's PaTPad*, a moving (intelligent) light (or colour scroller) is known as a **FIXTURE**.

A **FIXTURE** is controlled by more than one DMX slot (address).

A **FIXTURE** might be as simple as a light fitted with a colour scroller. One DMX slot controls the light's dimmer and another slot controls the colour position of the scroller.

A **FIXTURE** might be as complex as a moving light that can have multiple DMX slots. One DMX slot controls the dimmer (HTP) and many other DMX slots can control *attributes* (LTP)

As you patch each Fixture you give it a unique *Fixture Number* that you use to refer to that Fixture on the *maXim*. The Yellow flash buttons are used for the fixture numbers.

DMX SLOT. Every Fixture has a selectable DMX starting address and this is patched to that same DMX SLOT number on the *maXim*. The *maXim* will then automatically patch all of the remaining DMX slots for that Fixture according to the information in that particular Fixtures Template.

TEMPLATE. A *Fixture Template* is a file that tells the *maXim* the function of each control channel for that fixture and it defines the unique parameter controls and labels that will appear on the **PaTPad** and video screen for that Fixture. Every different *type* of Fixture that you control from the **PaTPad** requires a Template. Templates are loaded into the *maXim* library via the disk drive. Templates for most popular models of Fixtures are available from the LSC website;

www.lscighting.com.au

Instructions on how to write your own Templates using a text editor program on a personal computer is referred to in Section 10 and also can be found on the LSC web site.

LIBRARY. The *maXim* stores its Templates in a library that can hold up to 64 Fixture Templates. They are organised in the library by brand (manufacturer) and model. When you want to use a particular model of Fixture, you select its Template from the library and load it into the patch. The *maXim* can have up to 10 different *types* of Fixture Templates (from the library) in use in the patch at the same time.

ATTRIBUTE. Each brand and model of Fixture has a specified number and order of control channels. An **ATTRIBUTE** is one or two DMX control channels (two channels used for higher resolution) that uniquely controls one of the physical motions of the Fixture. The manufacturers specification of a Fixture lists each attribute and its control channel number(s).

PARAMETER. A parameter is one or more attributes that are grouped together in the *maXim* to control a logical aspect of the Fixture. The **PaTPad** controls *parameters* and these in turn set the attributes of the Fixture. In many cases a parameter directly controls the attribute of the same name. However, a single parameter can also be used to control multiple attributes of a Fixture. This allows a single parameter on the **PaTPad** to very easily perform a complex task.

For example,

A "Pan" *parameter* might simply control the pan *attribute*. A "Colour" *parameter* might simultaneously control *attributes* for a Colour Wheel plus three CMY (Cyan, Magenta, Yellow) attributes for colour filters. Complex colours (pre-defined in the Template) can therefore be quickly selected by varying a single *parameter*. This "colour" parameter can be defined in the Template with "wheel stops" (below) so that each wheel stop selects a named colour. Parameters for each Fixture are defined in that Fixture's Template.

WHEEL STOPS. Parameters on the **PaTPad** can be continuously variable or they can jump between pre-defined values called *wheel stops*. Each wheel stop can be given a name that will appear on the **PaTPad** when that wheel stop is selected.

For example,

A six position gobo wheel would be defined with 6 wheel stops. The value at each wheel stop would be defined in the Template to exactly position the wheel for the required gobo. When you select the gobo parameter on the **PaTPad**, you change gobos by tapping either end of the gobo displayer. If names have been defined for each wheel stop, for example, star, dots, circle etc, these will appear on the **PaTPad** as each gobo is selected.

A wheel stop can also have a limited variable area within the stop.

For example,

A wheel stop called “strobe” might be variable to allow you to vary the strobe speed by mousing the middle of the displayer. Wheel stops for each parameter are defined in their Fixture’s Template.

GROUP. A group is a list of 2 or more Fixture numbers. Groups provide a rapid method of loading, Hi-lighting, or cloning many Fixtures in a single operation.

For example,

Select all the Fixtures on the rear truss and store them as Group 1. If desired, name the group “Rear Truss”. If all of your patched fixtures are already loaded on the **PaTPad**, pressing [**group**] [**F/A**] (1) will highlight only the Rear Truss Fixtures.

FILTER. Filters are a powerful tool that you can use to select exactly which **parameters** of a fixture are involved in most **PaTPad** operations. Every parameter on every fixture on the **PaTPad** can have a filter applied to it. When a fixture is loaded onto the **PaTPad** it has no filters applied (and it is Hi-lighted, see below).

If **no filters** are applied, **all parameters** are included (subject to Hi-lights) in any store, preset, palette or padlock operation.

If **any parameter is filtered**, then **only filtered parameters** are included (subject to Hi-lights) in any store, preset, palette or padlock operation.

You can easily see which parameters are included because they will flash on the **PaTPad** and on video 4 (PaTPad Mimic). One simple rule is applied;

Only FLASHING parameters will be INCLUDED.

HI-LIGHT. Hi-lights are a tool that you can use to select exactly which **fixtures** on the **PaTPad** are involved in most **PaTPad** operations. Every fixture on the **PaTPad** can have its Hi-light on or off. When a fixture is loaded onto the **PaTPad** it is automatically Hi-lighted.

If a fixture is **Hi-lighted**, it is **included** (subject to the filters) in any store, preset, palette or padlock operation.

If a fixture is **not Hi-lighted**, it is **not included** in any store, preset, palette or padlock operation, irrespective of any filters and it cannot be selected by the fixture displayer.

You can easily see which parameters are included because they will flash on the **PaTPad** and on video 4 (PaTPad Mimic). The same simple rule is applied;

Only FLASHING parameters will be INCLUDED.

PRESET. A preset is a special type of scene that can be stored or recalled from the **PaTPad**. A preset refers to specific **Fixtures Numbers** and is usually stored with only specifically filtered parameters (for example, focus). A link to a preset can be included in any normal scene allowing that scene to automatically recall the preset. Multiple scenes can include a link to the same preset.

The advantage of using a preset is that if you need to make changes, editing a single preset will automatically change the look of all scenes that include a link to that preset.

For example.

Some Fixtures are focused onto the centre rostrum on stage and their focus (position) parameters are Filtered and stored as the *centre rostrum preset*. You now program the scenes for your show by creating each look on stage and recording each look as a scene. If the scene is to include the Fixtures on the centre rostrum, you load the *centre rostrum preset* on the **PaTPad** and then store or record the look as a scene. You might program 50 different scenes for the show and the *centre rostrum preset* might be used in 20 of those scenes. The centre rostrum is now moved down stage by 2 metres so it is no longer lit. You recall the *centre rostrum preset*, adjust the position of fixtures to the new rostrum position and re-store the preset. All of the 20 scenes that include the *centre rostrum preset* are now set to the new position.

PALETTE. A palette is a special type of scene that can be stored or recalled from the **PaTPad**. A palette refers to specific **Fixtures types** (Templates) and is usually stored with only specifically filtered parameters (for example, colour). A palette can include more than one *type* of Fixture. A link to a palette can be included in any normal scene allowing that scene to automatically recall the palette. Multiple scenes can include a link to the same palette. Palettes work in a similar way to presets in that that if you need to make changes, editing a single palette will automatically change the look of all scenes that include a link to that palette. Palettes are also ideal for making colour or gobo selections on the **PaTPad**. If a palette is recalled onto the **PaTPad**, all Fixtures on the **PaTPad** of the *type(s)* recorded in the *palette* will move to those palette settings (if the parameter is flashing).

HTP. (Highest Takes Precedence). HTP channels are used to control the intensity of lights. If you patch a dimmer it will be a HTP channel. If you patch a Fixture (moving light) then the channel that controls its *intensity* will automatically be set as a HTP channel and it will be controlled by the yellow fader that you choose as the Fixture Number. If the level for a HTP channel is emanating from several places within the *maXim*, such as its channel fader and from a scene, then the **highest** of all those levels will be the level of that channel at the output.

LTP. (Latest Takes Precedence). LTP channels are used to control Fixture parameters, for example, pan, tilt, colour etc. When you patch a Fixture, its *parameters* will automatically be set as LTP channels. The level for a LTP channel on the output of the *maXim* will always be the level from the place where the **latest** action took place (subject to any times).

A latest action is **triggered** when;

1. A parameter is altered on the **PaTPad**.
2. A Playback master is faded UP from zero.
3. A step of a stack or chase is EXECUTED (effectively the same as 2).
4. A <flash/assign> button is pressed. This will only **momentarily** override the current LTP level whilst the button is held down.
5. The **PaTPad** trigger button is pressed.

LTP channel levels are not influenced by the settings of the playback faders, masters or the flash level control. This means that when a scene is faded up, the parameters (LTP) of any fixtures in that scene will go to their recorded/stored settings in their recorded/stored times as soon as the scene fader is raised above zero. If another scene is raised above zero, the parameters go to their new (latest) settings in their recorded/stored times for that scene. If a scene is faded down, the parameters do not change, the Fixtures intensity simply dims out. To move a parameter (to its latest value) you must fade up (from zero) a scene containing that parameter setting or alter it via the **PaTPad**. Every scene and every step in every stack has individually programmable times (move and delay) for every parameter of every Fixture.

4.0 BASIC PaTPad PROCEDURES

The following overview is typical of how the **PaTPad** is used. Detailed procedures are described in Section 5 of this manual.

There are three basic steps; Patching, Programming and Playback.

4.1 PATCHING

Ensure that the *maXim*'s Fixture library contains the Template(s) for the brand/model of Fixture(s) that you will be using. Press;

[menu], [library], [view].

If they are not in the library, obtain them from www.lscighting.com.au/templates, or write your own on a PC, (Section 10) then load them via floppy disk into the *maXim*. Press;

[menu], [library], [add].

Patch your Fixtures into the *maXim* by editing the patch.

Hold [function], tap [patch].

Press [edit], [library]

Select the Fixture Template (by brand/model) of the Fixture you are to patch. It is now loaded in the patch and can be used every time you need to patch that type of Fixture. Select the DMX slot (address) for the Fixture using the Edit wheel or the [<] or [>] buttons. Patch the fixture to a Fixture number by pressing a yellow fader [F/A] button. The selected [F/A] fader controls the Fixtures intensity and the [F/A] button is used to load that Fixture Number onto the **PaTPad**. The *maXim* automatically patches all of the remaining DMX slots for the Fixture according to the information contained in the Fixture Template and advances the DMX slot to the next available. Select further Fixtures and patch them as above.

When finished patching, press; [edit]. The patch is automatically saved.

4.2 PROGRAMMING

Fixtures are programmed by loading them onto the **PaTPad**.

Fade up the Fixtures with their yellow faders (ensure yellow master is up). Load the faded up Fixtures onto the **PaTPad**; Hold [get], tap [F/A] (flash yellow master).

Select a loaded Fixture by tapping either end of the Fixture Displayer. Alter the Fixtures parameters using the **PaTPad** matrix and displayers to get the desired look on stage. Touch and scroll a Parameter displayer to vary its value. When a displayer's yellow LED flashes you can also use the Edit wheel to vary it. Select other parameters on a displayer by touching that displayer or by pressing the [PM] buttons beside it.

Tap either end of the Fixture Displayer to select other fixtures and adjust their parameters as above.

Record the total output into a scene, press;

[record scene], [F/A] (scene number)

Or;

Store only selected (flashing) parameters into a scene, press;

[filter], [PM], [filter], [PM] etc to select the parameters. Press;

[clear], [F/A] (Fixture Number), to clear the Hi-Lights Fixtures you do not want to store,

Store the flashing parameters into a scene number, press;

[store], [F/A] (scene number).

or to include intensity, press;

[store + level], [F/A] (scene number)

Only FLASHING parameters will be INCLUDED.

Repeat the above programming steps until all scenes have been created.

There are many tools available on the **PaTPad** to speed the programming process. These include Groups, Hi-lights, All, Home, Presets, Palettes, Filters, Clone, etc. They are described later in this manual.

4.3 PLAYBACK

As required, fade up the playbacks containing the scenes programmed in the previous step.

Scenes saved using [record scene] will be totally reproduced. The look that was onstage when the scene was “recorded” will be played back when the playback scene fader is raised.

Scenes saved using [store] will be partially reproduced. The parameters that were flashing when the scene was “stored” will be played back when the playback scene fader is raised. All other parameters are not affected. This allows you to create many different looks on stage by combining different scenes.

If a scene contains both intensity and parameters, slightly raising the fader above zero will trigger the parameters so the Fixture moves into position whilst still dimmed down. Raising the fader to full will reveal the correctly positioned scene.

The intensity of each Fixture will be under direct scene fader control (if intensity was included in the scene) but the levels of parameters will be immediately played back (subject to their individual times) as soon as their scene fader moves above zero. The scene fader position only has control over the *intensity* of the Fixtures and dimmers that might be in the scene, it does not affect parameter values.

When a scene is faded down, the intensity is still under fader control (HTP) but the parameters do not change (LTP). Parameters only change when a new scene is faded up from zero or they are altered on the **PaTPad**. This prevents unwanted and unexpected movement of Fixture parameters when playing back scenes. See LTP in the glossary for details.

Scenes can also be momentarily recalled by holding their **[F/A]** button.

The **PaTPad** can also be used during playback to manually change Fixture parameters.

5.0 DETAILED PaTPad PROCEDURES

These detailed procedures will lead you through the process of patching Fixtures, loading them onto the **PaTPad**, controlling their parameters, storing scenes, advanced programming and play back.

5.1 PATCHING

5.1.1 TEMPLATE LIBRARY

To check if the Templates for the Fixtures you are using are in the *maXim*'s Fixture library, press [menu], [library], [view].

Templates are organised in the library by manufacturer and model. The **PaTPad** shows a list of Fixture manufacturers. If more than 6 manufacturers are loaded in the library, press the ">" or "<" symbol on the Fixture Displayer to change pages.

Press the [PM] button beside the required manufacturers name.

The **PaTPad** shows a list of Template names (models) from that manufacturer. If more than 6 templates for that manufacturer are loaded in the library, press the ">" or "<" symbol on the Fixture Displayer to change pages.

If the Template is in the library, press [menu] (to close it), then proceed to "Editing the Patch" below.

5.1.2 ADDING TEMPLATES TO THE LIBRARY

If a required Template is not in the library, you can download it from www.lscighting.com.au/templates. The website contains templates for most popular fixtures. If the template for your fixture is not on the website you can either contact LSC (info@lscighting.com.au) and request the template, providing details of manufacturer, model and software version number or you can write your own template. Basic instructions on how to write your own Templates using a text editor program on a personal computer are in section 10 of this manual. Contact LSC for detailed instructions.

Save the new Template onto a floppy disk. Insert the floppy disk into the *maXim* disk drive then press;

[menu], [library], [add].

The display shows the Templates on the disk. Press the [PM] button corresponding to the required Template. The Template is now added to the *maXim* library.

The *maXim* library can hold up to 64 Templates.

5.1.3 COPYING TEMPLATES FROM THE LIBRARY TO DISK

If you need to edit a template or save it off line, copy it from the library to floppy disk.

Press;

[menu], [library], [CopyToDsk].

Select the manufacturer, then the model.

5.1.4 DELETING TEMPLATES IN THE LIBRARY

To delete a Fixture Template from the library; press

[menu] [library] [remove]

The **PaTPad** shows a list of Fixture manufacturers. If more than 6 manufacturers are loaded in the library, press ">" or "<" on the Fixture Displayer to change pages.

Press the [PM] button beside the required manufacturers name.

The **PaTPad** shows a list of Template names (models) from that manufacturer. If more than 6 Templates (models) for that manufacturer are loaded in the library, press “>” or “<” on the Fixture Displayer to change pages.

Press the **[PM]** button beside the template name to be removed.

5.1.5 DELETING ALL TEMPLATES IN THE LIBRARY

To delete the entire contents of the library; press **[menu] [library] [remove] [all]**

The main display on the maXim will scroll the message “Do you want to remove all library fixtures”.

Press **[yes]**

5.1.6 CLEARING THE PATCH

If you are starting a new show it is best to clear the patch.

Hold **[function]**, tap **[patch]**.

Press **[remove]**, **[yes]**.

Warning. This will erase any existing patches. If you need to keep the current patch, save your show to disk.

5.1.7 EDITING THE PATCH (PATCHING)

Hold **[function]**, tap **[patch]**.

You now have 3 choices;

1. **[add]** Adds a one to one patch
2. **[remove]** Deletes the entire patch.
3. **[edit]** Allows you to load templates from the library into the patch and to patch fixtures and dimmers.

5.1.8 LOADING FIXTURE TEMPLATES

Pressing **[edit]** above allows you to start patching. Before you can patch a Fixture its Template must be loaded from the library into the patch.

The **PaTPad** shows;

DIMMER	⊠
LIBRARY	?

The button beside “DIMMER” will be flashing, indicating that the **maXim** is ready to patch a conventional dimmer. To load a Fixture Template into the patch, press the **[PM]** button beside “LIBRARY”. The **PaTPad** shows a list of Fixture manufacturers. If more than 6 manufacturers are loaded in the library, press “>” or “<” on the Fixture Displayer to change pages. Press the **[PM]** button beside the required manufacturers name. The **PaTPad** shows a list of Template names (models) from that manufacturer. If more than 6 Templates (models) for that manufacturer are loaded in the library, press “>” or “<” on the Fixture Displayer to change pages. Press the **[PM]** button beside the required template name to load it into the patch.

The PaTPad shows;

DIMMER	?
SCAN-X	α
LIBRARY	?

In this example the selected Fixture is a fictitious “scan-x” but you will see the name of the actual Template you selected. The [PM] button beside it will be flashing, indicating that the *maXim* is ready to patch that Template (type of Fixture). This Template is now loaded in the patch and does not need to be loaded again. You can use it every time that you need to patch that type of Fixture. If you are using several different types of Fixtures you can load their Templates now or you can patch the currently loaded Fixture (see below) then return to the library later and load the other Templates. To load more Templates now press the [PM] button beside “LIBRARY” and make your selection as above.

DIMMER	?
SCAN-X	?
Mover-Z	α
LIBRARY	?

In this example, two types of fixtures have been loaded into the patch. Up to 10 Templates can be used in the same patch. If more than 5 Templates are loaded, press “>” or “<” on the Fixture Displayer to change pages. When a Fixture Template has been loaded, you can begin patching.

5.1.9 PATCHING A FIXTURE

Each Fixture that you patch will have its own DMX address (that you set on that Fixture). This is the starting DMX slot for that Fixture and each Fixture will use a quantity of DMX slots, depending upon the number of attributes that need to be controlled. The number of slots is defined in the Fixture Template.

To patch a Fixture, edit the patch (above) then press [<] or [>] or rotate the Edit Wheel to select the starting DMX slot of the Fixture.

The *maXim* L, XL and XXL have 2 DMX universes (2 outputs) and use “U1” or “U2” to indicate DMX Universe 1 or Universe 2. When the DMX slot is incremented above the highest number in Universe 1 (U1-512), it changes to Universe 2 (U2-1). The *maXim*-MP model has only one DMX universe (“U1”).

The yellow bank is used for Fixture Number selection and Fixture intensity control.

To patch the currently flashing Fixture Template to the selected DMX slot and give it a Fixture number, press; [F/A] (Fixture Number) (yellow bank). The selected [F/A] button becomes the Fixture Number for that Fixture. The selected [F/A] fader controls the Fixture’s intensity.

The *maXim* automatically patches all of the remaining DMX slots for that Fixture according to the information contained in the Fixture Template. The DMX slot number automatically advances to the slot after the last slot used by the patched Fixture, ready for the next patch.

The maximum number of Fixtures that can be patched is either 24, 36, 48 or 60, depending on the number of yellow channels on your model of **maXim**. The total number of parameters that can be controlled is limited to approximately 400.

To patch further Fixtures of the same type (flashing [PM] button on the **PaTPad**), if necessary, press [**<**] or [**>**] or rotate the Edit Wheel to select the starting DMX slot of the Fixture then give it a Fixture number by pressing; [**F/A**] (Fixture Number).

To patch a Fixture of a different type, press its Template [**PM**] button on the **PaTPad** (it flashes) then press [**<**] or [**>**] or rotate the Edit Wheel to select the starting DMX slot of the Fixture then give it a Fixture number by pressing; [**F/A**] (Fixture Number).

Each patch that is made will use the Template with the flashing [PM] button beside it. If the Template you require is not shown, load it from the library as above.

If finished patching press; [**edit**]. The patch is automatically saved.

5.1.10 PATCHING MULTIPLE FIXTURES

Whilst editing the patch (above), to automatically patch a sequential range of Fixtures of the same type with contiguous DMX addresses, to a sequential range of Fixture Numbers, press [**<**] or [**>**] or rotate the Edit Wheel to select the DMX slot of the first Fixture. Select the Fixture Template on the **PaTPad**. Press and HOLD the [**F/A**] button of the first Fixture Number then tap the [**F/A**] button of the last Fixture Number in the sequence. All Fixtures in the selected range are automatically patched.

For example, to patch 6 Fixtures of the same type to Fixture Numbers 1 to 6 respectively and with the starting DMX address of the first Fixture set to 100, press [**<**] or [**>**] or rotate the Edit Wheel to select DMX slot 100, then press and HOLD [**F/A**] (1) and tap [**F/A**] (6). All patches for all 6 Fixtures are automatically made.

If finished patching press; [**edit**]. The patch is automatically saved.

5.1.11 PATCHING DIMMERS

Whilst editing the patch (above), to patch a conventional dimmer to a channel, press the [**PM**] button beside DIMMER.

Press [**<**] or [**>**] or rotate the Edit Wheel to select the dimmers DMX slot.

Press the [**F/A**] button of the channel number (any yellow or red F/A button). When patching dimmers, the DMX slot does not automatically increment when the patch is made. This allows you to set a patch level (below) without inadvertently patching multiple slots to the same desk channel.

If finished patching press; [**edit**]. The patch is automatically saved.

5.1.12 PATCHING MULTIPLE DIMMERS

Whilst editing the patch (above), to automatically patch a sequential range of dimmers to a sequential range of channels, press the [**PM**] button beside DIMMER then press [**<**] or [**>**] or rotate the Edit Wheel to select the DMX slot of the first dimmer. Press and HOLD the [**F/A**] button of the channel number to be patched to that dimmer then Tap the [**F/A**] button of the channel to be patched to last dimmer number in the sequence. All channels in the selected range are automatically patched to their respective dimmer.

For example, to patch a rack of 12 dimmers with a starting DMX address of 200 to channels 13 to 24 respectively, press [**<**] or [**>**] or rotate the Edit Wheel to select DMX slot 200, then press and HOLD [**F/A**] (13) and tap [**F/A**] (24).

If finished patching press; [**edit**]. The patch is automatically saved.

5.1.13 PATCHING COLOUR SCROLLERS OR FIXTURES WITH EXTERNAL DIMMERS

Colour scrollers and some brands of fixture require a separate dimmer to control their intensity. The dimmer usually has a DMX slot number that is not related to the DMX slot numbers used by the scroller or fixture.

To patch a scroller or a fixture that uses an external dimmer, edit the patch then load the template for the scroller or fixture from the library as described above.

Use the edit wheel or [**<**] or [**>**] to select the first DMX slot of the scroller or fixture.

To make the patch and give the fixture a number, press;

[**F/A**] (Fixture Number) (yellow bank).

The display scrolls the message, "Fixture needs HTP channel".

The **PaTPad** knows that this scroller or fixture needs an external dimmer because it is defined in its template. Press;

[**OK**].

Use the edit wheel or [**<**] or [**>**] to select the DMX slot of the dimmer then press;

[**OK**].

The yellow fader that was selected for the fixture number now controls the intensity of the dimmer and the **PaTPad** controls the scroller gel string or fixture parameters.

If finished patching press; [**edit**]. The patch is automatically saved.

5.1.14 SET A PROPORTIONAL PATCH LEVEL

All dimmers and the intensity attribute of any Fixture can have a proportional patch level. The LTP attributes of Fixtures are always a fixed unity patch.

When patching (above), select the DMX slot (use EDIT wheel, [**<**] or [**>**]) then hold down the FLASHING [**F/A**] button of the patched channel. The display shows the patch level. Whilst holding down the channel [**F/A**] button, rotate the EDIT to set the patch level. The level of the patch is shown on the display. With Fixtures, you can select any DMX slot for the desired Fixture, (not just the intensity attribute) as the **maXim** will automatically only adjust the intensity patch level.

5.1.15 PATCH INDICATORS

Whilst you are editing the patch, the F/A LEDs of any Fixture Numbers or dimmer channels that are patched are lit to show that they have been used.

As each DMX slot is selected with [**<**] or [**>**] or the Edit Wheel, if the DMX slot is patched, the F/A LED of its Fixture Number or dimmer channel will *flash*.

As each patch is made, the "V2 Output & Patch" video shows the Fixture Number and name, parameter names, DMX slots and DMX levels for each Fixture.

The "FIXTURES" pop up video window also shows each Fixture name beside its number as it is added to the patch.

5.1.16 REMOVING A FIXTURE

If a fixture is no longer required, it can be removed from the patch. Whilst editing the patch, select any DMX slot that is used by the Fixture to be removed.

See also “Removing a Template” below.

Press: [remove], [yes].

When finished patching press; [edit].

5.1.17 Removing a Template

If a Template is no longer required, it can be removed from the patch. If a template is removed from the patch, all patches for that type of fixture are also removed.

To remove a Template from the patch;

hold [function], tap [patch].

Press [edit].

The PaTPad shows the Templates in the patch, for example,

DIMMER	?
TRACKSPOT	?
MAC250	α
LIBRARY	?

Press; the [PM] button beside the template to be removed (it flashes).

Press; [clear] [yes] [edit].

5.1.18 Editing Fixture Names

The default name of each Fixture as shown on the video screens is defined in its Template. Hence all Fixtures of the same type have the same name. You can individually edit the name of every Fixture to make it more descriptive for your application.

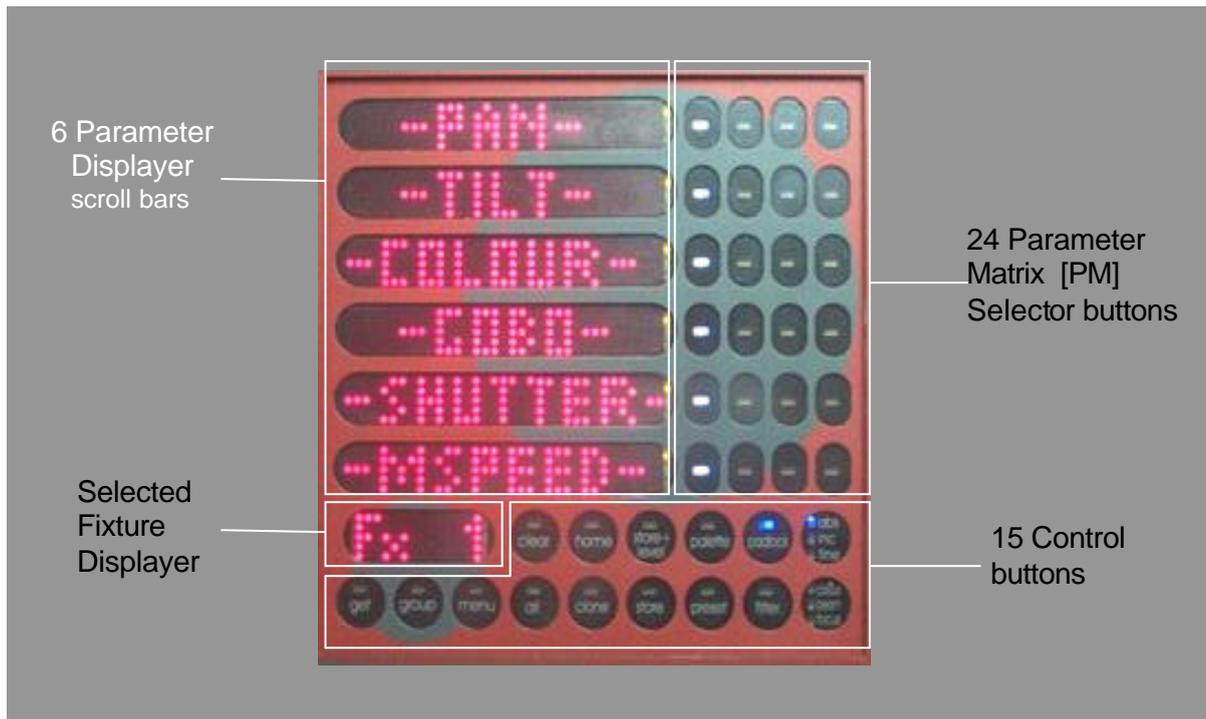
To edit a Fixture name, press and hold [function], tap [F/A] (name), a yellow bank function button. The display says “Pick Object to Name”.

Press: [F/A] (Fixture Number)

Either rotate the edit wheel or press the yellow bank [F/A] buttons for the desired characters as labelled below the buttons. Press [<] or [>] to move the cursor and press [remove] or [add] to remove or add characters or spaces.

When finished, press [OK].

5.2 PROGRAMMING



Programming with the **PaTPad** consists of the following basic steps;

- ?? Getting Fixtures onto the **PaTPad**.
- ?? Selecting the Fixture to adjust.
- ?? Adjusting parameters to get the desired look.

Then either;

- ?? **"Recording"** the entire output in a scene.

Or

- ?? Selecting the parameters of the Fixtures to be stored.
- ?? **"Storing"** only selected parameters in a scene.

Advanced programming techniques using Groups, Filters, Hi-lights, Presets, Palettes etc are described later in this manual.

The following operations assume that some Fixtures have been patched as detailed in Section 5.1.

5.2.1 LOADING FIXTURES

There are several ways to load fixtures onto the **PaTPad**.

To load a single Fixture press;

[get]

The "FIXTURES" video window pops up showing all available (patched) Fixtures.

Select a Fixture by pressing;

[F/A] (Fixture Number).

The loaded Fixture Number is shown on the Fixture Displayer. The "Pad View" video window pops up displaying a list of Fixtures loaded. The "**PaTPad Mimic**" video window lists all parameters of the selected Fixture.

To load several Fixtures, press and HOLD **[get]**, then tap;

[F/A] (Fixture Number), [F/A] (Fixture Number), etc, release [get].

To load all patched fixtures press;
[get], [all].

All of the above operations “add” the selected fixtures to the PatPad.

To clear the PatPad press;
[clear], [all].

To both clear the PaTPad and load fixtures in one operation, fade up the required Fixtures with their yellow faders (ensure the yellow master is up).

Press;
[get], [F/A] (flash Yellow master).

See Section 8 “PatPad Control Buttons” for more methods of loading fixtures.

5.2.2 SELECTING A FIXTURE

To alter the parameters of a loaded Fixture, select it by tapping either end of the Fixture Displayer. Tapping the left end selects the next lower Fixture Number. Tapping the right end selects the next higher Fixture Number. Continual taps will eventually cause the display to wrap around to the other end.

To change directly to a specific Fixture Number,
Press and HOLD the centre of the Fixture Displayer, then tap [F/A] (Fixture Number).

The Fixture Number of the currently *selected* Fixture is shown on the Fixture Displayer and also indicated on the V4 PAD VIEW video by a row of colons. ::::::::::::::
The PaTPad can now control the parameters of this Fixture.

5.2.3 ALL MODE

To select “ALL MODE“, press [ALL].

The letter A appears on the fixture displayer beside the selected fixture number and the button lights blue.

All Fixtures that are both Hi-lighted AND of the same type as the selected Fixture can be controlled simultaneously.

When multiple fixtures are loaded in the one operation, “ALL MODE“ is automatically selected.

To control **only** the currently selected fixture, turn off ALL mode by pressing [ALL].

5.2.4 CONTROLLING THE SELECTED FIXTURE

When a fixture is selected on the PaTPad, its Fixture Number is shown on the Fixture Displayer and all of its *available* parameters matrix [PM] buttons are active. Each of the 6 parameter displayers can be used to control a parameter and to display that parameter’s current settings. The parameter for each displayer is selected by the 4 [PM] buttons beside it. This allows a maximum of 24 parameters to be controlled, 4 per displayer. The number of [PM] buttons that are active and the actual parameters that each of these PM buttons selects are defined in the Fixture Template.

For example;

If a Fixture has 12 parameters, then these would typically be arranged so that each displayer can control two parameters which are selected by the first two PM buttons beside it. The

remaining two buttons would have no function and would not be lit. You can have any parameter on any button by editing the Template file for that fixture on a personal computer. The colour of the PM buttons indicates their status or function;

- ?? **Red, Green & Blue.** This parameter is **active** on the parameter displayer to its left.
- ?? **Red.** This is a **colour** parameter but it is not currently active. Pressing this PM button will select it on the parameter displayer to its left.
- ?? **Blue.** This is a **beam** parameter but it is not currently active. Pressing this PM button will select it on the parameter displayer to its left.
- ?? **Green.** This is a **focus** parameter but it is not currently active. Pressing this PM button will select it on the parameter displayer to its left.

Video 4 **PaTPad View** shows the name of every parameter. When a parameter is selected (by pressing a red, blue or green PM button) its displayer will show the **Name** of the parameter and the PM button will light red, green & blue to show that it is active.

There are three display levels of information available on the displayers for each parameter. Tapping an active *PM button* will toggle its parameter displayer between **Name** or **Value**. Tapping a *parameter displayer* that is showing a **Name** will change it to **Value**.

- ?? **Name** – Displays the name of the current parameter. e.g. “PAN” or “Colour”.
- ?? **Value** – Displays the current value of the parameter. e.g. “Pan= 109” or “Green” and allows you to alter the value by touching and scrolling the displayer.

Pressing and HOLDING a PM button will change its displayer to:

- ?? **Time** – Displays the timing information that will be recorded/stored for that parameter and allows you to alter the timing information (see below).

Tapping a PM button returns its displayer to **Name**.

There are three yellow LEDs located at the right hand end of each parameter displayer and they indicate which level of information is being displayed.

- ?? Top yellow LED = **Name**
- ?? Mid yellow LED = **Value**
- ?? Low yellow LED = **Time**

5.2.5 ADJUSTING PARAMETER VALUES

In **Value** and **Time** modes, the displayer can be used to adjust its parameter value by “mousing” the display. Use the edge of your finger to get the best response from the displayer. For fine adjustment “roll” the edge of your finger. When you have touched a displayer, the Mid (Name) or Low (Time) yellow LEDs will flash. Whilst they are flashing, the EDIT wheel can also be used to vary the value. Use the Edit wheel for very fine adjustments. If the Edit wheel is not moved for 30 seconds, the yellow LED will stop flashing and the Edit wheel will revert to scrolling the V1 or V2 video page. To manually revert to scrolling the V1 or V2 video page press [ok].

To re-connect the Edit wheel to a parameter displayer or connect it to a different displayer, simply touch the required displayer.

To connect the edit wheel to the next parameter, press [>]. To connect the edit wheel to the previous parameter, press [<].

For example, whilst adjusting pan with the edit wheel, if you press [>], the wheel will now adjust tilt. If you press [>] again, the edit wheel will connect to the next parameter such as colour. Pressing [<] connects it back to tilt.

The parameters that can be selected with the < and > buttons can be restricted by the use of filters.

For example, if no filters are selected, the < and > buttons can be used to step through all parameters of a fixture. If only pan and tilt have filters applied, then the < and > buttons are restricted to only selecting pan and tilt. This provides a rapid and error free method of quickly alternating between filtered parameters when adjusting via the edit wheel.

Different parameters can be adjusted in different ways. The way each parameter is adjusted is defined in its Fixture's Template.

- ?? The value of each parameter might be continuously variable (e.g. Pan).
- ?? It might jump between pre-defined values called *wheel stops* (e.g. Gobo 1, Gobo 2 etc).
- ?? There might be variable areas within wheel stops (e.g. gobo spin speed).

VARIABLE PARAMETER

When a parameter is continuously adjustable, the displayer will show the name of the parameter and an "equals" sign (=) followed by its value. e.g. Pan = 136.

You can use your finger or a stylus to "mouse" the displayer and hence alter the value of the parameter. If you touch anywhere on a displayer, its yellow LED flashes and the EDIT wheel can also be used to vary the value.

WHEEL STOPS

If wheel stops are available, the displayer will show the name of the current wheel stop, e.g. Gobo 1. Tapping on the left or right ends of the displayer will step the parameter through the wheel stops. e.g. Gobo 1, Gobo 2, Gobo 3, etc.

When the displayer yellow LED flashes, the EDIT wheel can also be used to step through the wheel stops.

VARIABLES WITHIN WHEEL STOPS

If the current wheel stop allows a variable range to be controlled, the displayer will show the name of the wheel stop followed by a colon then its value. e.g. Strobe : 52.

You can use your finger or a stylus to "mouse" within the *central area* of the displayer and hence alter the value of the parameter within the limits of that wheel stop.

If you touch the central area on a displayer, its yellow LED flashes and the EDIT wheel can also be used to vary the value.

Tapping either end of the displayer will step to the next wheel stop.

5.2.6 ADJUSTING PARAMETER TIMES

In Time mode (press and hold the PM button), there are 3 pages of settings available for every parameter. Tapping on the left or right ends of the displayer will step through the pages. When a page is displayed, you can alter its settings by mousing the central area of the displayer or if you touch the central area on a displayer, its yellow LED flashes and the EDIT wheel can also be used to vary the value.

The 3 pages are;

1. Mov = 0.0s.

This is the time taken for the parameter to "move" to the value that you store or record in a scene or chase step. When you playback (trigger) the scene or chase step, this parameter will take this time to move to its value in the scene or step. This is subject to the flag settings described below. The move time is adjustable from 0 seconds to over 16 minutes. You can either "mouse" the displayer, or if you touch the central area of the displayer, its yellow LED flashes and the EDIT wheel can also be used to vary the value.

See "LTP" in the Glossary for more details on when this time is triggered.

2. Dly = 0.0s.

This is the "delay" time that must expire after a scene or step is triggered before the Move time (above) starts. This is subject to the flag settings described below. The delay time is

adjustable from 0 seconds to over 16 minutes. You can either “mouse” the displayer, or if you touch the central area of the displayer, its yellow LED flashes and the EDIT wheel can also be used to vary the value.

3. Flags: - - -

When Flags:--- is displayed, tapping the centre of the displayer selects the FLAGS menu. When the FLAGS menu is selected, tapping either end of the displayer steps through the available flags. Tapping the centre of a displayer selects that flag.

The following flags are available;

As-Pan. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to No, the parameter will use its own Move and Delay settings. When set to Yes, the parameter will move *when* and in the same *move time* as set for the PAN parameter of the fixture. This flag is not available for the Pan parameter.

PanEnd. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to Yes, the parameter will snap move (zero time) at the end of the Pan movement. This flag is not available for the Pan parameter.

As-Tilt. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to No, the parameter will use its own Move and Delay settings. When set to Yes, the parameter will move *when* and in the same *move time* as set for the TILT parameter of the fixture. This flag is not available for the Pan parameter.

Tilt-End. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to Yes, the parameter will snap move (zero time) at the end of the Tilt movement. This flag is not available for the Pan parameter.

As-Chase. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to Yes, this parameter when played back as part of a CHASE, will use the crossfade setting of the chase.

The default setting for the “As-Chase” flag for Pan and tilt parameters is Yes.

This means that when you record a chase and then play it back, you can use the chase rate and crossfade controls to easily adjust the pan and tilt move times. If you want to create a complex chase where every step uses the individual parameter times, set the “As-Chase” flag to NO and set each individual parameter time for every step.

The default setting for the “As-Chase” flag for all other parameters is No.

This means that parameters such as gobos and colours will not be influenced by the crossfade settings of the chase and use the individual parameter times. Typically you would set gobo and colour wheel parameter times to zero so that they snap change on each step and use slow times for colour *mixing* parameters so that colours blend from step to step.

The Flags page shows exactly which flags (if any) have been set to yes

Flags: - - -	No Flags
Flags: - P -	As Pan
Flags: EP -	End Pan
Flags: - T -	As Tilt
Flags: - - C	As Chase

DEFAULT TIMES

If you do not set any of the parameter times, the default values will be used.

There are separate default times for Colour, Beam and Focus parameters. These are set via the “MENU” button described later in this manual.

The times and flags for every parameter of the selected fixture are shown on the “PaTPad MIMIC” video screen. If the default times are being used, ** appears below the parameter. The values of the defaults are shown at the bottom of the MIMIC window.

Note: *Homing a fixture ([home], [fixture displayer]) sets all of its parameters to their home values and sets the parameter times to their default values.*

5.2.7 SAVING SCENES

When you have adjusted the parameters of your fixtures you save the settings in scene memory.

Fixture information is saved in the same scenes that you use for conventional dimmer scenes. The red bank has 9 pages of memory and the blue bank (not available on **maXim** MP) has 9 pages of memory. Scenes, chases and stacks share the same memory within each bank.

For example, if a “bank/page/[F/A] (flash/assign) number” location has been used for a scene, then it cannot be used for a chase or stack. A chase or stack recorded in the same location would overwrite the scene. The red and blue bank memories are totally separate. Repeated presses of either [page red bank] or [page blue bank] will step through their 9 respective pages of memory.

Press and hold either [page red bank] or [page blue bank] to reveal a video pop up screen showing current memory usage for the selected bank.

See “MEMORY STRUCTURE” in the **maXim** operational manual for more details.

The **maXim** with **PaTPad** provides several ways of programming scenes into memory.

?? **RECORD SCENE**, saves the entire output of the **maXim**.

The method used by the maXim is as follows:

Each channel of the desk is checked to see if it is producing an output. If it is, its level is recorded. In addition, if the channel is controlling a fixture all parameters of the fixture are recorded. In addition, if a fixture is currently on the **PaTPad**, any time settings or effects are also recorded.

To record a scene of the entire output press;

[record scene] [page] (optional), [F/A] (scene number)

?? **STORE**, saves only selected (flashing) parameters of the Fixtures on the **PaTPad** into a scene. You can select any parameters by using Filters. You can select any Fixtures by using Hi-lights.

To store a scene of the flashing parameters press;

[store] [page] (optional), [F/A] (scene number)

?? **STORE + LEVEL** saves fixture parameters on the **PaTPad** as if the STORE button was pressed but also includes all intensity levels on the output. In addition, fixtures with an intensity above zero that are not on the **PaTPad** have **all** of their parameters stored.

To store a scene including levels press;

[store + level] [page] (optional), [F/A] (scene number)

Record is best used for the fully programmed show. What you see on stage when the scene is recorded will be reproduced when the scene is played back.

Store is best used to create building blocks for the “Ad Lib” show.

When you use the *store* method, the parameter settings of all of the Fixtures on the **PaTPad** will be saved subject to one simple rule.

Only flashing parameters will be stored.

You select parameters to flash or not flash by using Filters and Hi-lights.

?? Filters apply to parameters.

?? Hi-lights apply to entire fixtures.

If a Fixture has no Filters applied, all of its parameters will flash.

If one or more parameters are Filtered, only the Filtered parameter will flash.

If a Fixture is not Hi-lighted, none of its parameters will flash.

The one rule to remember is;

Only FLASHING parameters will be Stored.

When a Fixture is loaded onto the **PaTPad** it will automatically be Hi-lighted and it will not have any Filters so all of its parameters will be flashing. You decide which parameters on which Fixtures you want to store by selecting the appropriate Filters and/or Hi-lights.

To Filter a parameter; press **[filter] [PM]** (parameter to Filter). The parameter flashes.

To turn off a filter, press **[filter] [PM]**. (Toggle action).

To clear the hi-light of a fixture, press **[clear], [F/A]** (fixture number)

To hi-light a fixture, press **[get], [F/A]** (fixture number)

More details of how to apply Filters and Hi-lights are described later.

When you **store** a scene, only parameters that are flashing (on the **PaTPad** PM buttons and Pad View video) will be stored in the selected scene.

The **PaTPad** shows only the parameters of the currently selected Fixture.

The Pad View video shows the parameters of **all loaded Fixtures**.

Be sure to always check the "Pad View" screen before completing the store operation.

See "PROGRAMMING CONCEPTS" at the start of this manual for more information on "store" and "record".

Hint: *To store a scene containing only fixture intensities and no parameters, fade up only the fixtures to be in the scene, load them onto the PaTPad ([get], [F/A] (flash yellow master)), clear all Hi-lights ([clear], [fixture displayer]), then press [store + level], [F/A] (scene number).*

This stores the fixture levels, but as no fixtures are hi-lighted, no parameters are included.

Use this method to store scenes that act like group masters allowing you to simply fade up and down multiple fixtures with a single scene fader without affecting their parameters.

5.2.8 SAVING TIMES

Parameter times are included with the parameter information when scenes saved by both the RECORD SCENE, STORE and STORE + LEVEL methods.

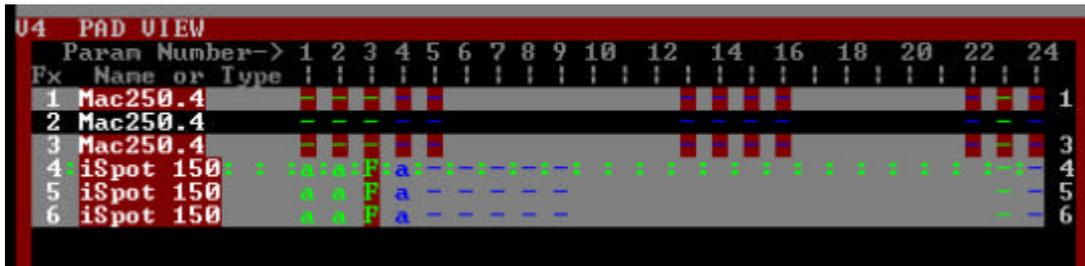
“PaTPad MIMIC” shows the times for every parameter of the fixture selected by the fixture displayer.



** indicates that the default times are being used. The defaults times for Colour (red text), Beam (blue text) and Focus (green text) are shown at the bottom of the window.

5.2.9 PAD VIEW

Video 4 (Pad View) shows a list of all Fixtures loaded on the PaTPad and shows exactly which parameters are included in your PaTPad operations



Parameters that are included will flash.

- ?? Fixtures that are not Hi-lighted have a black background.
- ?? Fixtures that are faded up on the output have a white name.
- ?? The Fixture that is currently selected on the PaTPad is indicated by a row of :::: symbols.
- ?? The 24 parameter matrix buttons are numbered across the top of the screen.
- ?? A colon (-) indicates that the parameter exists and can be selected by its [PM] button on the PaTPad.
- ?? **F** indicates that a filter has been applied.
- ?? **a** indicates that the parameter has been altered.

5.3 ADVANCED PROGRAMMING

Some of the following advanced functions have already been covered earlier in this manual. This section gives complete descriptions of these functions.

5.3.1 GROUPS

Groups provide a rapid method of loading, Hi-lighting, or cloning many Fixtures in a single operation. Groups are stored by number. The yellow [F/A] buttons select the number. The *maXim* MP, L, XL and XXL can store 24, 36, 48 or 60 group memories respectively.

STORING GROUPS

To store a Group, load the required Fixtures onto the **PaTPad**. When loaded they will automatically be Hi-lighted. Only Hi-lighted fixtures will be stored in the Group.

To store a group, press;

[store], [group], [F/A] (group number) (yellow bank)

The order in which the fixtures were loaded onto the PaTPad is stored and recalled as part of a group. The order is displayed on the right of the Video 4 “Pad View” screen. This order is used by the “Fans” menu when automatically fanning fixtures.

See “Fans” in section 8 for details.

LOADING GROUPS

To load a group of fixtures onto the **PaTPad** press;

[get], [group].

The [group] buttons lights orange and the [F/A] buttons of all yellow bank faders that have a group stored in them will flash. The “GROUP MEMORY” video window pops up displaying a list of all groups.

To load press;

[F/A] (group number)

To load several groups, press;

[get],

Press and HOLD [group], then tap;

[F/A] (group number) [F/A] (group number) [F/A] (group number), etc.

To load a range of groups, press;

[get], [group].

Press and HOLD [F/A] (first group in range), then tap [F/A] (last group in range). Both selected groups and all groups in between them are loaded.

CHANGING HI-LIGHTS USING GROUPS

Hi-lights are used to either include (Hi-light) or exclude (NO Hi-light) already loaded Fixtures from certain operations on the **PaTPad**.

See “FILTERS and HI-LIGHTS” below for more details

To ONLY Hi-light the fixtures in a group (and clear the Hi-lights of all other fixtures), press;

[group], [F/A] (group number).

NAMING GROUPS

Groups can be given a name to help identify them. For example, “FOH Scans”.

To name a group, press and hold [function], tap [F/A] (name), a yellow bank function button.

The display says “Pick Object to Name”.

Press:

[group], [F/A] (group number) (yellow bank)

Either rotate the edit wheel or press the yellow bank [F/A] buttons for the desired characters as labelled below the buttons. Press [<] or [>] to move the cursor and press [remove] or [add] to remove or add characters or spaces.

When finished, press [ok].

COPY GROUP

Groups can be copied to a different group memory number.

To copy a group, press;

[assign/copy], [group], [F/A] (source group number) (yellow bank)

The display will briefly scroll, “Pick group to copy to”.

Press;

[F/A] (destination group number) (yellow bank)

5.3.2 FILTERS AND HI-LIGHTS

Filters are a powerful tool that you can use to select exactly which parameters of a Fixture are involved in **PaTPad** operations. When a Fixture is loaded onto the **PaTPad**, it has no Filters applied (and it is Hi-lighted, see below) so all of its parameters will be included in any **store**, **preset** or **palette** operation. Filters allow you to select which *parameters* of a Fixture will be stored or altered. See “Programming Concepts” for more details on the application of Filters. Every parameter on every Fixture on the **PaTPad** can have a Filter applied to it.

If no Filters are applied to a Fixture (and it is hi-lighted), then every parameter of that Fixture will be included in any store operations or preset or palette recall.

If a Filter is applied to any parameter(s), then only those Filtered parameters will be included in any store operations or preset or palette recall.

The PM buttons *flash* for those parameters that will be *stored*.

The one rule to remember is;

Only FLASHING parameters will be INCLUDED.

For example, if only the pan and the tilt parameters are Filtered (only their parameter buttons flash), then any “store” operation will only save the pan and tilt values. Filters can be individually selected or they can be quickly applied to all colour, beam or focus parameters. Filter selections can be stored and recalled in Filter memories.

APPLY A FILTER

To apply a Filter to a parameter to all fixtures on the **PaTPad** of the same type as the selected fixture press;

[filter] (it lights orange) [PM] (parameter to filter).

When a Filter is applied to a parameter, the letter “F” flashes on the Pad View video and the parameter’s PM button flashes.

APPLY SEVERAL FILTERS

To apply filters to several parameters of all fixtures on the **PaTPad** of the same type as the selected fixture, press and HOLD [filter] for half a second to lock it on. Now press [PM] (parameter to filter), [PM] (parameter to filter), etc. Press [filter] to finish.

APPLY FILTERS AUTOMATICALLY

The [colour/beam/focus] button provides a rapid method of selecting filters. Repeated presses will cycle through the following filter selections.

Press; [colour/beam/focus], (only altered parameters are Filtered (they have the letter "a" displayed on the "PAD VIEW" screen), or if no parameters have been altered, all parameters are filtered.

press; [colour/beam/focus] (only **focus** parameters are Filtered)

press; [colour/beam/focus] (only **beam** parameters are Filtered)

press; [colour/beam/focus] (only **colour** parameters Filtered)

press; [colour/beam/focus] (**no** parameters are Filtered)

Repeated presses of [colour/beam/focus] cycle through the 5 Filter selections.

When the desired Filters are applied, press;

[filter] (it changes to blue to show that Filters are applied).

For example,

if 3 parameters have been altered, to automatically filter only these altered parameters, press;

[colour/beam/focus], [filter].

or, to filter only focus parameters, press;

[colour/beam/focus], [colour/beam/focus], [filter].

CLEARING A FILTER

To remove a Filter from a single parameter on all fixtures of the same type as the selected fixture press;

[filter], [PM] (filter to clear) (toggle action).

CLEARING ALL FILTERS

To clear all the filters from all fixtures press;

[clear], [filter].

FILTER MEMORY

Filter settings that you select can be saved in Filter memory for easy recall. Filters are stored by number. The yellow [F/A] buttons select the number. The **maXim** MP, L, XL and XXL can store 24, 36, 48 or 60 Filter memories respectively

To store your current Filter settings, press;

[store], [filter], [F/A] (filter number) (yellow bank)

To recall a filter memory, press;

[filter], [F/A] (filter number) (yellow bank)

NAMING FILTER MEMORIES

Filter memories can be given a name to help identify them.

To name a Filter memory, press and hold [function], tap [F/A] (name), a yellow bank function button.

The display says "Pick Object to Name".

Press: [filter], [F/A] (Filter number) (yellow bank).

Either rotate the edit wheel or press the yellow bank [F/A] buttons for the desired characters as labelled below the buttons. Press [<] or [>] to move the cursor and press [remove] or [add] to remove or add characters or spaces.

When finished, press [OK].

COPY FILTER

Filters can be copied to a different memory number.

To copy a Filter, press;

[assign/copy], [filter], [F/A] (source filter number) (yellow bank)

The display will briefly scroll, "Pick filter to copy to".

Press; [F/A] (Destination filter number) (yellow bank)

5.3.3 HI-LIGHTING FIXTURES

Hi-lights are a powerful tool that you can use to select which *Fixtures* on the **PaTPad** will be involved in **PaTPad** operations.

A Fixture must be Hi-lighted to be included in any store operations or preset or palette recall.

Also, when [all] mode is active on the pad, all hi-lighted fixtures of the same type as the currently selected fixture will be controlled simultaneously.

To exclude a loaded Fixture, clear its Hi-light.

When a fixture is loaded it is automatically Hi-lighted. (See "Loading Fixtures" in the "Programming" section for details.)

To CLEAR the Hi-light of a fixture press;

[clear], [F/A] (fixture number).

To clear the Hi-lights of all loaded Fixtures, press;

[clear], [Fixture Displayer] (Hilts).

To clear the Hi-lights from a range of fixtures, press;

[clear], press and HOLD [F/A] (first fixture in range), then tap [F/A] (last fixture in range).

Both selected fixtures and all fixtures in between them have their Hi-lights cleared.

To Hi-light a fixture again, press; [get], [F/A].

Groups provide a powerful method of controlling fixture Hi-lights. When you use the group button, all hi-lights are firstly cleared, then only the fixtures in the group or groups that you select are Hi-lighted.

To exclusively Hi-light a group press;

[group] [F/A] (group Number)

To exclusively Hi-light several groups;

Press and HOLD [group], then tap;

[F/A] (group Number) [F/A] (group Number) [F/A] (group Number), etc.

To exclusively Hi-light a range of groups, press [group].

Press and HOLD [F/A] (first group in range), then tap [F/A] (last group in range). Both selected groups and all groups in between them are Hi-lighted.

Hint: When you have stored some groups, load all of your patched fixtures onto the PaTPad ([get], [all]) then use the groups to quickly change the hi-lights of the fixtures that you want to control, to store, or to which you want to apply a preset or palette.

5.3.4 PRESETS

A preset is a special type of scene that can be stored and recalled from the **PaTPad** and a link to a preset can also be included in any normal scene. A preset refers to specific **Fixture Numbers** and is usually stored with only specifically Filtered parameters (for example, focus).

When a preset is loaded onto the **PaTPad**, all *Fixture Numbers* that are both stored in the preset and currently loaded on the **PaTPad**, will move to the parameter settings stored in the preset.

It is possible to prevent any parameter(s) or Fixture(s) from being affected by the preset by using Filters or Hi-lights. The rule is, if a parameter is flashing, it can be changed by the loading of a preset.

When a preset is loaded, the letter P is displayed for each affected parameter on the Pad View video screen.

If a scene is now recorded or stored (without altering any "P" parameters), then a link to that preset is included in the scene. Many scenes can include the same preset. Editing a single preset will automatically change all scenes that include that preset.

For example.

Some Fixtures are focused onto the centre rostrum on stage and their focus (position) is Filtered and stored as the *centre rostrum preset*. You now program the scenes for your show by creating each look on stage and recording each look as a scene. If the scene is to include the Fixtures on the centre rostrum, you load the Fixtures onto the **PaTPad** (if they were not already loaded) then recall the *centre rostrum preset* and then store or record the look as a scene. You might program 50 different scenes for the show and the *centre rostrum preset* might be used in 20 of those scenes. The centre rostrum is now moved down stage by 2 metres so it is no longer lit. You recall the *centre rostrum preset*, adjust the position of Fixtures to the new rostrum position and re-store the preset. All of the 20 scenes that include the *centre rostrum preset* are now fixed.

PRESET MEMORY

Presets are stored by page and number. The [Colour, Beam, Focus] button selects the page (User, Colour, Beam or Focus). The yellow [F/A] buttons select the number. The page names are simply an organisational tool. You can actually store any type of preset (colour, beam etc) in any page.

STORING A PRESET

To store a preset, Hi-light all of the Fixtures to which the preset will apply then set the parameter(s) to the value(s) to be stored. Apply Filter(s) to the parameter(s) to be stored in the preset so that they flash.

Only FLASHING parameters will be INCLUDED.

To store the preset, press;

[store], [preset], [Colour/Beam/Focus] (optional, repeated presses for the four pages)

[F/A] (preset number) (yellow bank).

The letter "P" is displayed on the Pad View screen for each parameter in the Preset.

LOADING A PRESET

If a preset is loaded onto the **PaTPad**, all Fixtures on the **PaTPad** that are also stored in the preset will move to those preset settings if there parameters are flashing (as determined by any Filters or Hi-lights that might be applied).

Only FLASHING parameters will be LOADED.

To load a preset, press;

[preset], [Colour/Beam/Focus] (repeated presses for four optional pages)

[F/A] (preset number) (yellow bank).

All fixtures on the **PaTPad** (with their required parameters flashing) that also exist in the preset will change to their preset settings and a “P” will be shown on the Pad View screen for every parameter that was affected by the preset.

***Hint:** Include all of your fixtures in every preset that you store. Then, when loading a preset, use groups to hi-light only the fixtures to be affected by the preset.*

LINKING A PRESET TO A SCENE

To link a preset to a scene, load the preset (above) then (without altering any “P” parameters), record or store a scene.

***Note:** If a new lighting “look” has been created by fading up several scenes that already contain links to presets and a new scene is now stored or recorded, then any links to presets in any of the scenes contributing to the look will be retained in the new scene.*

REMOVING A LINK TO A PRESET FROM A SCENE

To remove a link to a preset from a scene,
Clear the **PaTPad**, press,

[clear], [all].

Load the scene onto the **PaTPad**, press;

[get], [store], [page] (optional), [F/A] (scene number).

This loads the scene and selects all filtering as originally stored in the scene.

Clear the link to the preset, press;

[clear], [preset].

Use either [record] (all current output) or [store] (only flashing parameters) to save the scene back into the same memory location.

NAMING PRESETS

Presets can be given a name to help identify them.

To name a preset, press and hold [function], tap [F/A] (name), a yellow bank function button.

The display says “Pick Object to Name”.

Press; [preset], [Colour, Beam, Focus] (repeated presses for four optional pages)
[F/A] (preset number) (yellow bank).

Either rotate the edit wheel or press the yellow bank [F/A] buttons for the desired characters as labelled below the buttons. Press [<] or [>] to move the cursor and press [remove] or [add] to remove or add characters or spaces.

When finished, press [OK].

COPY PRESET

Presets can be copied to a different memory number.

To copy a preset, press;

[assign/copy], [preset], [Colour/Beam/Focus] (repeated presses for four optional pages), [F/A] (source preset number) (yellow bank).

The display will briefly scroll, “Pick preset to copy to”.

Press;

[Colour/Beam/Focus] (repeated presses for four optional pages)

[F/A] (destination preset number) (yellow bank).

5.3.5 PALETTES

A palette is a special type of scene that can be stored or recalled from the **PaTPad**. A palette refers to specific **Fixtures types** (Templates) and is usually stored with only specifically Filtered parameters (for example, colour). A palette can include more than one *type* of Fixture.

When a palette is loaded onto the **PaTPad**, all *fixture type(s) recorded in the palette* and currently loaded on the **PaTPad** will move to the parameter settings stored in the palette.

It is possible to prevent any parameter(s) or Fixture(s) from being affected by the palette by using Filters or Hi-lights. The rule is, if a parameter is flashing, it can be changed by the loading of a palette.

When a Palette is loaded, the letter E is displayed for each affected parameter on the Pad View video screen.

If a scene is now recorded or stored (without altering any “E” parameters), then a link to that palette is included in the scene. Many scenes can include the same palette. Editing a single palette will automatically change all scenes that include that palette.

For example.

One Trackspot is loaded onto the **PaTPad** and its colour parameter is altered to yellow and the colour parameter is Filtered.

One MAC2000 is loaded onto the **PaTPad** and has its Cyan, Magenta, Yellow parameters adjusted to match the yellow of the Trackspot. All Colour parameters are Filtered.

A palette is now stored and named “TS/MAC Yel”.

Each time that you recall this palette on the **PaTPad**, *all* highlighted Trackspots and MAC2000’s on the **PaTPad** go to this yellow (if their colour parameters are flashing).

If a scene is saved, a link to this palette is included.

PALETTE MEMORY

Palettes are stored by page and number. The [Colour/Beam/Focus] button selects the page (User, Colour, Beam & Focus). The yellow [F/A] buttons select the number. The page names are simply an organisational tool. You can actually store any type of palette (colour, beam etc) in any page.

STORING A PALETTE

To make a palette, clear the **PaTPad** ([clear], [all]) then get any ONE of the type of Fixture to which the palette will apply. Adjust the parameter(s) to the value(s) to be stored then apply Filters to those parameters so that they flash. If the palette is to apply to more than one type of Fixture, get the next fixture type, adjust its parameters and set its Filters as above. You only need one of each type of fixture when you store a palette.

Only FLASHING parameters will be INCLUDED.

To store the palette, press;

[store], [palette], [Colour/Beam/Focus] (optional colour, beam, focus or user page), [F/A] (palette number) (yellow bank).

The letter “E” is displayed on the Pad View screen for each parameter in the Palette.

LOADING A PALETTE

If a palette is loaded onto the **PaTPad**, all Fixtures on the **PaTPad** *that are of the same type as the Fixture(s) in the palette* will move to those palette settings if their parameters are flashing (as determined by any Filters or Hi-lights that might be applied).

Only FLASHING parameters will be LOADED.

To load a palette, press;
[palette], [Colour/Beam/Focus] (repeated presses for four optional pages)
[F/A] (palette number) (yellow bank).

All Fixtures on the **PaTPad** of the same type as the palette (with their required parameters flashing) will change to their palette settings and a “E” will be shown on the Pad View video screen for every parameter that was affected by the palette.

***Hint:** Include one of every type of your fixtures in every palette that you store. Then, when loading a palette, use groups to hi-light only the fixtures to be affected by the palette.*

LINKING A PALETTE TO A SCENE

To link a palette to a scene, load the palette (above) then (without altering any “E” parameters), record or store a scene.

***Note:** If a new lighting “look” has been established by fading up several scenes that already contain links to palettes and a new scene is now stored or recorded, then any links to palettes that exist in any of the scenes contributing to the look will be retained in the new scene.*

REMOVING A LINK TO A PALETTE FROM A SCENE

To remove a link to a palette from a scene;
Clear the **PaTPad**, press,

[clear], [all].

Load the scene onto the **PaTPad**, press;

[get], [store], [page] (optional), [F/A] (scene number).

This loads the scene and selects all filtering as originally stored in the scene.

Clear the link to the palette, press;

[clear], [palette].

Use either [record] (all current output) or [store] (only flashing parameters) to save the scene back into the same memory location.

NAMING PALETTES

Palettes can be given a name to help identify them.

To name a palette, press and hold [function], tap [F/A] (name), a yellow bank function button.

The display says “Pick Object to Name”.

Press; [palette] [Colour, Beam, Focus] (repeated presses for four optional pages)

[F/A] (palette number) (yellow bank).

Either rotate the edit wheel or press the yellow bank [F/A] buttons for the desired characters as labelled below the buttons. Press [<] or [>] to move the cursor and press [remove] or [add] to remove or add characters or spaces.

When finished, press [ok].

COPY PALETTE

Palettes can be copied to a different memory number.

To copy a palette, press;

[assign/copy], [palette], [Colour/Beam/Focus] (repeated presses for four optional pages), [F/A] (source palette number) (yellow bank).

The display will briefly scroll, “Pick palette to copy to”.

Press; [Colour/Beam/Focus] (repeated presses for four optional pages)

[F/A] (destination palette number) (yellow bank).

SAVING AND LOADING PALETTES TO DISK

To save all palettes to disk,

Press and hold [function], tap [F/A] (disk).

Press [yes], [PM] (palettes) [yes].

When saved, press [ok].

To load all palettes from disk,

Press and hold [function], tap [F/A] (disk).

Press [no], [yes], [PM] (palettes), [yes]. Existing palettes will be replaced. Continue?

Press [yes], [yes].

5.3.6 COMBINING PATPAD FUNCTIONS

If you have stored some groups, presets and palettes you can quickly create looks by using the PatPad's group Hi-lighting feature to selectively affect different groups when presets or palettes are loaded.

Remember, when you press [group], [F/A] (group number), all hi-lights are removed then only the selected group is hi-lighted.

Here is an example using some generic fixtures.

There are 10 "Scans" and 10 "Wash" fixtures. Groups of odds and evens of each type of fixture have been stored. Several preset focus's have been stored. All presets include **all fixtures**. Several colour palettes have also been stored. All palettes include **both types** of fixtures.

Load all patched fixtures onto the PatPad.

[get], [all]

All scans and washes are loaded and hi-lighted

Hi-light only "odd scans".

[group], [F/A] (odd scans)

Load "red" palette.

[palette] [F/A] (red)

Odd scans turn red.

Hi-light only "even scans".

[group], [F/A] (even scans)

Load "blue" palette.

[palette], [F/A] (red)

Even scans turn blue.

Hi-light only "odd scans" and "even scans" groups.

Hold [group], tap [F/A] (odd scans), [F/A] (even scans).

Load "drums" preset.

[preset], [F/A] (drums)

Odd and even scans move to drums, retaining their colours.

Hi-light only "even wash" group.

[group], [F/A] (even wash)

Load "cyc" preset.

[preset], [F/A] (cyc)

Even wash move to cyc

Load "blue" palette

[palette], [F/A] (blue)

Cyc turns blue.

Hi-light only “odd wash” group.

[group], [F/A] (odd wash)

Load “stage” preset.

[preset] [F/A] (stage)

Odd wash move to stage.

Load “pink” palette.

[palette], [F/A] (pink)

Odd wash turn pink.

The complete look has been created.

Record the scene.

[record scene], [F/A] (scene number).

Using the above methods, it is easy to create hundreds of combinations from just a few groups, presets and palettes.

5.3.7 CLONE

Cloning copies selected parameters of the currently selected Fixture to another Fixture or group of Fixtures. This permits fast duplication of looks onto multiple Fixtures.

To clone a Fixture, select the source Fixture on the **PaTPad** and set its parameters. If a Filter is applied then only those parameters that are Filtered are cloned.

Only FLASHING parameters will be INCLUDED.

To clone the Fixture to a single Fixture press;

[clone], [F/A] (destination Fixture Number)

To clone the Fixture to a group press;

[clone], [group], [F/A] (destination group number)

6.0 PLAYBACK

6.1 SCENES

In the previous section when you programmed your scenes, the fixture intensity was coming from the yellow fixture faders via the yellow master.

During playback, you have several choices for the control of fixture intensity.

- ?? If a scene was saved with the [record scene] button, it will contain the intensity levels. You can fade down the yellow master and fade up the red or blue masters (depending upon where you recorded the scenes). Now fade up the playbacks containing the scenes. The intensity of each Fixture will be under direct control of its scene fader.
- ?? If a scene was saved with the [store + level] button, it will also contain the intensity levels. Once again you can fade down the yellow master and fade up the red or blue masters (depending upon where you recorded the scenes). The intensity of each Fixture also will be under direct control of its scene fader.
- ?? If a scene was saved with the [store] button, it will not contain any intensity levels. You can either use the yellow fixture faders and yellow master to control fixture intensity or fade up a scene that contains the fixture intensities. To store a scene containing **only fixture intensities** and no parameters, fade up only the fixtures to be in the scene, load them onto the PatPad ([get], [F/A] (flash yellow master)), clear all Hi-lights ([clear], [fixture displayer]), then press [store + level], [F/A] (scene number). This stores the fixture levels, but no parameters are included because no fixtures were hi-lighted. You can use this method to store several scenes with different groups of fixtures in each scene.

In all of the above cases, fixtures parameters are played back on a “Latest Takes Precedence” (LTP) basis. As soon as a scene fader is raised above zero, the levels of parameters in that scene will be immediately played back (subject to their individual times). Any further movement of the scene fader will not affect the parameters. The scene fader only has control over the *intensity* of any Fixtures and dimmers that might be in the scene.

When a scene is faded down, the intensity is still under fader control but the parameters do not change. They only change when a new scene is faded up (triggered). This prevents unwanted and unexpected movement of Fixture parameters. See LTP in the glossary for more details.

The **PaTPad** can be used during playback to change Fixture parameters, but as soon a scene is triggered (fader raised above zero), that scene becomes the latest action and the scene takes control.

You can see exactly where the latest action came from for every parameter on video 1 (hold [function], tap [F/A1]).

6.1.1 PAD TRIGGER

Whenever a scene is played back, the current **PaTPad** parameter values and times are automatically saved (in a special “P-Trig” memory).

Pressing [PaTPad trigger] recalls the “P-Trig” memory to restore the previous **PaTPad** parameter values using the previous **PaTPad** parameter times. This effectively gives you an extra playback.

6.1.2 SCENE FLASH

To momentarily and instantly playback a scene, press;

[F/A] (scene fader).

When you release the flash button the fixtures return to their previous settings.

6.1.3 PADLOCK

You can prevent a parameter from moving when a scene is played back (triggered) by using the padlock function.

If [padlock] is pressed (its LED lights blue), the flashing parameters of any Fixture on the PaTPad will not respond to any playback from scenes or chases.

You determine which parameters are flashing by using Filters and/or Hi-lights.

6.1.4 PALETTE PLAYBACK (E-MOD)

If press and HOLD [palette], it will lock on.

“E-Mod” is shown on the maXim display

You can now use the yellow [F/A] buttons for live playback your palettes.

This effectively doubles the number of available playbacks.

Press [palette] again to de-select E-Mod mode.

6.1.5 PRESET PLAYBACK (P-MOD)

If press and HOLD [preset], it will lock on.

“P-Mod” is shown on the maXim display

You can now use the yellow [F/A] buttons for live playback your presets.

This effectively doubles the number of available playbacks.

Press [preset] again to de-select P-Mod mode.

6.2 CHASES

Chases are recorded and played back in the normal way as described in the MaXim operational manual.

However, if a chase has been recorded and its steps consist of “stored” scenes that contain “Filtered” parameters then is easy to vary the look of the chase whilst it is being played.

For example;

Store three scenes which contain only intensity and focus (pan and tilt) parameters by utilizing Filters to select the pan and tilt parameters and the [store + level] button to include intensity.

Record a chase where the 3 steps consist of the above scenes.

Press; [record chase], [F/A] (chase number),

[F/A] (scene number), (intensity and focus scene)

[F/A] (scene number), (intensity and focus scene)

[F/A] (scene number), (intensity and focus scene)

[record chase]

Store some more scenes that are Filtered to contain only colour parameters for the same Fixtures. Store a red scene, a blue scene and a yellow scene.

Playback the chase by fading it up.

Fade up the fader of the red, blue or yellow scenes and the chase changes to the latest colour (LTP) to be faded up from zero.

Press the [F/A] buttons of the red, blue or yellow scenes and the chase momentarily changes to the selected colour.

The same techniques can be used to change other parameters in the chase such as gobo or shutter by storing scenes that are Filtered to only contain those parameters.

6.2.1 Chase Times

The chase rate can be varied, which changes the time between steps.

The times taken for Fixture parameters to move when their step is triggered, is dependent upon the “As Chase” flags. The default settings for these flags depends upon the type of parameter.

- ?? Colour and beam parameters have their “As Chase” flag set to “No” by default. They therefore use the times that are in the scenes that make up the steps. They ignore the chase crossfade setting.
- ?? Focus parameter have their “As Chase” flag set to “Yes” by default. Their times are therefore under the control of the chase crossfade setting. This allows the speed of Fixture movement (focus) to be easily controlled without the need to edit the times in every step. If the chase is snapping from step to step, the focus parameters also snap. If the chase has a crossfade setting, the focus parameters will fade from step to step as determined by the chase rate and percentage crossfade. The crossfade is set as a percentage of the chase rate.

For example,

If the chase rate is set at 60 BPM (one step per second), then with crossfade set at 0% (that is, no fade), the chase will wait for one second, then snap to the next step. None (0%) of the available rate time will be used for crossfading.

If the crossfade is set to 50%, then the chase will perform a 0.5 second crossfade to the next step, wait for 0.5 seconds and then perform the next crossfade. That is, 50% of the Rate time is used to perform a crossfade and 50% of the Rate time is spent waiting before starting the next crossfade.

If the crossfade is set to 100%, then the Chase will use all of the Rate time performing a crossfade to the next step. When the crossfade is complete, the next crossfade will commence immediately, as 100% of the available rate time has been used by the crossfade. Hence, if the crossfade is set to 100%, the chase rate will smoothly control move time of all focus parameters of the fixtures in the chase.

By default, only the focus parameters are affected by the chase crossfade. Therefore, parameters such as gobo or colour wheels will not make slow movements from step to step. Typically they will be set to zero time so that they snap change.

If your fixtures have colour mixing features, simply set the colour parameter “As-Chase” flag to “yes” and the colour mixing will be under control of the chase crossfade.

To change the chase crossfade, press;

[select], **[F/A]** (chase number), **[function]**, **[function]**, rotate the Edit wheel.

To change the rate press **[function]** again then rotate the Edit wheel.

If the chase is faded down to zero, the chase automatically stops.

To change a parameters “As Chase” flag, see section 5.2.6 for details.

7.0 EDITING

You may **edit** a scene live or blind (faded down). If the scene is faded up on stage you will see the changes. When you edit the scene its intensity channel levels are shown on the F/A LED indicators and the contents of the **PaTPad**, will be replaced by the Fixtures from that scene.

Hint: If you are unsure about the edits you are about to perform, make a copy of the scene as a back-up ([assign/copy], [F/A] (source scene number), [F/A] (destination scene number). If the edit is unsatisfactory, copy the back-up back to the original scene number.

7.1 EDITING SCENES

To edit a scene in the current page press;

[edit], [F/A] (scene number).

To edit a scene in a different page press;

[edit], [red page] or [blue page], (repeated presses until desired page is shown),

or hold [page] tap [F/A] (page number), [F/A] (Scene number).

The contents of the **PaTPad** are replaced by the Fixtures from that scene. The filter selections (if any) that were applied when the scene was stored are also loaded. The flashing “F” symbols show exactly which parameters the scene contains.

Use the **PaTPad** in the normal way to alter any parameter settings. If you alter a parameter that did not exist in the scene, remember to turn on its Filter to ensure it is included in the scene.

To remove any unwanted parameter from the scene, turn off its Filter.

To remove any unwanted Fixture from the scene, turn off its Hi-light.

To add a Fixture to the scene, load it onto the **PaTPad** then adjust its parameters and select filters if required.

To alter the intensity (if any) of a fixture, press;

[function], [F/A] (fixture number) then rotate the edit wheel.

To alter the intensity IN fade time, press;

[function] again then rotate the edit wheel.

To alter the intensity OUT fade time, press;

[function] again then rotate the edit wheel.

When finished editing press;

[edit].

The changes are automatically saved and the **PaTPad** is cleared.

7.2 CLEARING (REMOVING) PARAMETERS FROM A SCENE

Selected parameters can be cleared (removed) from a scene, leaving the other stored parameters unaltered. This action does not set the parameter to zero, but totally removes it from the scene.

To clear a parameter(s) from a scene, select the Fixture(s) on the **PaTPad** and ensure that only Fixtures to be included are Hi-lighted. Filter the parameter(s) to be cleared so that they are the only parameters flashing then press;

[store], [clear], [page] (optional), [F/A] (scene number)

Only FLASHING parameters will be CLEARED.

7.3 EDITING PRESETS

To edit a preset, clear the **PaTPad**, press;
[clear], [all].

Load the preset onto the **PaTPad**, press;
[get], [preset], [colour/beam/focus] (optional), [F/A] (preset number).

Use the **PaTPad** to make the changes, ensuring that the desired Filters and Hi-lights are applied.

Store the preset back to the same preset number, press;
[store], [preset], [colour/beam/focus] (optional), [F/A] (same preset number).

7.4 EDITING PALETTES

To edit a palette, clear the **PaTPad**, press;
[clear], [all].

Load the palette onto the **PaTPad**, press;
[get], [palette], [colour/beam/focus] (optional), [F/A] (palette number).

Use the **PaTPad** to make the changes, ensuring that the desired Filters and Hi-lights are applied.

Store the palette back to the same palette number, press;
[store], [palette], [colour/beam/focus] (optional), [F/A] (same palette number).

7.5 DIRECT EDIT WHEEL ATTRIBUTE CONTROL

The **maXim** also provides an alternative to the **PaTPad** that allows you direct access to the attribute values of a Fixture allowing you to adjust them via the Edit Wheel with their values displayed on video 1 (Channel View).

Note: Direct Edit wheel control sets the level of an attribute, not a parameter. See the glossary for more details.

To directly control an attribute of a fixture, press;
[select], [F/A] (fixture number).

Video 1, Channel View, is automatically displayed with the selected Fixture highlighted by a **dark red background**.

The attribute to be controlled is selected with the [<] and [>] buttons below the Edit Wheel and is indicated by a dark grey background.

To alter the selected attribute, rotate the Edit Wheel.

When finished press; [select]

You can store or record the new settings as described in the “Programming” section of this manual.

8.0 PaTPad CONTROL BUTTONS



Fifteen control buttons are located at the bottom of the **PaTPad**. If you press a control button on the **PaTPad** it will light and further possible button choices will flash rapidly. To cancel a lit button, press it again. Some buttons are only active when Fixtures are loaded on the **PaTPad**.

8.1 GET BUTTON

The get button is used to load Fixtures or groups of fixtures onto the **PaTPad**. Whenever fixtures are loaded, they are automatically hi-lighted.

To load a Fixture onto the **PaTPad** press;

[get],
[F/A] (fixture number).

To load several Fixtures,
press and HOLD [get], then tap;

[F/A] (Fixture Number),
[F/A] (Fixture Number),
[F/A] (Fixture Number), etc.
Release [get].

To load a range of fixtures, press and release [get].

Press and HOLD [F/A] (first fixture in range), then tap [F/A] (last fixture in range). Both selected fixtures and all fixtures in between them are loaded.

If you press and HOLD [F/A] (**last** fixture in range), then tap [F/A] (**first** fixture in range), the fixtures are loaded in reverse order. This order is used by the FANS menu. See FANS later in this section for details.

To load only fixtures that have an intensity above zero (**and clear all other fixtures from the PaTPad**) press;

[get],
[F/A] (yellow master).

To load all patched fixtures, press;

[get],
[all].

To load a group onto the **PaTPad** press;

[get],
[group],
[F/A] (group number).

To load several groups, press [get], press and HOLD [group], then tap;
[F/A] (group number), [F/A] (group number), [F/A] (group number), etc.

To load a range of groups, press [get], [group].

Press and HOLD [F/A] (first group in range), then tap [F/A] (last group in range). Both selected groups and all groups in between them are loaded.

To load all fixtures in a selected scene including all filter selections and values in the scene, press;

[get],
[store],
[F/A] (scene number).

To load all fixtures in a selected palette including all filter selections and values in the palette, press;

[get],
[palette],
[Colour/Beam/Focus] (optional),
[F/A] (palette number).

To load all fixtures in a selected preset including all filter selections and values in the preset, press;

[get],
[preset],
[Colour/Beam/Focus] (optional),
[F/A] (preset number).

To load all fixtures in a selected filter memory including all filter selections values in the filter memory, press;

[get],
[filter],
[F/A] (filter number).

8.2 GROUP BUTTON

The group button is used to store groups of fixtures and to Hi-light groups of fixtures. It is used in conjunction with the [get] button to load groups. .

To store a group, load the required Fixtures onto the **PaTPad**. When loaded they will automatically be Hi-lighted. Only Hi-lighted Fixtures will be stored in the group. Remove the Hi-light from any Fixtures not required in the group or clear them from the **PaTPad** then press;

[store],
[group],
[F/A] (group number).

The order in which the fixtures are loaded is stored (and recalled) as part of the group. This order is used by the FANS menu.

To load a group onto the **PaTPad** see section 8.1 “GET BUTTON” above.

Hi-lights are used to either include (Hi-light) or exclude (NO Hi-light) Fixtures from certain operations on the **PaTPad**.

After fixtures have been loaded on the PatPad, the [group] button provides a rapid method of only Hi-lighting any fixtures that are in a group.

To ONLY Hi-light the fixtures in a group (and clear the Hi-lights of all other fixtures), press; [group], [F/A] (group number).

To ONLY Hi-light the fixtures in several groups (and clear the Hi-lights of all other fixtures); press and HOLD [group], then tap; [F/A] (group number), [F/A] (group number), [F/A] (group number), etc.

To ONLY Hi-light the fixtures in a range of groups (and turn off the Hi-lights of all other fixtures), press; [group].

Press and HOLD [F/A] (first group in range), then tap [F/A] (last group in range). Fixtures in both selected groups and all groups in between them are hi-lighted.

To ONLY Hi-light the fixtures that have an intensity on the output (and turn off the Hi-lights of all other fixtures), press; [group], [F/A] (flash yellow master).

Note: When a group is used to Hi-light fixtures, it also recalls the stored order of the fixtures as used by the FANS menu.

Hint: [group] affects only those fixtures currently loaded on the PatPad. Therefore, if you store a group of **all odd** fixture numbers and another group of **all even** fixture numbers you can use these groups to Hi-light any odd or any even fixtures that are currently loaded. For example, if you clear the PatPad then load the rear truss group and the front truss group, all fixtures from these two trusses will be Hi-lighted. Now press [group], [F/A] (all odd) and you have hi-lighted only the odd fixtures from these two trusses without the need to make separate odd and even groups for both trusses.

8.3 MENU BUTTON

When the menu button is pressed, the six “Fixture Displayers” and the PM buttons beside them become a general six line display/selector. Pressing the [PM] button beside a displayer selects that menu and allows you to progress into the menu system. If more than 6 choices are available in any menu, the Fixture Displayer at the bottom will show a < or > symbol. Tapping either symbol steps forward or back through the pages. In some menu choices, some of the “Fixture Displayers” become scroll bars allowing you to set values.

The top level of the menu provides the following choices. Effects and fans are only available when fixtures are loaded on the **PaTPad**.

Effects	☐
FANS	☐
Times	☐
Library	☐

8.3.1 EFFECTS

OVERVIEW

PatPad “effects” allow you to program complex pan and tilt movements of fixtures with just a few simple keystrokes. Shapes include circles, triangles, rectangles, flicks and bounces plus 4 user custom shapes. You can set the overall size, phase, spread, rate, direction, and number of cycles in an effect. You can also alter the shapes by independently altering pan and tilt sizes, start points and rates.

When a fixture is stationary, its pan and tilt have static values. Effects are achieved by adding continuously varying values to both (or either) pan and tilt. These varying values are created by waveforms. Different waveforms (such as a sine wave, a ramp or a square wave etc) cause different movements. When you select a shape from the menu (e.g. circle) the appropriate waveforms are automatically applied to the pan and tilt parameters. You can also independently set the size and rate for pan and for tilt allowing you to create variations of the basic shapes. For example, with a circle, setting the tilt size to be larger than the pan size will make an oval or setting the tilt rate to be twice the pan rate will create a “figure 8” shape.

Effects can be saved for instant recall to the current look or they can be included as part of a scene.

When a conventional scene (one without an effect) is played back, the fixture parameters are recalled and the fixture moves to those scene settings subject to any delay and/or move times in the scene. The fixture then remains stationary in that position until another scene is played back or the fixture is controlled from the PatPad.

When a scene containing an effect is played back, the fixture parameters are recalled and the fixture moves to those scene settings subject to any delay and/or move times in the scene. The fixture then moves in the shape that was programmed in the effect. It continues to move until either another scene is played back or if a set number of cycles have been programmed in the effect, it will stop when that number of cycles has been completed.

Effects consume much less memory (and programming time) than using conventional programming techniques.

For example, to program a fixture to move in a circle on the stage using conventional programming requires the following.....

- ?? Load the fixture onto the PatPad.
- ?? Filter for “Focus”
- ?? Adjust pan and tilt to position the beam to the top edge of the circle.
- ?? Store a scene of this position.
- ?? Move the beam a few degrees around the circle.
- ?? Store a scene of this position.
- ?? Continue to move and record until the circle is complete.
- ?? Depending upon the distance between steps, this will take quite some time and consume many scenes to complete the circle.
- ?? Record a chase using all of the scenes stored above as the chase steps.
- ?? Playback the chase and the beam moves in a circle.

To program a fixture to move in a circle on the stage using effects requires the following.....

- ?? Load the fixture onto the PatPad.
- ?? Position the beam to the centre of the circle.
- ?? Press [menu], [effects], [shape], [circle].
- ?? The beam moves in a circle.

If you now store a scene, the effect is saved as part of that scene. Only one scene is used. Imagine if you need to change the size of the circle.

With the circle made from a chase of multiple scenes, you have to create every step again. With effects, you simply adjust the size.

BASIC EFFECT OPERATIONS

To include a fixture when programming an effect, the fixture must be on the PatPad and Hi-lighted and it also must have some intensity on the output.

Position the beam (or beams) to the position on stage where the effect is to occur.

Press: [menu], [EFFECTS], [shape].

Press either end of the "shape" displayer to select the required shape.

The fixture(s) move in the selected shape.

Press the centre of the "size" displayer then mouse the displayer or use the edit wheel to set the size of the effect.

Press the centre of the "rate" displayer then mouse the displayer or use the edit wheel to set the rate of the effect.

More variations can be made (described below), but if you have finished adjusting the effect you now have several choices;

1. To remove the effect and exit from the effects menu without saving press [menu].
2. To exit from the effects menu but keep the effect running press "OK" on the fixture displayer. You can now use the PatPad to reposition the effect if necessary. If you store or record a scene, the effect will be included. The effect will stop (and be lost) if any scene containing the focus parameters of the fixture(s) is played back.
3. Whilst still in the EFFECTS menu, you can either;
 - ?? Press [record scene], [F/A] (scene number) to record the entire output including the effect.
 - ?? Press [store]. Two options are offered on the PatPad;

Effect ++. Stores the effect and the current parameter values (subject to filters and Hi-lights) in a scene number

Effect. Stores ONLY the effect in a scene number.

To make your selection, press the [PM] button beside either "Effect++" or "Effect". The selected button flashes.

To store, press [page] (optional), [F/A] (scene number).

Storing only the **effect** allows that effect to be applied at any time. It will be applied to the fixtures in their current position on stage. For example, if the fixtures in a "circle effect" are currently focused stationary on the drum kit, playing back the effect will cause them to circle the drummer. If they are focused on the lead singer, playing back the effect will cause them to circle the lead singer. The effect will be applied wherever they are focused.

Pressing the [F/A] button of the effect scene momentarily applies the effect.

STOPPING EFFECTS

There are several methods of stopping an effect.

To stop a running effect;

?? If in the effects menu, press [control], [stop?].

?? If not in the effects menu, either;
Load the fixtures onto the PatPad then press;
[home], [all].

?? Playback a static scene containing the fixture parameters that are in the effect.

EFFECT MENUS

Effects are programmed from the "Effects" menu. The Effects menu is only available when one or more fixtures are loaded on the PatPad. Only Hi-lighted fixtures will be influenced by an effect.

Press; [menu], [EFFECTs].

The following menu choices are available.....

SHAPE

SIZE

PHASEs

RATE

CYCLES

CONTRL

To select one of the menus press either the centre of its displayer or the [PM] button beside it. When a menu is selected, you can step through its sub-menus by pressing either end of that menu displayer. If a colon is displayed after a name, then you can mouse the displayer to vary the value. If you touch the centre of a displayer its yellow LED flashes and you can also use the EDIT wheel to vary the value. If a question mark is displayed after a word, pressing the centre of the displayer answers yes to the question. For example, the displayer reads "Start?" Pressing the displayer will start the effect.

SUB-MENUS

The following sub-menus are available under each displayer menu;

SHAPE

None

Circle

Triangle

Rectangle

Flick

P-Flick

T-Flick

Bounce

P-Bounce

T-Bounce

Shaper 1 (User defined shape)

Shaper 2 (User defined shape)

Shaper 3 (User defined shape)

Shaper 4 (User defined shape)

SIZE

Size: (overall size)

PSize: (Pan size)

TSize (Tilt size)

PHASEs

Phase: (the point in the waveform where the Pan & Tilt will start)
PPhase: (the point in the waveform where the Pan will start)
TPhase: (the point in the waveform where the Tilt will start)
Spread: (the distance between each fixture in the effect)

RATE

Rate: (Pan and Tilt Rate)
PRate: (Pan Rate)
TRate: (Tilt Rate)

CYCLEs

Last: (how many cycles until the effect stops)
First: (how many cycles before the effect starts)

CONTRL

Start? (or Stop? if effect is running)
Reverse? (or Forward? if effect is reversed)
Edge? (or Centre?. The position around which the effect occurs)
Reset (resets all effect settings to defaults)
EditShp1? (Edit User Shape 1) (or CloseShp1? when finished)
EditShp2? (Edit User Shape 2) (or CloseShp2? when finished)
EditShp3? (Edit User Shape 3) (or CloseShp3? when finished)
EditShp4? (Edit User Shape 4) (or CloseShp4? when finished)

DETAILED MENU DESCRIPTIONS

SHAPE

None

No effect is applied.

Circle

The beam moves in a circle. Adjusting the PSize or TSize (below) will make an oval.

Triangle

The beam moves in a triangle. You can change the angles of the triangle by independently adjusting PSize or TSize.

Rectangle

The beam moves in a rectangle. You can change the aspect ratio of the rectangle or make it a square by independently adjusting PSize or TSize (below).

Flick

The beam moves out at the set rate then snaps back. This affects both pan and tilt.

P-Flick

The beam pans at the set rate then snaps back.

T-Flick

The beam tilts at the set rate then snaps back.

Bounce

The beam moves out and back at the set rate. This affects both pan and tilt.

P-Bounce

The beam pans left then right at the set rate.

T-Bounce

The beam tilts up then down at the set rate.

Shaper 1

The beam moves in a shape defined by you. See below for how to create a shape.

Shaper 2, 3 and 4

As per shaper 1.

SIZE

Size:#

Overall size. This affects both pan and tilt equally. If pan or tilt is independently set to different values, no value is shown for overall size.

PSize: #

Pan Size. The range is from 0 to 100.

TSize:#

Tilt Size. The range is from 0 to 100.

Use different PSize or TSize settings to change the aspect ratio of a shape.

PHASE

Phase:#

The phase point in the waveform where the Pan & Tilt will start.

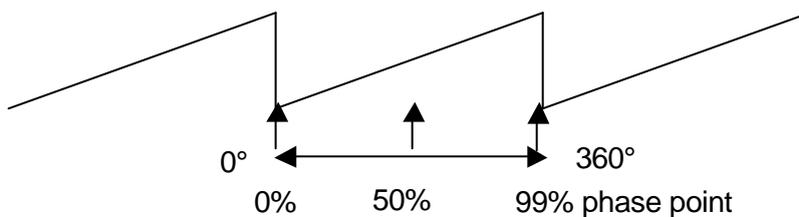
PPhase:#

The phase point in the waveform where the Pan will start.

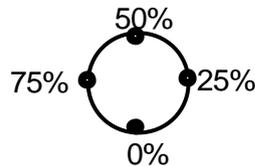
TPhase:#

The phase point in the waveform where the Tilt will start.

Effects are created by using waveforms to vary the pan and tilt values. The waveform continuously varies through 360 degrees. You can set the phase of the starting point of an effect to be at any point through the 360 degrees of the waveform. This is displayed as 0 – 99% on the displayer.



For example, a circle is chosen and set to “edge”.



Phase points around the shape are shown.

- ?? If “Phase” is set to 0%, the circle begins at the 0% point in the cycle and hence the circle moves upstage from the pan and tilt position.
- ?? If “Phase” is set to 25%, the circle begins at the 25% point in the cycle. Hence the circle is to the left.
- ?? If “Phase” is set to 50%, the circle begins at the 50% point in the cycle. Hence the circle is downstage.
- ?? If “Phase” is set to 75%, the circle begins at the 75% point in the cycle. Hence the circle is to the right.

You can skew these effects by independently starting pan and tilt at different phase angles of the waveform by using different PPhase and TPhase settings.

Spread

If multiple fixtures are in the effect, by default they all move together. Spread allows you to spread the fixtures around the effect.

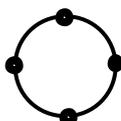
For example; there are four fixtures moving in a circle.



When spread is set to 0, the moving beams are all focused on the same point as they move around the circle.



With spread set to 25%, the moving beams are spread around one quarter of the circle.



With spread set to 99%, the moving beam are evenly spread around entire circle.

RATE

Rate:#

The overall Pan and Tilt Rate of an effect can be varied from 0.1 seconds per cycle down to 59 seconds per cycle.

PRate:#

Pan Rate

TRate:#

Tilt Rate

Use different PRate or TRate settings to change the shape of an effect. For example, selecting bounce and setting TRate to 0.5sec and PRate to 3sec will make the beam follow a sine wave pattern across the stage.

CYCLEs

Last:#

This sets how many cycles of the effect oscillator will run until the effect stops. The count starts when a scene containing an effect is played back. The default is FL (FULL) meaning that the effect is continuous.

First:#

This sets how many cycles of the effect oscillator will run until the effect starts. The count starts when a scene containing an effect is played back. The default is 1 meaning that the effect starts immediately.

CONTRL

Start? (or Stop?)

Used to start or stop an effect.

Tap the centre of the displayer to select.

If the effect is running, the displayer will read "Stop?"

If the effect is Stopped, the displayer will read "Start?"

Reverse? (or Forward?)

Used to change the direction of an effect.

Tap the centre of the displayer to select.

If the effect is running forward, the displayer will read "Reverse?"

If the effect is running reverse, the displayer will read "Forward?"

Edge? (or centre?)

Tap the centre of the displayer to select.

If “Edge” is active, the displayer will read “Centre?”

“Edge”. The effect passes through the current pan and tilt position.

If “Centre” is active, the displayer will read “Edge?”

“Centre”. The effect is centered around the current pan and tilt position.

For example, if a circle shape is selected.

If “centre” is selected, the beam scribes a circle whose centre is the current pan and tilt position.

If edge is selected, the beam leaves the current pan and tilt position, scribes a circle and returns to the same position.

When “edge” is selected you can set the position of the effect (left, right, front, back) relative to the current beam position. See “Phase” above for details.

Reset

Resets all effect settings to default home values.

EditShp1? (or CloseShp1? when finished)

EditShp2? (or CloseShp2? when finished)

EditShp3? (or CloseShp3? when finished)

EditShp4? (or CloseShp4? when finished)

Effects use waveforms to create the shapes that you see on stage. You can create 4 different custom shapes that can then be selected from the “Shape” menu.

To create a custom shape, firstly reset to defaults to ensure that the effect is running continuously.

Press [menu], [effects], [control] then use the ends of the displayer to select [reset?].

Press [reset?].

Select one of the 4 shaper waveforms as the current shape.

Press [shape], then use the ends of the displayer to select [shaper1].

This lets you see the shape running live as you create it.

To edit this shape, press

[control], then use the ends of the displayer to select [editShp1?]. Press [editShp1?].

Yellow faders 1 through 24 are used to form the shape of the **pan** waveform.

Red faders 1 through 24 are used to form the shape of the **tilt** waveform.

When a fader is in its mid position it has no effect. When it is set above or below its mid position it affects the parameter by a corresponding amount.

Set Yellow faders 1 to 24 to mid position. The pan parameters will now be stationary.

Set red faders 1 to 24 to mid position. The tilt parameters will now be stationary.

Adjust the faders into any shape of your choice. The fixtures respond in real time to the shapes that you create on the faders. You can make smooth changes by only having small variations between adjacent faders or you can make sudden movements by having large variations.

To save the shape that you have created press;

[closeShp1].

This shape is now available whenever you select [shaper1] from the shape menu.

Create other shapes in the other shapers in a similar manner.

If you edit a custom shape, any stored effect that uses that shape will be affected. However, as with any other shape, you can store many variations of a custom shape by using different settings of size, rate, phase etc.

COPYING EFFECTS TO OTHER FIXTURES

You can copy an effect that is running on a fixture to other fixtures of the same type.

Hi-light a fixture then select an effect from the effects menu and press [OK].

Hi-light the source and destination fixtures.

Use the fixture displayer on the PatPad to select the source fixture.

Press [menu], [effects].

The effect on the selected fixture is copied to all of the other hi-lighted fixtures of the same type.

8.3.2 FANS

OVERVIEW

When you are controlling multiple fixtures on the PatPad you have the ability to manually make a fan (or spread) of settings across fixtures so that you get a symmetrical look.

Typically you might individually adjust the pan parameters so that each fixture is focused on a common point or you might spread the fixtures out in a diverging pattern. Every fixture has to be individually adjusted which can be very time consuming.

PatPad FANS automate this process by evenly spreading the parameter values to give you symmetrical looks at a touch of the PatPad. You typically position all of your fixtures at a starting point, usually via the [home], [all] command, but it could be by playing back a scene that sends the fixtures to a known position.

Press [menu], [fans] and instantly start to create stunning looks.

You can individually fan the positions of pan and tilt. Fans can be symmetrical from the middle outwards or can start from either end.

The order in which the fixtures are loaded onto the PatPad is used for the fanning order. You can save the fanning order as a group for later use.

The fanning value can be adjusted in the positive or negative direction to give diverging or converging results.

When you achieve the desired look, save the look as either a scene or a preset.

FANS can also be used to quickly spread the move and delay times of fixtures. Scenes recorded with fanned times can give you stunning movement effects when they are played back especially when fanned delay times are used.

Fans can be combined with effects to quickly create amazing visual effects that would take hours to program manually.

FAN FUNCTIONS

Fans can only be selected when there are 2 or more high-lighted fixtures of the same type on the PatPad. If you try to fan a single fixture then the message "ERR" (error) is shown on the fixture displayer. Press [menu] to cancel.

To create a fan, load the fixtures to be fanned onto the PatPad. If the fixtures exist in a group you can load the group.

Hint: To avoid confusion when fanning, clear the PatPad ([clear], [all]) before loading the fixtures to be fanned.

To select fans, press [menu], [FANS].

The following functions are available;

- F-Pan Position (Fan Pan Position)
- F-Tilt Position (Fan Tilt Position)
- F-Pan Mov (Fan Pan Move Time)
- F-Tilt Mov (Fan Tilt Move Time)
- F-Pan Dly (Fan Pan Delay Time)
- F-Tilt Dly (Fan Tilt Delay Time)

To select a function press its displayer or the [PM] button beside it.

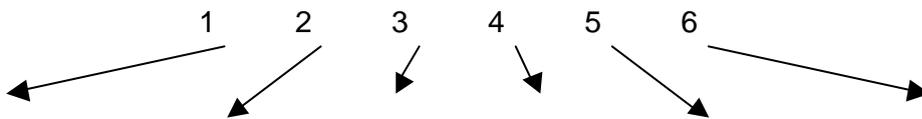
There are three options for each of the above functions. Press either end of each displayer to step through the options;

- mid (fan from middle)
- lo2hi (fan from low number to high number)
- hi2lo (fan from high number to low number)

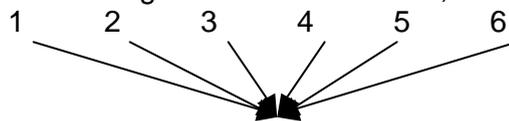
To create a fan, touch the centre of the required displayer and “mouse” the value. After you have touched a displayer, its yellow LED will flash and you can use the edit wheel to change the value.

A window pops up on Video 4, PAD VIEW showing you the parameter number that is being fanned and also the parameter value, move time or delay time for every fixture that is being fanned.

The fan can be either positive or negative. Negative values reverse the effect. For example, a positive pan fan spreads the beams like this;

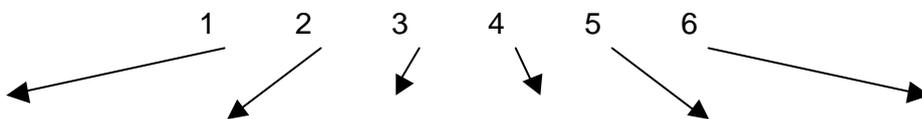


A negative pan fan looks converges the beams like this;

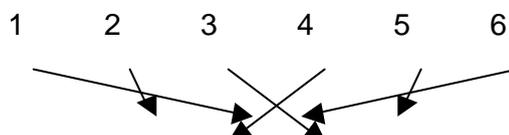


The actual order of the fixtures that is used when fanning via each of these three options is determined by the order in which the fixtures are loaded onto the PatPad. The fanning order is shown on the right hand side of the PAD VIEW (video 4) screen.

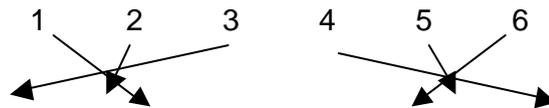
Therefore if you have 6 fixtures and load them in the order 1, 2, 3, 4, 5, 6 and then fan the pan from the middle you get a symmetrical look.



However, if you load them in order 6, 4, 5, 2, 3, 1 and again fan the pan from the middle you get a different look.



Or if you load them in order 3, 6, 2, 5, 1, 4 and fan the pan from the middle you get another look.



The order in which you load the fixtures can be saved as group.

[store], [group], [F/A] (group number).

When the group is loaded on the PatPad, the stored order is recalled.

You can use either

[get], [group], [F/A] (group number), or

[group], [F/A] (group number)

to load the order.

When you fan pan and tilt you see the results on stage.

When you fan move and delay times, you must move the fixtures from a different (starting) focus position to the current focus position to see the times executed. To do this, playback the scene that sends the fixtures to their starting position then press the [PatPad trigger] button. This moves the fixtures to their PatPad positions using the PatPad (fanned) times.

When fanning times, the number shown in the displayer is only an indication of the amount of fan that has been applied. You can see the actual time values on the video screen (Video 4 PAD VIEW) as you adjust the fan.

When you have made your fan, the fixture displayer reads "OK" and the [store] button flashes.

You now have three choices;

- ?? To remove the fan and exit from the fan menu press [menu].
- ?? To keep the fanned values and exit from the fan menu press "OK" on the fixture displayer. You can now use the PatPad to make other adjustments if necessary. The fan will be lost if any scene containing the focus parameters of the fixtures is played back.
- ?? To keep the fanned values, save it in a scene or a preset.
The usual methods of saving are available.
 - ?? To record the entire output press [record scene], [F/A] (scene number).
 - ?? To store only flashing parameters, press [store], [F/A] (scene number).
 - ?? To store a preset of only flashing parameters, press [store], [preset], [colour/beam/focus] (optional), [F/A] (preset number).

If you create a fan and then exit the fan menu via the OK button, the fanned values are entered into their fixtures parameters and you have created a look. If you select the fan menu again, you start to fan the current look (which is already fanned). Therefore all fan values (on the PatPad) will be back to zero as you are yet to begin fanning this look.

8.3.3 TIMES

This menu allows you to set the default times that will be used if you have not set individual parameter times on the PatPad. Separate default times can be set for Colour, Beam and Focus parameters.

To set a default time, press;

[menu] [Times]

The menu offers the following choices;

[colour]

[beam]

[focus]

[clear]

Selecting either colour, beam or focus will reveal 3 pages of settings. Tapping on the left or right ends of the displayer will step through the pages. When a page is displayed, you can alter its settings by mousing the central area of the displayer or if you touch the central area on a displayer, its yellow LED flashes and the EDIT wheel can also be used to vary the value.

The 3 pages are;

1. Mov = 0.0s.

This is the time taken for the parameter to “move” to the value that you store or record in a scene or chase step. When you playback (trigger) the scene or chase step, this parameter will take this time to move to its value in that scene or step. This is subject to the flag settings described below. The move time is adjustable from 0 seconds to over 16 minutes. You can either “mouse” the displayer, or if you touch the central area of the displayer, its yellow LED flashes and the EDIT wheel can also be used to vary the value. See LTP in the Glossary for more details on when this time is triggered.

2. Dly = 0.0s.

This is the “delay” time that must expire after a scene or step is triggered before the Move time (above) starts. This is subject to the flag settings described below. The delay time is adjustable from 0 seconds to over 16 minutes. You can either “mouse” the displayer, or if you touch the central area of the displayer, its yellow LED flashes and the EDIT wheel can also be used to vary the value.

3. Flags:- - -

Tapping the centre of the displayer selects the FLAGS menu. When the FLAGS menu is selected, tapping either end of the displayer steps through the available flags. Tapping the centre of a displayer selects that flag.

The following flags are available;

As-Pan. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to No, the parameter will use its own Move and Delay settings. When set to Yes, the parameter will move *when* and in the same *move time* as set for the PAN parameter of the fixture. This flag is not available for the Pan parameter.

PanEnd. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to Yes, the parameter will snap move (zero time) at the end of the Pan movement. This flag is not available for the Pan parameter.

As-Tilt. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to No, the parameter will use its own Move and Delay settings. When set to Yes, the parameter will move *when* and in the same *move time* as set for the TILT parameter of the fixture. This flag is not available for the Pan parameter.

Tilt-End. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to Yes, the parameter will snap move (zero time) at the end of the Tilt movement. This flag is not available for the Pan parameter.

As-Chase. Tapping the centre of the displayer toggles between N (No) or Y (Yes). When set to Yes, this parameter when played back as part of a CHASE, will use the crossfade setting of the chase.

The default setting for the “As-Chase” flag for Pan and tilt parameters is Yes. This means that when you record a chase and then play it back, you can use the chase rate and crossfade controls to easily adjust the pan and tilt move times. If you want to create a complex chase where every step uses the individual parameter times, set the “As-Chase” flag to NO.

The default setting for the “As-Chase” flag for all other parameters is No. This means that parameters such as gobos and colours will not be influenced by the crossfade settings of the chase. Typically you would set gobo times to zero and use slow times for colour mixing parameters.

The Flags page shows exactly which flags (if any) have been set to yes.

Flags: - - - **No Flags**
 Flags: - P - **As Pan**
 Flags: EP - **End Pan**
 Flags: - T - **As Tilt**
 Flags: ET - **End Tilt**
 Flags: - - C **As Chase**

Selecting [clear] will restore the factory default times.

When finished press; [menu]

Hint; If you have many scenes to program and they will all be using the same time values, you can set these values as the default times and so save valuable programming time. . When multiple fixtures are on the PatPad it is far quicker to set the default times for all rather than set the individual parameter times of every fixture.

8.3.4 LIBRARY

The library is used for adding (from disk) and storing (in non-volatile memory) up to 64 Fixture Templates. Templates are organized in the library by manufacturer and model.

To access the library press;

[menu], [library].

The menu offers the following choices;

[add]
 [remove]
 [view]
 [Cpy to Disk]

VEIWING FIXTURE LIBRARY

To view the current contents of the Fixture library press;

[view]

The **PaTPad** shows a list of Fixture manufacturers. If more than 6 manufacturers are loaded in the library, press the “>” or “<” symbol on the Fixture Displayer to change pages. Press the button beside the required manufacturer’s name. The **PaTPad** shows a list of model names (Templates) from that manufacturer. If more than 6 Templates for that manufacturer are loaded in the library, press the “>” or “<” symbol on the Fixture Displayer to change pages.

When finished viewing press; **[menu]**.
or to remain in the library menu press; **[ok]** (below edit wheel).

ADDING A TEMPLATE

If a required Template is not in the library, templates for most popular models of Fixtures can be downloaded from www.lscighting.com.au/templates. Refer to Section 10 further instructions on how to write your own Templates using a text editor program on a personal computer, or visit the LSC website for instructions.

Save the Template onto a floppy disk. Insert the floppy disk into the **maXim** disk drive then press;

[menu], **[library]**, **[add]**.

The **PaTPad** shows a list of Template files contained on the disk. If more than 6 are on the disk, press the “>” or “<” symbol on the Fixture Displayer to change pages.

To add a Template, press the **[PM]** button beside the name of the Template.

ADDING ALL TEMPLATES

If the floppy disc contains many Templates they can all be added to the library in a single operation. Press;

[menu], **[library]**, **[add]**, **[all]**, **[yes]**.

REMOVING A TEMPLATE

To remove a Fixture Template from the library press;

[menu], **[library]**, **[remove]**.

The **PaTPad** shows a list of Fixture manufacturers. If more than 6 manufacturers are loaded in the library, press the “>” or “<” symbol on the Fixture Displayer to change pages. Press the button beside the required manufacturer's name. The **PaTPad** shows a list of Templates names (model) from that manufacturer. If more than 6 Templates for that manufacturer are loaded in the library, press the “>” or “<” symbol on the Fixture Displayer to change pages.

To remove a Template, press the **[PM]** button beside the name of the Template.

REMOVING ALL TEMPLATES

To remove all fixture templates from the library press;

[menu], **[library]**, **[remove]**, **[all]**, **[yes]**.

COPY TEMPLATE TO DISK

Templates can be copied to disk so that they can be archived or edited.

To copy a fixture template from the library to a floppy disk, insert a formatted disk in the drive then press;

[menu], **[library]**, **[Copy to Dsk]**.

Select the manufacturer then the model as described above.

8.4 CLEAR BUTTON

The clear button has multiple functions.

8.4.1 CLEARING FIXTURES

To clear ALL Fixtures from the **PaTPad** press;

[clear], **[all]**.

8.4.2 CLEARING FILTERS

To clear all filters on all loaded Fixtures press;

[clear], [filter].

8.4.3 CLEARING HI-LIGHTS FROM FIXTURES

To clear a Hi-light from a fixture press;

[clear], [F/A] (fixture to de-highlight).

To clear the Hi-lights from a range of fixtures, press;

[clear].

Press and HOLD [F/A] (first fixture in range), then tap [F/A] (last fixture in range). Both selected fixtures and all fixtures in between them have their hi-lights cleared.

To clear the Hi-lights from ALL fixtures on the **PatPad** press;

[clear], [fixture displayer].

8.4.4 CLEARING HI-LIGHTS FROM GROUPS

To clear the Hi-lights from a group press;

[clear], [group], [F/A] (group to de-highlight).

To clear the Hi-lights from a range of groups, press;

[clear], [group].

Press and HOLD [F/A] (first group in range), then tap [F/A] (last group in range). Both selected groups and all groups in between them have their hi-lights cleared.

8.4.5 CLEARING LINKS TO PRESETS FROM THE PATPAD

If a parameter has a link to a Preset, the letter “P” will be displayed on video 4 “Pad View”.

To clear a parameters link to a Preset, press;

[clear], [preset].

Only flashing parameters will have their links to Presets cleared . You can select any parameters by using Filters. You can select any Fixtures by using Hi-lights.

8.4.6 CLEARING LINKS TO PALETTES FROM THE PATPAD

If a parameter has a link to a Palette, the letter “P” will be displayed on video 4 “Pad View”.

To clear a parameters link to a Palette, press;

[clear], [palette].

Only flashing parameters will have their links to Palettes cleared . You can select any parameters by using Filters. You can select any Fixtures by using Hi-lights.

8.4.7 CLEARING PARAMETER DISPLAYERS.

To restore all parameter displayers to the *names* of the parameters that they control press;

[clear], [clear].

8.5 ALL BUTTON

The [all] button can be used in two different ways;

8.5.1 ALL MODE

Pressing [all] places the **PaTPad** in ALL MODE. The “all” button lights blue, the fixture displayer has the letter “A” before the fixture number and the video screen V4 “Pad View” reads;

“The ALL MODE is now active on the Pad.”

In ALL mode, all Fixtures that are both Hi-lighted AND of the same type as the currently selected Fixture can be controlled simultaneously. As soon as you touch a parameter displayer to alter its value, that same parameter on all other Hi-lighted Fixtures of the same type will immediately change to match and then follow any changes on the selected Fixture.

“All mode” is automatically selected when multiple fixtures are simultaneously loaded onto the **PaTPad**.

Hint: Use All mode to quickly select the same colour or gobo etc on all Fixtures of the same type. Use Hi-lights to select which fixtures are affected by ALL mode.

8.5.2 ALL COMMAND

The **[all]** button can be used as part of a command. It will flash whenever it is available as part of a command.

For example;

To load all patched fixtures onto the **PaTPad** press;

[get], [all].

To set all Fixtures on the **PaTPad** to their home positions, press;

[home], [all].

8.6 HOME BUTTON

You can send a Fixture to its “home” position as defined in its Template. This can be useful if you cannot see a Fixture's beam and you want to check or alter its parameters. Typically the home position will be an open white beam with pan and tilt in their mid positions. Homing a fixture resets all of its parameter times to their default values. You can edit Templates on a Personal Computer to make your own “home” settings. Refer to “Creating Templates” section.

To send a Fixture to its home position, select the Fixture on the Fixture Displayer then press; **[home], [fixture displayer]**.

To *momentarily* send a Fixture to its home position, press;

[home], [F/A] (Fixture Number).

When a **[F/A]** key is released, the Fixture returns to its previous settings.

Multiple Fixture **[F/A]** keys can be pressed at the same time.

Pressing **[F/A]** also flashes the intensity (as set by the “flash level” knob). If the flash mode is set to “solo”, all other fixtures are blacked out. This can be very useful when trying to check that a fixture is working.

When finished, press **[home]** again to de-select it.

To send *filtered* (flashing) parameters to their home positions, press;

[home], [filter].

Only FLASHING parameters will be homed.

To send ALL Fixtures on the **PaTPad** to their home positions, press;

[home], [all].

To send ALL *patched* Fixtures to their home positions, clear the **PaTPad**

[clear], [all], then press; **[home], [all]**.

To send ALL Fixtures that have some *intensity* level on the output to their home positions, press;

[home], [F/A] (flash yellow master).

8.7 CLONE BUTTON

Cloning copies parameters of the currently selected Fixture to another Fixture or group of Fixtures of the same type. This permits fast duplication of looks onto multiple Fixtures.

To clone a Fixture, select the source Fixture on the **PaTPad** and set its parameters. If Filters are applied then only those parameters that are Filtered are cloned.

Only FLASHING parameters will be cloned.

To clone the Fixture to a single Fixture press;
[clone], [F/A] (destination Fixture Number).

To clone the Fixture to a group press;
[clone], [group], [F/A] (group number).

8.8 STORE BUTTON

Store saves selected parameter values and times into a scene, preset or palette.

8.8.1 STORING SCENES

To store a scene, create the look that you require using the **PaTPad** controls then use Filters and Hi-lights to select the parameters to store (they flash) then press;

[store], [page] (optional), [F/A] (scene number).

Only FLASHING parameters will be STORED.

When you store a scene, the previous contents of that scene (if any) will be overwritten. Store does not save any intensity information, only (selected) parameter values and times.

8.8.2 CLEARING (REMOVING) PARAMETERS FROM A SCENE

Selected parameters can be cleared (removed) from a scene, leaving the other stored parameters unaltered. This action does not set the parameter to zero, but totally removes it from the scene.

To clear a parameter(s) from a scene, Filter the parameter(s) to be cleared so that they are the only parameters flashing then press;

[store], [clear], [page] (optional), [F/A] (scene number).

Only FLASHING parameters will be CLEARED.

The store button is also used for storing of Presets, Palettes, Filters and Groups, which are described in their relevant sections.

8.9 STORE + LEVEL BUTTON

The [store + level] button works in exactly the same way with the same rules as the [store] button (above) with **one addition**. It also stores all **intensity** levels (HTP) of all Fixtures and conventional dimmer channels that have a level above zero on the output when the [F/A] (scene number) is pressed.

8.10 PALETTE BUTTON

A palette is a special type of scene that can be stored or recalled from the **PaTPad** and a link to a palette can also be included in any normal scene. A palette refers to specific **Fixture types** (Templates) and is usually stored with only specifically Filtered parameters (for example, colour).

If a palette is recalled onto the **PaTPad**, all Fixtures on the **PaTPad** of the type(s) recorded in the palette will move to those palette settings subject to any Filters or Hi-lights. The letter “E” appears on Video 4 “Pad View” for any parameter whose value has come from a Palette. See “PALETTE” in the “Advanced Programming” and “Glossary” for more details.

8.10.1 STORE A PALETTE

To create a palette, clear the **PaTPad** ([clear] [all]) then get any one of the type of Fixture to which the palette will apply. Adjust the parameter(s) to the value(s) to be stored then apply Filters to those parameters. If the palette is to apply to more than one type of Fixture, get one of each type of Fixture and adjust its parameters and set their Filters as described above.

Only FLASHING parameters will be INCLUDED.

To store the palette, press;

[store], [palette], [Colour/Beam/Focus] (optional colour, beam, focus or user page), [F/A] (palette number) (yellow bank).

8.10.2 LOAD A PALETTE

If a palette is loaded onto the **PaTPad**, all Fixtures on the **PaTPad** of the type(s) stored in the palette will move to those palette settings if those parameters are flashing (subject to any Filters or Hi-lights that might be applied).

If the parameter FLASHES it will be LOADED

To load a palette, press;

[palette], [Colour/Beam/Focus] (optional colour, beam, focus or user page), [F/A] (palette number) (yellow bank).

A palette is an excellent tool for setting all Fixtures of the same type to the same colour or gobo.

8.10.3 STORE A LINK TO A PALETTE IN A SCENE

When you are creating a look on stage that is to be stored or recorded as a scene and you want to include a link to a palette in the scene, first establish the basic look then load the palette(s) onto the **PaTPad**. The letter “E” appears on Video 4 “Pad View” for any parameter whose value has come from a Palette. Without altering any “E” parameters on the **PaTPad**, record or store the scene. A link to the palette(s) will now be included in the scene. When the scene is played back, it will use parameter settings from the palette.

8.10.4 PALETTE PLAYBACK (E-MOD)

If press and HOLD [palette], it will lock on.

“E-Mod” is shown on the maXim display

You can now use the yellow [F/A] buttons for live playback your palettes.

Press [palette] again to de-select E-Mod mode.

8.11 PRESET BUTTON

A preset is a special type of scene that can be stored and recalled from the **PaTPad** and a link to a preset can also be included in any normal scene. See “PRESET” in “Advanced Programming” and “Glossary” for more details. A preset refers to specific **Fixture numbers**.

If a preset is recalled onto the **PaTPad**, all Fixture numbers on the **PaTPad** of the same numbers recorded in the preset will move to those preset settings subject to any Filters or Hi-lights. The letter “P” appears on Video 4 “Pad View” for any parameter whose value has

come from a preset. See “PRESET” in the “Advanced Programming” and “Glossary” for more details.

8.11.1 STORE A PRESET

A preset refers to specific **Fixture Numbers** and is usually stored with only specifically Filtered parameters (for example, focus). To make a preset, create the look using the required Fixtures then apply Filters to the parameters that are to be stored.

Only FLASHING parameters will be INCLUDED.

To store the preset, press;

[store] [preset], [Colour, Beam, Focus] (optional colour, beam, focus or user page), [F/A] (preset number) (yellow bank).

8.11.2 LOAD A PRESET

If a preset is loaded onto the **PaTPad**, all Fixtures on the **PaTPad** *that are also stored in the preset* will move to those preset settings if those parameters are currently flashing (as determined by any Filters or Hi-lights that might be applied).

If the parameter FLASHES it will be LOADED

To load a preset, press;

[preset], [Colour, Beam, Focus] (optional colour, beam, focus or user page), [F/A] (preset number) (yellow bank).

8.11.3 STORE A LINK TO A PRESET IN A SCENE

When you are creating a look on stage that is to be stored or recorded as a scene and you want to include links to any presets in the scene, first establish the look then load the preset(s) onto the **PaTPad**. The letter “P” appears on Video 4 “Pad View” for any parameter whose value has come from a Preset. Without altering any “P” parameters on the **PaTPad**, record or store the scene. A link to the preset(s) is included in the scene. When the scene is played back, it will use parameter settings from the preset.

8.10.4 PRESET PLAYBACK (P-MOD)

If press and HOLD [preset], it will lock on.

“P-Mod” is shown on the maXim display

You can now use the yellow [F/A] buttons for live playback your presets.

Press [preset] again to de-select P-Mod mode.

8.12 PADLOCK BUTTON

To turn on padlock, press; [padlock].

When PadLock is turned on (its LED lights blue), the flashing parameters of any Fixture on the **PaTPad** will not respond to any playback from scenes or chases. You determine which parameters are flashing by using Filters and/or Hi-lights.

To turn off padlock, press; [padlock] again.

8.13 FILTER BUTTON

Filters are a powerful tool that you can use to select exactly which **parameters** of a Fixture are involved in most **PaTPad** operations.

If no filters are applied, all parameters are included (subject to Hi-lights). When you apply a filter, only the filtered parameters are included (subject to Hi-lights).

To apply a filter to a parameter, select the Fixture using the Fixture Displayer then press; **[filter]** (it lights orange), **[PM]** (parameter to Filter).
All fixtures of the selected type will have a filter applied to that parameter.

When a Filter is applied to a parameter, a “F” appears on the Pad View video and the parameter’s PM button flashes. If any Filters have been applied to any Fixtures on the **PaTPad**, the Filter buttons lights blue.

To remove a filter from a parameter, select the Fixture using the Fixture Displayer then press; **[filter]** (it lights orange), **[PM]** (flashing parameter).
All fixtures of the selected type will have that parameter filter removed.

To apply filters to several parameters, select the Fixture using the Fixture Displayer then press and HOLD **[filter]** for ½ a second. This locks the filter button on. Now press the **[PM]** buttons of any parameter to Filter. When a filter is selected, the **[PM]** button flashes. Pressing a flashing **[PM]** buttons removes its filter (toggle action). To finish, press; **[filter]**

Filters can also be applied to groups of parameters (colour/beam/focus as described below) or your Filter settings can be stored and recalled from memory. See “FILTERS” in “Advanced Programming” and “Glossary” for details.

8.14 ABS/INC/FINE BUTTON. “PaTPad TRIGGER”

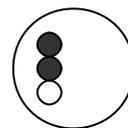
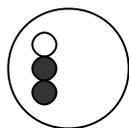
This button is now the “**PaTPad** trigger” button.

Whenever a scene is played back, the current **PaTPad** parameter values and times are automatically saved in a special memory called “P-Trig”.

Pressing **[PaTPad trigger]** recalls the “P-Trig” memory to restore the previous **PaTPad** parameter values. They change to these values using the previous **PaTPad** parameter times.

The LED’s in the **PaTPad** trigger button show you which parameters values are currently in use and displayed on the **PaTPad** displayers.

Top LED on:
Values from Pad.



Bottom LED on:
Values from Playbacks.

Therefore, if the bottom LED is on, pressing **[PaTPad trigger]** will restore the previous **PaTPad** values.

See “LTP” in the “GLOSSARY OF TERMS” earlier in this manual for more details.

Hint: Use the **PaTPad** trigger to see the **PaTPad** times executed before saving a scene. For example, if you have an existing scene that focuses your fixtures down stage and you want to program a new scene with the fixtures focused up stage. When you eventually playback this new scene, you want the fixtures to move slowly to their new up stage position. Use the **PaTPad** to focus the fixtures in the new up stage position and also to adjust the pan and tilt times.

Before recording this new “up stage” scene, playback the existing “down stage” scene. This moves the fixture down stage and automatically saves the **PaTPad** settings in P-Trig.

Press **[PaTPad trigger]**.

The fixtures move to the **PaTPad** (UP STAGE) settings using the **PaTPad** times.

Make any time adjustments that you might need.

Playback the down stage scene (the new times are saved in P-Trig) then press [PaTPad trigger].

You see the same move with the new times.

When the times are correct, save the new scene.

This function is especially useful when using fans and delay times.

8.15 COLOUR/BEAM/FOCUS BUTTON

The colour/beam/focus button has two functions;

1. Applying Filters

The [colour/beam/focus] button provides a rapid method of selecting filters. Repeated presses will cycle through the following filter selections.

press; [colour/beam/focus], all *altered* parameters are filtered (they have the letter “a” displayed on the “PAD VIEW” screen), or if no parameters have been altered, all parameters are filtered.

press; [colour/beam/focus] (**focus** parameters are Filtered)

press; [colour/beam/focus] (**beam** parameters are Filtered)

press; [colour/beam/focus] (**colour** parameters Filtered)

press; [colour/beam/focus] (**no** parameters are Filtered)

Repeated presses of [colour/beam/focus] cycle through the 5 Filter selections.

When the desired Filters are applied, press;

[filter] (it changes to blue to show that Filters are applied).

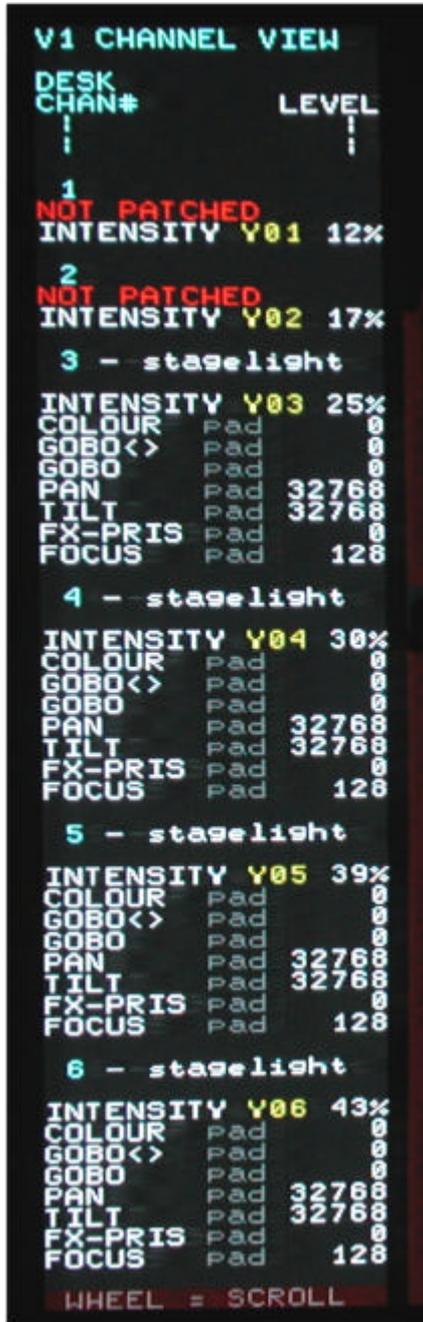
2. Preset and Palette memory pages

[colour/beam/focus] is used to select pages of memory for “presets” and “palettes”. See “Advanced Programming” for details.

9.0 VIDEO

There are several video screens that assist you when working with the **PaTPad**.

9.1 VIDEO 1 – CHANNEL VIEW



Video 1 (CHANNEL VIEW) provides information about Fixtures when using the **PaTPad**.

To select video 1;
Press and hold [function], tap [F/A] (video 1).

CHANNEL VIEW shows the desk channel numbers, Fixture names, Fixture attributes and their level and where this level came from (LTP) in the *maXim*. This LTP information is useful during programming and playback. It tells you if the parameter was last controlled by either the **PaTPad** (pad), a scene bank/page/number, a preset page/number, a palette page/number, the “P-Trig” **PaTPad** memory or directly from the Edit Wheel.

To scroll the display to other channel numbers, rotate the edit wheel.

To de-select video 1;
Press and hold [function], tap [F/A] (video 1).

9.2 VIDEO 2 – OUTPUT & PATCH

DESK CHAN	@%	DMX SLOT	DMX LVL
12	MAC	2000	
	100		
SHUTTER		178	66
CYAN		177	230
MAGENTA		179	00
YELLOW		180	00
CTC		181	00
COL-GOBO		182	00
GOBO1		183	00
GOBO1POS		184	00
(1sb)		185	00
GOBO2		186	00
GOBO2POS		187	00
(1sb)		188	00
EFFECTS		189	00
EF-POS-V		190	00
IRIS		191	00
FOCUS		192	128
ZOOM		193	128
PAN		194	128
(1sb)		195	128
TILT		196	00
(1sb)		197	128
SPEED		198	00
EF-SPEED		199	00
200		200	00
25	Wash	575.3	
	100		
PAN		263	104
TILT		250	128
SPEED		251	128
CONTROL		252	00
COLOUR		253	00
CYAN		254	00
MAGENTA		255	00
YELLOW		256	00
SPEED		257	00
COLOUR2		258	00
FxWHEEL		259	00
ZOOM		260	00
STROBE		261	00
		262	255

Video 2 (OUTPUT & PATCH) provides patch and level information.

To select video 2;

Press and hold [function], tap [F/A] (video 2).

Output & Patch shows the desk channel numbers, Fixture names, Fixture attributes, the DMX slot to which each parameter or dimmer is patched and their DMX level.

DMX Universe 1 is shown in blue.

DMX Universe 2 is shown in red.

Intensity (HTP) channels also show their proportional patch level.

To scroll the display to other channel numbers, rotate the edit wheel.

To de-select video 2;

Press and hold [function], tap [F/A] (video 2).

9.3 VIDEO 4 – PaTPad VIEW

Video 4 is the main **PaTPad** window and consists of 2 sections, **PaTPad** View and **PaTPad** Mimic. Whenever you load a fixture onto the **PaTPad** Video 4 automatically appears.

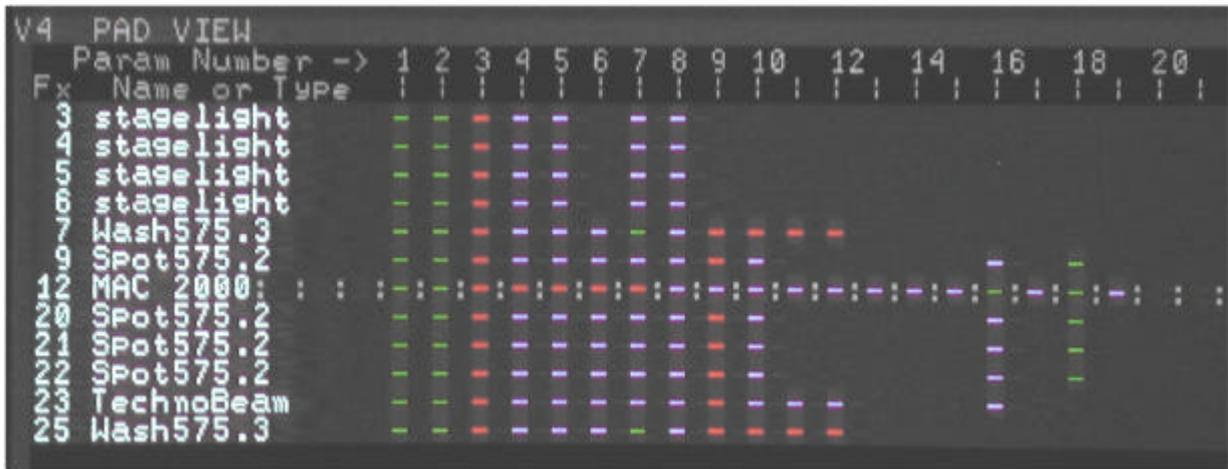
To manually turn off Video 4; press and hold [function], tap [F/A] (video 4).

To manually select video 4; press and hold [function], tap [F/A] (video 4).

Video 4 is not available if there are no Fixtures on the **PaTPad**.

9.3.1 PaTPad View Window

Pad View shows all of the Fixtures loaded on the **PaTPad**. When a Fixture is loaded onto the **PaTPad** it is automatically Hi-lighted by a grey background. Hi-lights can be turned on or off as desired. Fixtures that are not Hi-lighted (black background) are not included in any store or recall operation and hence their parameters do not flash.



If a loaded fixture has no intensity on stage, it's name is displayed in cyan.

The currently selected Fixture is indicated by a row of colons. “:.....”.

To the right of each Fixture name, its parameters are indicated by colour coded symbols;

- RED A Colour parameter.
- BLUE A Beam parameter.
- GREEN A Focus parameter.

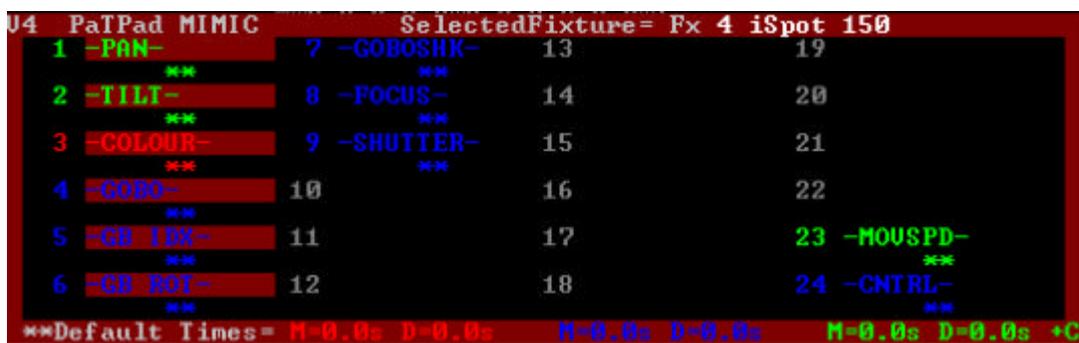
The symbols are;

- ? The parameter exists and can be selected by a [pm] button
- a The parameter value or time has been altered by the **PaTPad**.
- F The parameter has been Filtered.
- E The parameters value came from a Palette.
- P The parameters value came from a Preset.

If the parameter symbol is flashing then that parameter will be included in any store or recall operation.

9.3.2 PaTPad Mimic Window

PaTPad Mimic shows the currently selected Fixture and gives an expanded view of the [PM] (Parameter) buttons on the **PaTPad**. Each displayer on the **PaTPad** can control up to 4 parameters as selected by the 4 [PM] buttons beside it.



To see the name of each available parameter on a **PaTPad** displayer you have to press the appropriate [PM] button. **PaTPad Mimic** is laid out in the same geographical format as the [PM] buttons so you can always see the names of every available parameter for the selected fixture. It therefore makes parameter selection quick and easy. The parameter(s) that are currently selected on the **PaTPad** are indicated by a red background. Below each parameter, its times are shown. If the default times are being used, ** is shown. The current default times for colour, beam and focus are displayed at the bottom of the **PaTPad Mimic** window.

9.4 FIXTURES POP-UP WINDOW

To see a list of all available (patched) Fixtures, press; [get].

If you then select a Fixture by pressing its [F/A] (Fixture Number), the pop-up window automatically closes.

To manually close the window; press; [get].

9.5 GROUP POP-UP WINDOW

To see a list of all stored groups, press; [group].

If you then select a group by pressing its [F/A] (group number), the pop-up window automatically closes.

To manually close the window; press; [group].

9.6 PALETTE POP-UP WINDOW

To see a list of all stored palettes, press; [palette]

Palettes are stored by page and number. To step through the 4 palette pages (User, Colour, Beam & Focus) repeatedly press the [colour/beam/focus] button on the **PaTPad**. If you select a palette by pressing its [F/A] (palette number), the pop-up window automatically closes.

To manually close the window; press; [palette].

9.7 PRESET POP-UP WINDOW

To see a list of all available presets, press; **[preset]**.

Presets are stored by page and number. To step through the 4 preset pages (User, Colour, Beam & Focus) repeatedly press the **[colour/beam/focus]** button on the **PaTPad**. If you select a preset by pressing its **[F/A]** (preset number), the pop-up window automatically closes.

To manually close the window; press; **[preset]**.

9.8 FILTER POP-UP WINDOW

To see a list of all available Filter memories, press; **[filter]**.

If you select a Filter by pressing its **[F/A]** (Filter Number), the pop-up window automatically closes.

To manually close the window; press; **[filter]**.

10.0 FIXTURE TEMPLATES

10.1 TEMPLATE NAMES

A Fixture *Template* is a file that tells the **maXim** the function of each control channel for that fixture and it defines the unique parameter controls and labels that will appear on the **PaTPad** and video screen for that Fixture. Every different *type* of Fixture that you control from the **PaTPad** requires a Template.

Templates for most popular fixtures can be downloaded from www.lscighting.com.au/templates.

If the template for your fixture is not on the website you can either contact LSC (templateRequest@lscighting.com.au) and request the template, providing details of manufacturer, model, mode and software version number of your fixture or you can write your own template.

Templates are constructed using a simple text file editor program such as Microsoft® Notepad or “Crimson Editor”®. A degree of PC based computer literacy is required. The easiest way of creating a template is to edit and re-name an existing template. To do this either copy a similar template from the **maXim’s** library onto a floppy disc or download it from www.lscighting.com.au/templates. Open the template in the text editor program and edit the values to your new requirements.

When a show is loaded from disc onto the **maXim**, the system checks to see if the templates in the show are already in the library. It does this by comparing manufacturer and model names. If the templates are already in the library, it compares the version numbers. The highest version is always used.

?? If the library template is higher, it will be used for the show and also saved to disk when the show is saved replacing the older show template.

?? If the show template is higher, it will be used for the show and also copied into the library, replacing the older library template.

If you want to create custom templates, LSC recommends that you use your own name or company name in place of the fixture “Brand” in the template file.

For example.

You might edit the template of a “Martin”, “MAC300”, so that the 3 CMY colour mixing parameters can also be controlled by a single **PaTPad** parameter that has “descriptive” wheel stops for all of the popular colours. In the template file, where the original information was;

```
Fixture
  manufacturer = MARTIN
  name = MAC300
  version = 1.1
```

your personalised version might be;

```
Fixture
  manufacturer = RICHIE
  name = MAC300
  version = 1.0
```

When you save the file, give it a different file name for easy identification and ensure that the file extension is *.fxt.

Now your custom template and the original template can both exist in the library, allowing you to choose which template you load into the patch.

10.2 TEMPLATE STRUCTURE

Templates should follow the recommended structure detailed below.

Fixture Template recommended structure

Revision 0.95

28 August 2003

1. All ranges and home values should be listed in decimal and not hex.
2. The order of keywords at the beginning of the file should be
 Fixture
 manufacturer =
 name =
 version =
3. The manufacturer name is to be in capital letters.
4. Attribute keywords should be listed in the following order:
 Attribute
 name =
 channel =
 homeVal =
5. Attribute names should be 9 characters or less in length.
6. Parameters keywords should be listed in the following order:
 Parameter
 name =
 displayerNum =
 type =
 attribList =

 stop =
7. Parameters in the template should be listed according to the displayer number to aid in finding the parameter if it needs to be modified.
8. Parameter names should:
 - ?? Start and finish with a hyphen character “-“
 - ?? Be in capitals
 - ?? Be no longer than 9 characters including the hyphen characters.
9. Parameter types should be a capital letter.
10. Parameters should be ordered as follows:
 - ?? PAN
 - ?? TILT
 - ?? COLOUR(s)
 - ?? GOBO(s)
 - ?? FOCUS
 - ?? ZOOM
 - ?? PRISM
 - ?? IRIS
 - ?? SHUTTER
 - ?? Other parameters
 - ?? Speed parameters should be located on parameter 23 unless there is more than one Lamp Control. For example if there are 2 lamp controls then these would be located on 23 and 24 and the speed would be located on 23.
 - ?? Lamp control parameters should be located on parameter 24.

11. A Parameter that controls colour should have stops ordered in the following manner:
 - ?? White
 - ?? Colours
 - ?? Half Colours (If applicable)
 - ?? Wheel Spins
 - ?? Mouseable Colour Wheel Index (If applicable)

12. A Parameter that controls gobos should have stops ordered in the following manner:
 - ?? No Gobo
 - ?? Gobos
 - ?? Half Gobos (If applicable)
 - ?? Wheel Spins
 - ?? Mouseable Gobo Wheel Index (If applicable)

13. A Parameter that controls a shutter should have stops ordered as:
 - ?? Closed
 - ?? Open
 - ?? Strobe
 - ?? Pulse
 - ?? Random
 - ?? Other

14. A parameter should be set to type N (no store) for lamp control and motor resets.

15. The format of wheelstops should adhere to the following layout for easier reading.
stop = (Mxxx:yyy),2,"Text"
where xxx and yyy are always 3 characters wide—fill with spaces if number less than 100.
Replace M with a space if it is not required.

16. Wheelstop text should always start with a capital letter. The rest of the test should be lower case however the use of a capital letter or two for clarity is acceptable.

17. Where there is only one mouseable wheelstop across the full range of the attribute, the wheelstop text should include an equals sign "=" to indicate this. In other words seeing an equal sign should signify that there are no other wheelstops.

stop = (M 0:255),B,"Pan="

- If this stop controls any attribute other than Pan or Tilt, the display should be a type 2. That is, the value will be represented as a 2-digit %.

18. Where a wheelstop is mouseable but there is more than one wheelstop then a colon ":" should be used to indicate that the stop is mouseable and that other stops are available.

19. Where a wheelstop will cause an attribute of the light to rotate, the "<" character should be used to indicate counter clockwise rotation and the ">" character used to indicate clockwise rotation.
e.g.: For a Colour Wheel CW Spin, the wheel stop text should be: "CWhl>:"

20. The word "Open" should be avoided in a wheelstop as it does not convey any information as to the type of parameter that is open. Instead use terminology such as:
 - ?? No Gobo
 - ?? No Filter
 - ?? No Prism
 - ?? White (for the colour Parameter)

21. Where an attribute has an off and an on state, the off state should be before the on state where ever possible. This would apply to things like shutters and lamp control. This means that the user can assume that if the lamp is currently on (home position) then hitting the left end of the displayer will turn the lamp off.

An example is:

stop = (0: 19),N,"Lamp Off"

stop = (241:255),N,"Lamp On"

22. Where several ranges of DMX levels on an attribute result in the same thing, then only one stop should be used.

23. Home values for Zoom and Focus parameters should default to 50%.

24. Below is a list of standard terms that can be used in templates. It is not essential to use these however their use reduces the amount of memory used by a show, will allow more templates to be put into the library and speed up operation of the desk.

ATTRIBUTES	PARAMETERS	WHEELSTOPS		
PAN	-PAN-	Pan=	No Gobo	G1 Shk:
TILT	-TILT-	Ti@=	Gobo 1	G2 Shk:
COLOUR	-COLOUR-	Colour 1	Gobo 2	G3 Shk:
COLOUR 1	-COLOUR1-	Colour 2	Gobo 3	G4 Shk:
COLOUR 2	-COLOUR2-	Colour 3	Gobo 4	G5 Shk:
CYAN	-CYAN-	Colour 4	Gobo 5	G6 Shk:
MAGENTA	-MAGENTA-	Colour 5	Gobo 6	G7 Shk:
YELLOW	-YELLOW-	Colour 6	Gobo 7	G8 Shk:
GOBO	-GOBO-	Colour 7	Gobo 8	G9 Shk:
GOBO 1	-GOBO<>-	Colour 8	Gobo 9	G10 Shk:
GOBO 2	-GOBO 1-	Colour 9	Gobo 10	G11 Shk:
GOBO ROT	-GOBO 2-	Colour 10	Gobo 11	G12 Shk:
INTENSITY	-GOBOROT-	Colour 11	Gobo 12	GWhl>:
SHUTTER	-SHUTTER-	Colour 12	No Gobo1	GWhl<:
IRIS	-IRIS-	White	Gobo 1.1	Gobo>:
ZOOM	-ZOOM-	SteelBlue	Gobo 1.2	Gobo<:
FOCUS	-FOCUS-	Amber	Gobo 1.3	G1Whl>:
PRISM	-PRISM-	Violet	Gobo 1.4	Gobo1:
MSPEED	-CONTROL-	Blue	Gobo 1.5	G1Fine:
SHAPE	-MSPEED-	Pink	Gobo 1.6	Gobo1>:
ZAPMODE	-SHAPE-	Col1>:	Gobo 1.7	Gobo1<:
STROBE	-ZAPMODE-	Col1<:	Gobo 1.8	Gb1Idx=
FROST	-STROBE-	Col1:	Gobo 1.9	G2Whl>:
	-FROST-	Col2>:	No Gobo2	Gobo2:
		Col2<:	Gobo 2.1	G2Fine:
MANUFACTURERS		Col2:	Gobo 2.2	Gobo2>:
COEMAR		ColWhl:	Gobo 2.3	Gobo2<:
MARTIN		Cwhl>:	Gobo 2.4	Gb2Idx=
ROBE		Cwhl<:	Gobo 2.5	Focus=
COEF		Cyan=	Gobo 2.6	Focus:
CLAY PAKY		Cyan:	Gobo 2.7	SoftFocus
SGM		Mgnta=	Gobo 2.8	No Prism
ABSTRACT		Mgnta:	Gobo 2.9	Prism
FAL		Yellow=	No Iris	Prism 1
FUTURELIGHT		Yellow:	Iris Min	Prism 2
GENI		Sht Clsd	Iris Max	Prism 3
GENIUS		Sht Open	Iris:	Prsm>:

GLP		Strobe:	Iris=	Prsm<:
GRIVEN		Pulse1:	Pulse:	Macro 1
HIGH END		Pulse2:	Flash:	Macro 2
JBLIGHTING		Rand:	Lamp Off	Macro 3
MOVITEC		MoveBlk	Lamp On	Macro 4
SAGITTER		O Pulse:	PT Reset	Macro 5
STUDIODUE		C Pulse:	Fx Reset	Macro 6
TECHNILUX		Rnd Fast	Mot Reset	Macro 7
ULTRALITE		Rnd Med	All Reset	Macro 8
VARILITE		Rnd Slow	Reset	
		No Effect	Fast	Dot
		Effect 1	Ultrafast	Dots
		Effect 2	Vector:	Cone
		Effect 3	Track:	Spirals
		Effect 4	SlowTrack	Spokes
		Effect 5		Squares
		FxIdx:		Star
		Fx>:		Stars
		Fx<:		Line
				Laser
				TieDie
				Glass 1
				Glass 2
				Glass 3
				Ripples

11.0 COMPANY PROFILE

The LSC name is synonymous within the Entertainment Lighting Industry for producing leading edge lighting control products that are innovative, stylish and functional.

Furthermore, its dedication to developing products that are inherently reliable and easily serviceable, has enhanced LSC's reputation with owners and operators alike. A great deal of pride is instilled in the people who design, manufacture and sell LSC products, whereas every sale is regarded as not just a purchase, but an important element in cementing a long term relationship with each customer.

The product range is diverse and covers control desks, digital dimmers and a comprehensive selection of DMX512 and power distribution equipment. LSC has forged a reputation for many years as a pioneer in DMX512 technology and this will be further enhanced with the release of new products over the next twelve months.

Our products are distributed through a worldwide sales network of over 52 Distributors in 36 Countries. Users of LSC equipment range from high profile corporate and professional clients to churches, museums, schools, amateur theatre groups, convention and exhibition industries, broadcast industry, production and rental companies; - basically anywhere good entertainment lighting is required.



e-Series – featuring the **ePAK**, **ePRO** and **e1220** rackmount 6 and 12 channel digital dimmers



i-Series – featuring the **iPAK** and **iPRO** range of professional installation dimmers.



DELTA – DMX512 data splitters and Power Distribution Products.



e24 – 24 channel dimming system with patch bay, monitoring and mains distribution



maXim – advanced lighting consoles in 5 models from 12 to 120 faders, up to 1024 DMX channels with moving light control



MINIM – entry level lighting console with manual/memory DMX512 control.

monoPAK – single unit portable dimmer



DNA – range of isolated inlets, outlets and power supply's for distributing DMX512.



TDS – 48 channel dimming system with patch bay, digital monitoring and mains distribution