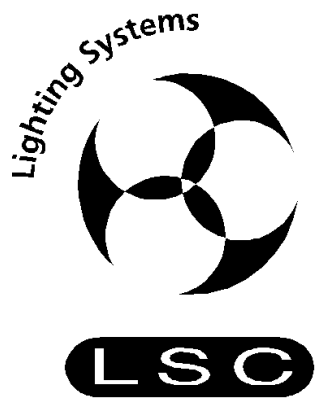


The Rules Have Changed

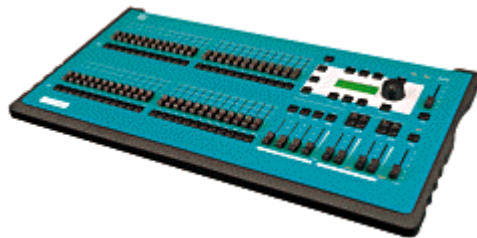


AXIOM

LIGHTING CONTROL DESK

OPERATOR MANUAL

Software Version 1.2
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Section 2: QUICK REFERENCE

INTRODUCTION

The QUICK REFERENCE section provides concise step by step instructions for the *common tasks* that you perform. You might like to make a copy of this section and keep it on hand for times when you quickly need to check a procedure.

HELP

Press <HELP> for a brief description of the *current menu level*. Use the [F5] (page up) and [F6] (page down) function keys or the EDIT WHEEL to scroll through the text. To exit press <HELP> a second time.

SCENES

When you press either <PROGRAM> or <PREVIEW/EDIT> all SCENE <S/A> keys will flash twice to show that they are possible scene number choices and all *used* scene numbers in the selected page will continue to flash.

PROGRAM A SCENE (RAPID METHOD)

To program the current output as a scene into a Scenemaster in the current page with the default fade times, press;
<PROGRAM>, double click <S/A> (scene number) (any Red preset fader)

PROGRAM A SCENE (RAPID METHOD IN A DIFFERENT PAGE)

To program the current output as a scene into a different page with the default fade times, press;
<PROGRAM>, [F6 SCENE], Hold <PAGE>, tap <S/A> (page number), double click <S/A> (any Red preset fader).

PROGRAM A SCENE (FULL METHOD)

To program the current output as a scene including fade times and name, press;
<PROGRAM>, [F6 SCENE], hold <PAGE>, tap <S/A> (page number), (the PAGE selection is optional) press <S/A> (Red preset fader).

To program a **NAME**, press; [F4 NAME]. Type the name with the Red preset S/A keys or rotate the EDIT wheel to select the characters. Press [F5 →] or [F4 ←] to move the cursor. Press [F6 DONE] to accept the name.

To program **FADE TIMES**, press [F5 TIMES]. Select each time that you wish to program with the [F4 ←] and [F5 →] keys. Set the time with the EDIT wheel or the [F2++] or the [F1—] keys. Manual times are selected by reducing programmed times below 0.0 seconds. Press [F6 DONE] to accept the times.

To save the scene, press; [F6 SAVE].

CHANGE PAGES ON THE SCENE MASTERS

To cycle through the pages of Scenemasters repeatedly press <PAGE>.

To directly select a page, hold <PAGE>, tap <S/A> (page 1 to 4) (Red preset S/A keys)

PREVIEW A SCENE

To preview a scene, press <PREVIEW/EDIT>, [F6 SCENE], hold <PAGE>, tap <S/A> (page number), (the PAGE selection is optional), press <S/A> (scene number).

When finished previewing, press **either** [F6 DONE] **or** <PREVIEW/EDIT>.

EDIT THE CHANNEL LEVELS IN A SCENE

To edit a scene, press <PREVIEW/EDIT>, [F6 SCENE], hold <PAGE>, tap <S/A> (page number), (the PAGE selection is optional), press <S/A> (scene number) [F2 CHANS], <S/A> (channel number to be edited). When a channel is selected, use the EDIT wheel or function keys to change the level. To edit another channel, press <S/A> (channel number).

When all channel levels are correct, press [F6 DONE], [F6 DONE], [F6 YES].

QUICK EDIT

To edit the channel levels of the last scene to be faded up, from MENU 1 press, [F1 EDIT], <S/A> (channel number to be edited). Use the EDIT wheel or function keys to change the level. To edit another channel, press <S/A> (channel number). To save the changes, press [F6 DONE], [F6 YES].

EDIT THE NAME OF A SCENE

To edit a scene name, press <PREVIEW/EDIT>, [F6 SCENE], hold <PAGE>, tap <S/A> (page number), (the PAGE selection is optional), press <S/A> (scene number), [F4 NAME]. Rotate the EDIT wheel to select the characters. Press [F5] or [F4] to move the cursor. To save the new name, press; [F6 DONE], [F6 DONE], [F6 YES].

EDIT THE FADE TIMES OF A SCENE

To edit a fade time, press <PREVIEW/EDIT>, [F6 SCENE], hold <PAGE>, tap <S/A> (page number), (the PAGE selection is optional), press <S/A> (scene number), [F5 TIMES]. Select each time that you wish to edit with the [F4] and [F5] keys. Set the time with the EDIT wheel or the [F2++] or the [F1—] keys. Manual times are selected by reducing programmed times below 0.0 seconds. To save the new times press, [F6 DONE], [F6 DONE], [F6 YES].

ERASE A SCENE

To erase a scene, press <PREVIEW/EDIT>, [F6 SCENE], hold <PAGE>, tap <S/A> (page number), (the PAGE selection is optional), press <S/A> (scene number) [F1 MORE], [F1 ERASE], [F6 YES].

COPY A SCENE

To copy a scene, press <PREVIEW/EDIT>, [F6 SCENE], hold <PAGE>, tap <S/A> (page number), (the PAGE selection is optional), press <S/A> (source scene number), [F1 MORE], [F4 ScnCpy], hold <PAGE>, tap <S/A> (page number), (the PAGE selection is optional), press <S/A> (destination scene number), [F6 OK].

BLIND SCENE PROGRAMMING

To Blind program a scene, PREVIEW/EDIT an unused scene number. When you select the scene number, the *Axiom* will warn you that the scene is empty and ask if you wish to continue. Select [YES], [F2 CHANS] then select each channel with its <S/A> key. When a channel is selected, use the EDIT wheel or function keys to set the level. To edit another channel, press <S/A> (channel number). When all channel levels are correct, press [F6 DONE], [F6 DONE], [F6 YES].

STACKS

When you press either <PROGRAM> [F4 STACK], or <PREVIEW/EDIT> [F4 STACK] all STACK <S/A> keys will flash twice to show that they are possible stack number choices and all used stack numbers will continue to flash.

PROGRAM A STACK OF SCENES

To program a stack consisting of scenes using the original fade times and name of each scene for its step in the stack, press; <PROGRAM>, [F4 STACK], <S/A> (stack number), [F1 SCENES], <S/A> (1st step scene number), <S/A> (2nd step scene number), <S/A> (3rd step scene number), etc.

If any of the scenes are in a different bank or page to the current bank or page, hold <^> or <v>, or <PAGE>, tap <S/A> (bank or page number) prior to pressing the scene number.

When all the steps have been programmed, save the stack by pressing; [F6 DONE], [F6 DONE], [F6 YES].

PROGRAM A STACK OF OUTPUTS (SNAPSHOTS)

To program a stack consisting only of snapshots of the *Axiom* output and programming the fade times and label of each step in the stack, press; <PROGRAM>, [F4 STACK], <S/A> (stack number), [F3 OUTPUT]. To record the current output as the 1st step of the stack, press; [F2 RECORD].

To program a **LABEL** for the step, press; [F4 LABEL]. Type the name with the Red preset S/A keys or rotate the EDIT wheel to select the characters. Press [F5] or [F4] to move the cursor. Press [F6 DONE] to accept the label.

To program **FADE TIMES** for the step, press [F5 TIMES]. Select each time that you wish to program with the [F4←] and [F5→] keys. Set the time with the EDIT wheel or the [F2++] or the [F1—] keys. Manual times are selected by reducing programmed times below 0.0 seconds. Press [F6 DONE] to accept the times.

Create the next lighting "Look" on the output of the *Axiom* then record this look as the 2nd step of the stack by pressing; [F2 RECORD]. Repeat the LABEL and FADE TIME programming described above.

Repeat the process of creating the look then recording it and programming the label and fade times for every subsequent step.

When all the steps have been programmed, save the stack by pressing; [F6 DONE], [F6 DONE], [F6 YES].

PROGRAM AN AUTO STEP IN A STACK.

When a step flagged to 'AUTO STEP' becomes the NEXT step it will *automatically* crossfade to become the CURRENT step. After programming the contents of a step, (described above) to make the step an Auto step, press; [F1 FLAG], [F6 YES].

PROGRAM A PAUSE IN A STACK.

When the step containing a PAUSE LINK becomes the NEXT step, it will automatically count down its programmed PAUSE time, after which it will automatically crossfade to the next step.

A PAUSE Link is programmed in a similar way as a SCENE, CHANNEL or OUTPUT step described above. Instead of selecting either [F1 SCENES], [F2 CHANLS], or [F3 OUTPUT], press; [F5 LINKS], [F1 PAUSE]. Rotate the EDIT wheel to set the pause time. To complete the pause time setting press; [F6 DONE]

PROGRAM A LINK TO ANOTHER STACK.

When the step containing a STACK LINK becomes the NEXT step, it will *automatically* assign another stack that you specify to the FX master, loading its 1st step as the NEXT step.

A STACK Link is programmed in the same way as a SCENE, CHANNEL or OUTPUT step described above. Instead of selecting either [F1 SCENES], [F2 CHANLS], or [F3 OUTPUT], press; [F5 LINKS], [F4 STACK], <S/A> (Stack number to link to), [F6 YES], [F6 DONE], [F6 DONE], [F6 YES].

PREVIEW A STACK IN MEMORY

To preview a stack in memory, press <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number). Step through the stack using either [F4←] or [F5→]. Step fade times and labels are shown on the screen and step channels are shown on the channel <S/A> keys. Press either, [F6 DONE] or <PREVIEW/EDIT> when finished.

ASSIGN A STACK TO AN FX MASTER

To assign a stack to an FX master, press, <ASSIGN>, [F4 STACK], <S/A> (stack number), <S/A> (FX master).

PREVIEW A STACK ON AN FX MASTER

To preview a stack that is currently assigned to an FX master, press <PREVIEW/EDIT>, <S/A> (FX master). The current step is shown. Step through the stack using either [F4←] or [F5→]. Step fade times and labels are shown on the screen and step channels are shown on the channel <S/A> keys. Press either, [F6 DONE] or <PREVIEW/EDIT> when finished.

CONTROLLING A STACK ON AN FX MASTER**INITIATING A CROSSFADE**

To crossfade from the *current* step to the *next* step, press the > (forward) key. While the crossfade is *in progress*, the STOP/STEP key will flash and both the > (forward) key and the < (reverse) key are inactive.

STOPPING A CROSSFADE

To stop a crossfade *in progress* press <STOP/STEP>. The > (forward) key and the < (reverse) key flash alternately.

STARTING A STOPPED CROSSFADE

To start a stopped crossfade in the forward direction press the > (forward) key.

To start a stopped crossfade in the reverse direction press the < (reverse) key.

STEPPING A STACK

To step a stack in the forward direction or snap a *stopped* crossfade to completion;

hold <Stop/Step>, tap > (forward)

To step a stack in the reverse direction or snap a *stopped* crossfade back to its starting point;

hold <Stop/Step>, tap < (reverse)

CLEARING AN FX MASTER

To clear an FX master press, <ASSIGN>, <S/A> (the FX master).

INSERT A STEP IN A STACK

To insert a step in a stack press **either**,

- <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number), [F2 EDIT] **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F2 EDIT].

Step through the stack using either [F4←] or [F5→] to the step PRIOR to the point where the new step is to be inserted then press, [F1 INSERT], [F6 YES].

Select the object to be inserted by pressing **either**,

- [F1 SCENES], <BANK> or <PAGE> <S/A> (bank or page number) (optional), <S/A> (scene number) **or**
- [F2 CHANL], <S/A> (channel number) **or**
- [F3 OUTPUT], [F2 RECORD].

To save the changes, press [F6 DONE], [F6 DONE], [F6 YES].

DELETE A STEP IN A STACK

To delete a step in a stack press **either**,

- <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number) **or**
- <PREVIEW/EDIT>, <S/A> (FX master).

Press, [F2 EDIT], [F2 DELETE], then step through the stack using either [F4←] or [F5→] to the step to be deleted and press [F6 YES].

To save the changes, press [F6 DONE], [F6 DONE], [F6 YES].

EDIT THE FLAG (AUTO STEP) OF A STEP IN A STACK

To edit the FLAG of a step in a stack press **either**,

- <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number), [F2 EDIT] **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F2 EDIT].

Step through the stack using either [F4←] or [F5→] to the step to be modified then press, [F3 MODIFY], [F1 FLAG]. To make the flag an AUTO step press, [F6 YES]. To make the flag a normal step press, [F4 NO].

To save the changes, press [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

EDIT THE CHANNELS OF A STEP IN A STACK

This function is only available if the step is a scene or a snapshot. To have a single channel step at a level other than full, delete the step then insert a new step as a scene or output with the channel at the required level.

To edit the channel levels of a step in a stack press **either**,

- <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number), [F2 EDIT] **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F2 EDIT].

Step through the stack using either [F4←] or [F5→] to the step to be modified then press, [F3 MODIFY], [F2 CHANS], <S/A> (channel number).

When a channel is selected, use the EDIT wheel or function keys to change the level.

To edit another channel, press <S/A> (channel number).

To save the changes, press [F6 DONE], [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

EDIT THE LABEL OF A STEP IN A STACK

To edit the label of a step in a stack press **either**,

- <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number), [F2 EDIT] **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F2 EDIT].

Step through the stack using either [F4←] or [F5→] to the step to be modified then press, [F3 MODIFY], [F4 LABEL]. Type the name with the Red preset S/A keys or rotate the EDIT wheel to select the characters. Press [F5→] or [F4←] to move the cursor. To save the changes, press [F6 DONE], [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

EDIT THE TIMES OF A STEP IN A STACK

To edit the fade times of a step in a stack press **either**,

- <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number), [F2 EDIT] **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F2 EDIT].

Step through the stack using either [F4←] or [F5→] to the step to be modified then press, [F3 MODIFY], [F5 TIMES]. Select each time that you wish to edit with the [F4←] and [F5→] keys. Set the time with the EDIT wheel or the [F2++] or the [F1—] keys. Manual times are selected by reducing programmed times below 0.0 seconds. To save the changes, press [F6 DONE], [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

EDIT THE NAME OF A STACK

To edit the name of a stack press **either**,

- <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number) **or**
- <PREVIEW/EDIT>, <S/A> (FX master).

Press [F1 MORE], [F4 NAME]. Type the name with the Red preset S/A keys or rotate the EDIT wheel to select the characters. Press [F5→] or [F4←] to move the cursor.

To save the changes, press [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

ERASE A STACK

To erase a stack press **either**,

- <PREVIEW/EDIT>, [F4 STACK], <S/A> (stack number) **or**
- <PREVIEW/EDIT>, <S/A> (FX master).

To erase the stack, press [F1 MORE], [F2 ERASE], [F6 YES].

CHASES

When you press either <PROGRAM> [F5 CHASE], or <PREVIEW/EDIT> [F5 CHASE] all CHASE <S/A> keys (Red preset S/A keys) will flash twice to show that they are possible chase number choices and all used chases will continue to flash.

PROGRAM A CHASE OF CHANNELS

To program a chase consisting of a single channel on each step, press; <PROGRAM>, [F5 CHASE], <S/A> (chase number), [F2 CHANLS], <S/A> (1st step channel number), <S/A> (2nd step channel number), <S/A> (3rd step channel number), etc, etc.

When all the steps have been programmed press; [F6 DONE], [F6 DONE], [F6 YES].

PROGRAM A CHASE OF SCENES

To program a chase consisting of scenes, press, <PROGRAM>, [F5 CHASE], <S/A> (chase number).

[F1 SCENES], <S/A> (1st step scene number), <S/A> (2nd step scene number), etc. If any of the scenes are in a different page to the current page, hold <PAGE>, tap <S/A> (page number) prior to pressing the scene number.

When all the steps have been programmed press; [F6 DONE], [F6 DONE], [F6 YES].

PROGRAM A CHASE OF OUTPUTS (SNAPSHOTS)

To program a chase consisting of outputs, press, <PROGRAM>, [F5 CHASE], <S/A> (chase number), [F3 OUTPUT]. Create the first look on the output, then, press; <F2 RECORD>. Create the next look on the output, press; [F2 RECORD]. Continue to create and record steps as above. When all steps have been recorded, press; [F6 DONE], [F6 DONE], [F6 YES].

PROGRAM A CHASE OF SCENES and/or CHANNELS and/or OUTPUTS

To program a chase consisting of a mixture of scenes, channels and outputs (snapshots), press, <PROGRAM>, [F5 CHASE], <S/A> (chase number).

Press either [F1 SCENES], [F2 CHANLS], or [F3 OUTPUT], to select the content of the 1st step.

For example, to program the first 2 steps as scenes, press; [F1 SCENES], <S/A> (1st step scene number), <S/A> (2nd step scene number), [F6 DONE].

You may now change to a different type of 'object' by pressing either,

[F1 SCENES], [F2 CHANLS], or [F3 OUTPUT].

For example, to program the next 2 steps as outputs, press; [F3 OUTPUT].

Create the required look then press, [F2 RECORD]. Create the next look then press, [F2 RECORD], [F6 DONE].

You may now change to a different type of 'object' by pressing either,

[F1 SCENES], [F2 CHANLS], or [F3 OUTPUT].

For example, to program the next 2 steps as individual channels, press,

[F2 CHANLS], <S/A> (channel number), <S/A> (channel number), [F6 DONE].

You may now optionally name the chase and program its rate and flags.

SAVING THE CHASE

When all the steps have been programmed, save the chase by pressing; [F6 DONE], [F6 YES].

PREVIEW A CHASE

To preview a chase, press <PREVIEW/EDIT>, [F5 CHASE], <S/A> (chase number). Step through the chase using either [F4] or [F5]. Press either, [F6 DONE] or <PREVIEW/EDIT> when finished.

ASSIGN A CHASE TO AN FX MASTER

To assign a chase to an FX master, press, <ASSIGN>, [F5 CHASE], <S/A> (chase number), <S/A> (FX master).

CONTROLLING A CHASE ON AN FX MASTER

KEY	ACTION
STOP/STEP	STOPS a running chase. STEPS a <i>stopped</i> chase in the direction indicated by the currently lit direction key. This stepping will be the direction that the chase was running prior to being stopped.
> (Forward)	STARTS a stopped chase and runs it forward . Changes the DIRECTION of a reverse running chase (runs it forward). Changes a BOUNCE chase into a normal forward chase. SNAPS a forward running chase to the next step.
< (Reverse)	STARTS a stopped chase and runs it backwards . Changes the DIRECTION of a forward running chase (runs it backwards). Changes a BOUNCE chase into a normal reverse chase. SNAPS a backward running chase to the next step.
Hold >, Tap <	Selects BOUNCE mode.
Hold <, Tap >	Also selects BOUNCE mode.
>	Deselects Bounce mode (runs forward).
<	Deselects Bounce mode (runs reverse).
Hold Stop/Step, Tap >	Selects SINGLE SHOT mode.
>	Runs a forward Single Shot.
<	Runs a reverse Single Shot.
Hold Stop/Step, Tap <	De-selects single shot mode.

MANUAL RATE CONTROL

To take manual control of the chase rate, match the position of the Rate fader to the programmed chase rate. The backlit RATE indicator lights when the Rate fader takes control.

SAVING CHASE RATE AND FADE

To save the rate and fade settings of a chase that is currently assigned to an FX master, press <PREVIEW/EDIT>, <S/A> (FX master). Use the rate fader to set the chase rate. Press, [F5 FADE] then rotate the edit wheel to set the percentage fade. Press [F6 DONE] to accept the fade setting. Press [F6 YES] to save both the settings in memory.

CLEARING AN FX MASTER

To clear an FX master press, <ASSIGN>, <S/A> (FX master).

INSERT A STEP IN A CHASE

To insert a step in a chase press **either**,

- <PREVIEW/EDIT>, [F5 CHASE], <S/A> (chase number), [F2 EDIT] **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F2 EDIT].

Step through the chase using either [F4←] or [F5→] to the step PRIOR to the point where the new step is to be inserted then press, [F1 INSERT], [F6 YES].

Select the object to be inserted by pressing **either**,

- [F1 SCENES], <PAGE> <S/A> (page number) (optional), <S/A> (scene number) **or**
- [F2 CHANL], <S/A> (channel number) **or**
- [F3 OUTPUT], [F2 RECORD].

To save the changes, press [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

DELETE A STEP IN AN FX CHASE

To delete a step in a chase press **either**,

- <PREVIEW/EDIT>, [F5 CHASE], <S/A> (chase number) **or**
- <PREVIEW/EDIT>, <S/A> (FX master).

Press, [F2 EDIT], [F2 DELETE], then step through the chase using either [F4←] or [F5→] to the step to be deleted and press [F6 YES].

To save the changes, press [F6 DONE], [F6 DONE], [F6 YES].

EDIT CHANNEL LEVELS OF A STEP IN A CHASE

This function is only available if the step is a scene or a snapshot. To have a single channel step at a level other than full, delete the step then insert a new step as a scene or output with the channel at the required level. To edit the channel levels of a step in a chase press **either**,

- <PREVIEW/EDIT>, [F4 CHASE], <S/A> (chase number), [F2 EDIT] **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F4 EDIT].

Step through the chase using either [F4←] or [F5→] to the step to be modified then press, [F3 MODIFY], <S/A> (channel number). Use the EDIT wheel or function keys to change the level.

To edit another channel, press <S/A> (channel number).

To save the changes, press [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

PATCH

ASSIGN A PATCH

To assign a Patch, press <ASSIGN>, [F1 PATCH], <S/A> (Patch number).

BYPASS THE PATCH

To bypass the Patch, press <ASSIGN>, [F1 PATCH], [F1 BYPASS], [F6 OK].

PROGRAM A PATCH

To program a patch, press <PROGRAM>, [F1 PATCH]. If the patch is currently bypassed, assign a patch by pressing <S/A> (Patch number).

PATCHING DIMMERS TO CHANNELS

Select Program Patch (above) then press, [F5 PATCH]. Rotate the EDIT wheel or press [F5→] or [F4←] to select the dimmer (DMX address). The screen gives all information for each dimmer as it is selected. To patch the selected dimmer to a channel, press <S/A> (Channel number). Select further dimmers and patch them in the same manner. To save the patch, press, [F6 DONE], [F6 SAVE].

SET A PROPORTIONAL PATCH LEVEL

Select Program Patch (above) then press, [F5 PATCH]. Rotate the EDIT wheel or press [F5→] or [F4←] to select the dimmer. If the dimmer is a HTP "TYPE" and is patched to a channel, press [F3 LEVEL]. Rotate the EDIT wheel to set the patch level then press, [F6 DONE]. A level of 0% will automatically delete the patch.

PREVIEW A PATCH

To Preview a patch, press <PREVIEW/EDIT>, [F1 PATCH]. If the patch is currently bypassed, assign a patch by pressing <S/A> (Patch number).

PREVIEWING DIMMERS

Preview the patch (above) then press, [F5 PATCH]. Rotate the EDIT wheel or press [F5→] or [F4←] to select the dimmer. The screen gives all information for each dimmer as it is selected.

PREVIEWING CHANNELS

Preview the patch (above) then press, [F2 CHANS]. Press the <S/A> key of the channel to be previewed. The channel TYPE and "label" is shown. To see which dimmers are patched to this channel and their patch levels press, [F5 DIMMS]. As up to 512 dimmers may be patched to the one channel, press, [F3 MORE] to see any more dimmers. Press, [F6 DONE] when finished.

To see other channels, press their <S/A> keys.

EDIT A PATCH

To Edit a patch, press <PREVIEW/EDIT>, [F1 PATCH]. If the patch is currently bypassed, assign a patch by pressing <S/A> (Patch number). The *procedure* for *Editing* a patch is exactly the same as the procedure for Programming a patch (refer above). If a dimmer is currently patched to a channel, selecting a different channel deletes the previous channel.

ERASE A PATCH

To erase a patch, press <PREVIEW/EDIT>, [F1 PATCH]. If the patch is currently bypassed, assign a patch by pressing <S/A> (Patch number). Press [F1 MORE], [F4 ERASE], [F6 YES].

ONE TO ONE PATCH

To program a 1 to 1 patch, press <PROGRAM>, [F1 PATCH]. If the patch is currently bypassed, assign a patch by pressing <S/A> (Patch number). Press [F1 MORE], [F1 1 to 1], [F6 YES], [F6 YES].

COPY A PATCH

To copy a patch, press <PREVIEW/EDIT>, [F1 PATCH]. If the patch is bypassed, assign a source patch by pressing <S/A> (Patch number). Press [F1 MORE], [F5 COPY], <S/A> (destination patch number), [F6 YES].

MOVING FIXTURES

PATCH A MOVING FIXTURE

LIBRARY PATCHING

To program a patch for a moving fixture, press <PROGRAM>, [F1 PATCH].

If the patch is currently bypassed, assign a patch by pressing <S/A> (Patch number).

Press, [F5 PATCH]. Rotate the EDIT wheel or press [F5→] or [F4←] to select the *starting* dimmer number (DMX address) to control the fixture.

Press, [F2 FIXTURE], [F1 LIBRARY], then press the function key corresponding to the *manufacturer* of the fixture. If the manufacturer is not shown, press [F3 MORE] to see further manufacturers. After selecting the type of manufacturer, press the function key corresponding to the *model* of the fixture.

All the parameters of the selected fixture have now been assigned by the library.

Rotate the EDIT wheel or press [F5→] or [F4←] to see the function of each dimmer output (DMX address) and patch it to a channel (if it has not yet been patched) by pressing <S/A> (Channel number).

MANUAL PATCHING

To manually program a patch for a moving fixture, press <PROGRAM>, [F1 PATCH]. If the patch is currently bypassed, assign a patch by pressing <S/A> (Patch number). Press, [F5 PATCH]. Rotate the EDIT wheel or press [F5→] or [F4←] to select the *starting* dimmer number (DMX address) to control the fixture. If the dimmer is to control a "movement" function of the fixture, press [F1 TYPE], [F4 LTP]. If the dimmer number is to control the "intensity" function of the fixture, press [F1 TYPE], [F5 HTP]. Assign a "Fixture Number" to the fixture by pressing [F2 FIXTURE], <S/A> (Fixture number). (Use any number not previously used for another fixture).

Patch the dimmer output to a channel (if it has not yet been patched) by pressing <S/A> (Channel number).

Press [F5→] to select the *next* dimmer number (DMX address) of the fixture. If the dimmer number is to control a "movement" function of the fixture, press [F1 TYPE], [F4 LTP]. If the dimmer number is to control the "intensity" function of the fixture, press [F1 TYPE], [F5 HTP]. Assign the **same** "Fixture Number" to the fixture by pressing [F2 FIXTURE], <S/A> (Fixture number). Patch the dimmer output to a channel (if it has not yet been patched) by pressing <S/A> (Channel number). Repeat the procedure using a common fixture number for all the dimmer outputs that are used to control the fixture. To save the patch, press, [F6 DONE], [F6 SAVE].

COLOUR SCROLLERS

To program a patch for a colour scroller, press <PROGRAM>, [F1 PATCH]. If the patch is currently bypassed, assign a patch by pressing <S/A> (Patch number). Press, [F5 PATCH]. Rotate the EDIT wheel or press [F5→] or [F4←] to select the dimmer number (DMX address) to control the **dimmer** of the fixture. Press [F1 TYPE], [F5 HTP]. Assign a "Fixture Number" to the fixture by pressing [F2 FIXTURE], <S/A> (Fixture number). (Use any number not previously used for another fixture). Patch the dimmer output to a channel (if it has not yet been patched) by pressing <S/A> (Channel number).

Rotate the EDIT wheel or press [F5→] or [F4←] to select the dimmer number (DMX address) of the scroller motor. Press [F1 TYPE], [F4 LTP]. Assign the **same** "Fixture Number" to the scroller by pressing [F2 FIXTURE], <S/A> (Fixture number). Patch the dimmer output to a channel (if it has not yet been patched) by pressing <S/A> (Channel number). To save the patch, press, [F6 DONE], [F6 SAVE].

PROGRAMMING SCENES FOR A MOVING FIXTURE OR SCROLLER

Scenes for moving fixtures and scrollers are programmed in exactly the same manner as normal scenes, with the exception that the levels for the *movement* channels (LTP's) are only included in the scene if the level of the *intensity* channel (HTP) is above zero. When a scene is played back, movements will only occur if the fixture has an intensity level in that scene. This prevents unwanted movements from occurring.

UTILITIES

DBO DISABLE

To disable the DBO key, from menu 2 press,
[F1 UTILS], [F5 PREFS], [F1 DBO], [F5 DISABLE].

To enable the DBO key, from menu 2 press,
[F1 UTILS], [F5 PREFS], [F1 DBO], [F4 ENABLE].

DISK FUNCTIONS

SAVING A SHOW

To save a show to disk, insert a double sided, high density (1.44 M) floppy disk in the disk drive, then from menu 2 press, [F1 UTILS], [F4 DISK], [F2 SAVE]. Rotate the Edit wheel to select a show number. Press [F6 SAVE]. After the *Axiom* saves and verifies, press [F6 OK].

LOADING A SHOW

Loading a show from disk will **ERASE ALL MEMORIES** in the *Axiom*. To load a show from disk, insert the disk in the disk drive, then from menu 2 press, [F1 UTILS], [F4 DISK], [F1 LOAD]. Rotate the Edit wheel to select the show number. Press [F6 LOAD], [F6 YES], [F4 YES].

LOCK / UNLOCK

To create a password and lock out all programming functions, from menu 2 press, [F1 UTILS], [F5 PREFS], [F3 LOCK], [F4 LOCK]. Enter your 4 digit password by pressing any of the flashing <S/A> keys. Press [F6 DONE]. Re-enter your 4 digit password by pressing the same <S/A> keys. Press [F6 DONE], [F6 DONE].

To unlock the *Axiom*, from menu 2 press, [F1 UTILS], [F5 PREFS], [F3 LOCK], [F5 UNLOCK]. Enter your 4 digit password by pressing the correct <S/A> keys. Press [F6 DONE], [F6 DONE].

To use your *existing* password to lock out all programming functions, from menu 2 press, [F1 UTILS], [F5 PREFS], [F3 LOCK], [F4 LOCK]. Enter your 4 digit password by pressing any of the flashing <S/A> keys. Press [F6 DONE], [F6 DONE].

RESET

SYSTEM RESET

Performing a system reset will reset the operating system but will **not** affect any of the programmed memory. There are two way of performing a **SYSTEM RESET**;

1. Switch off the power to the *Axiom* (on the rear panel) and wait for a few seconds. Press <HELP> and whilst and holding it down, switch the power back on. When the menu 1 screen appears, release the key. The *Axiom* should now perform normally.
2. From menu 2 press, [F1 UTILS], [F1 MORE], [F2 RESET], [F2 SYSTEM], [F6 YES].

TOTAL RESET

Total Reset will **ERASE** all the programmed memory from the *Axiom* and reset the operating system. All Scene, Stacks, Chases, MIDI set-ups, and Patches are erased. Reset also by-passes the patch.

There are two way of performing a **TOTAL RESET**;

1. Switch off the power to the *Axiom* (on the rear panel) and wait for a few seconds. Press and hold both <HELP> and <PROGRAM> and whilst holding them down, switch the power back on. The screen will warn you that all memory will be cleared. Press, [F6 YES], [F4 YES].
2. From menu 2 press, [F1 UTILS], [F1 MORE], [F2 RESET], [F1 TOTAL], [F6 YES], [F4 YES].

FADER BYPASS

A **faulty** fader may be jammed fully ON or OFF. To jam a fader, from menu 2 press, [F1 UTILS], [F1 MORE], [F3 DIAGS], [F2 FADERS], <S/A> (Fader to be jammed). Repeated presses of [F4 CONTROL] will cycle through "Jam @ 100%", "Jam @ 0%" or "Fader" control.

To enable your selection, press [F6 END], [F6 DONE].

YELLOW PRESET INVERT

To invert the operation of the Yellow preset master, from menu 2 press, [F1 UTILS], [F5 PREFS], [F2 PRESET], [F5 INVERT], [F6 DONE].

To restore the operation of the Yellow preset master to its classic state, from menu 2 press, [F1 UTILS], [F5 PREFS], [F2 PRESET], [F4 CLASSIC], [F6 DONE].

DEFAULT TIMES

To set your own default times that are used when you *rapidly* program scenes and stacks, from menu 2 press, [F1 UTILS], [F5 PREFS], [F5 TIMES], [F1 TIME]. Select each time that you wish to set with the [F4 ←] and [F5 →] keys. Set the time with the EDIT wheel or change it in single steps with the [F2++] key or the [F1—] key. If you hold down either [F2++] or [F1—], they will auto repeat. Double clicking on them snaps the time to maximum or minimum respectively. Manual times are selected by reducing programmed times below 0.0 seconds. To accept the times, press [F6 DONE], [F6 DONE], [F6 DONE].

VIEW/RIDE

VIEW

To view the contents of any Channel fader, Scene master, or Preset master, quickly tap (and release) the VIEW/RIDE key. Press <S/A> (fader to be viewed). Select further faders by pressing their <S/A> keys. When finished viewing, press either [F6 DONE], or <VIEW/RIDE>.

RIDE

When a timed fade is occurring on any master, the indicator LED on that Masters <S/A> key will flash quickly. To ride the fade time of any Softmaster or Scene master, press and HOLD the VIEW/RIDE key until the RIDE Scenemaster screen appears (about 1 second). Press <S/A> (master to ride).

Rotate the EDIT WHEEL to set the PERCENTAGE change to the fade RATE and so speed it up or slow it down whilst the fade is in progress.

When finished riding and to restore the original rate, press either [F6 DONE], or <VIEW/RIDE>.

OUTPUT TRIM

The Output TRIM section allows you to trim the level of any channel at the output of the Grand master, either increasing it by up to 400% or decreasing it to 0% (off).

TRIMMING CHANNELS

From MENU 1 press; [F3 TRIM], <S/A> (channel to be trimmed).

- HTP channels are shown as a level between 0% and 100%.
- LTP channels are shown as a level between 000 and 255.

Rotate the EDIT wheel to trim the channel level. Channels may be trimmed *down* to 0% (i.e. fully OFF) or by *up* to 400% of their internal level. Select other channels to trim by pressing their <S/A> keys.

When you have finished trimming, press; [F6 END] then either;

- Select [F3 CANCEL] to return to the previous screen and continue trimming.
- Select [F4 NO] to instantly restores **all** trimmed levels to their original levels.
- Select [F6 YES] to maintain all the trimmed levels.

RESTORING TRIMMED CHANNELS

INDIVIDUAL CHANNELS

When you use Output TRIM, when the menu asks you if you want to keep the modifications and you select [F5 YES], the trim will be maintained on the modified channel(s) until such time as that channel(s) no longer has a level at the output of the Grand master. The Output TRIM section monitors the output of the Grand master and if the level of a trimmed channel is greater than 0, even if it is coming from a different source, the trim will be maintained. When the channel is no longer detected on the output, the TRIM is cancelled. The next time that the channel appears, it will be at its correct (untrimmed) level.

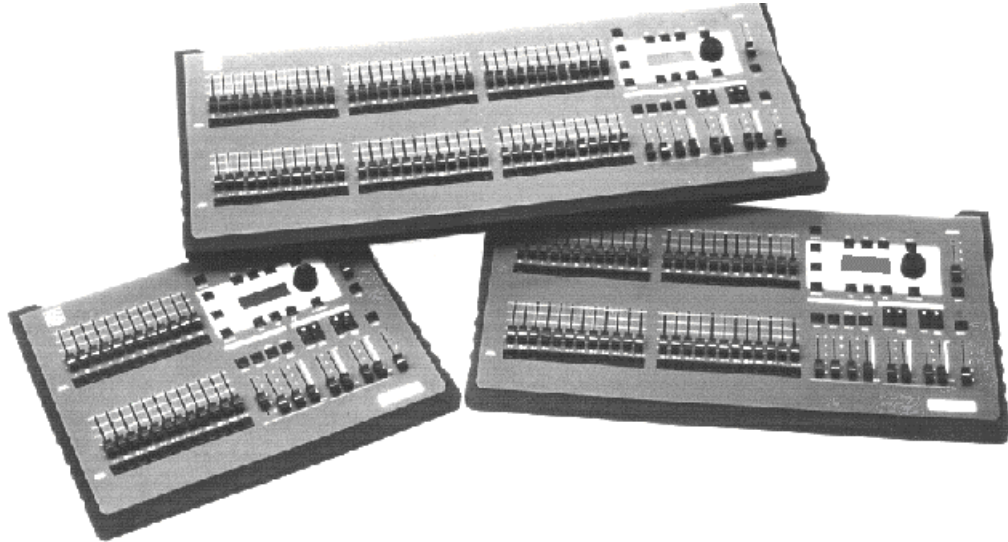
ALL CHANNELS

When you use Output TRIM, and the menu asks you if you want to keep the modifications, if you select [F4 NO], **all** trimmed levels are restored to their original levels. This includes any channels that were still being trimmed by previous trimming actions. Alternately, you may fade the Grand master fully down and up again or tap DBO twice.

Section 3: INTRODUCTION

The *Axiom* is a simple to use yet powerful lighting control desk that is suited to a wide range of applications. It is available in three models.

Axiom 36/72



Axiom 12/24

Axiom 24/48

All models have similar features and **vary only in the number of channels and scene masters that they support, and in their memory capacity.**

APPLICATIONS

The *Axiom's* wide range of applications includes:

- **Controlling "intelligent" moving fixtures and Colour Scrollers**, where the LTP channels and "Fixture Libraries" make complex programming a breeze.
- **Schools**...where unskilled operators can quickly use the colour coded presets to get lights up quickly and perform simple crossfades.
- **Hire Companies**...where unfamiliar operators will appreciate the "HELP" screens and "PROMPTS" provided on the LCD screen.
- **Theatres**... where the "STACK" features with *split time dipless crossfades* allow an entire show to be programmed and then played back with a single keystroke for each lighting cue.
- **Audio Visual Displays**...where the external control features allow the *Axiom* to be synchronised with other devices.
- **Touring Shows**...where the TWO FX masters allow flexibility of playback, the "Add/Kill" functions and versatile chase features are great for "concerts" and the four inbuilt patches and fixture library allows easy interfacing with dimmers, colour scrollers and moving fixtures.
- **Television Studios**...where the extensive "Trimming", "Editing" and "Previewing" functions allow critical balancing of channel levels within scenes whilst "LIVE" to air.

FEATURES

The *Axiom* incorporates the following features;

- Manual faders for all channels with associated Solo keys
- Preset, WIDE preset and Scene modes
- 3 Preset masters, (Red, Yellow and Grab), with associated Solo keys.
- Two Effects Masters to playback Stacks or Chases.
- Add/Kill fader, with associated Add or Kill mode key.
- Solo keys for all Channels and Masters
- Grand Master Fader, with associated DBO key.
- Channels may be set as "Highest Takes Precedence" (HTP) or "Last Takes Precedence" .

- Inbuilt "Fixture Libraries" allow any of the popular Moving Fixtures to be patched in an instant.
- Scene masters and Stacks have separate In and Out fade times.
- Instant manual control (View/Ride) of a timed fade that is in progress.
- Separate fade times for LTP channels
- Dipless crossfades on stacks.
- Stacks may be linked to other stacks.
- Chases may be linked to other chases.
- Extensive **Programming Editing Trimming** and **Previewing** facilities for Scenes, Chases, Stacks & Sound to Light.
- "Help" screens are available on the LCD for all functions

	AXIOM 12/24	AXIOM 24/48	AXIOM 36/72
Channels -Preset Mode	12	24	36
Channels -Wide Mode	24	48	72
Scene Masters	12	24	36
Scene Memories	12 X 12 pages = 144	24 X 12 pages = 288	36 X 12 pages = 432
Total Memories (Scenes + Snapshots)	1022	1022	1022
Stacks -99 steps per stack	12	24	36
Chases -99 steps per chase	12	24	36
Sound to Light Setups	12	24	36
Fixture numbers	12 user fixtures 28 Library fixtures	24 user fixtures 28 Library fixtures	36 user fixtures 28 Library fixtures

- All Scenes, Stacks, Chases, Sound To Light effects and Patches may be given an alpha-numeric name and all channels and Steps in a stack may be given a label.
- Four pages of fully proportional patch.
- Patch may be bypassed for "simple" operation.
- Program lockout with password.
- Isolated DMX 512/1990 output signal.
- Fully self contained...No external devices are required.
- Power supply is user selectable, 85–130 volts or 170–260 volts, 50/60 cycles.
- Comprehensive diagnostics are available via the LCD screen.
- Utilises "battery backed up" memory.



The *Axiom* contains a replaceable battery that maintains the memory.

CAUTION
 Danger of explosion if battery is incorrectly replaced.
 Replace only with the same or equivalent type recommended by the manufacturer.
 Dispose of used batteries according to manufacturer's instructions.

EXTERNAL PORTS

The following external ports are provided;

- MIDI In, Out and Thru.
- Audio input (stereo) for STL (Sound to Light).
- RS232 (computer interface).

CARING FOR YOUR AXIOM

The *Axiom* is manufactured from quality components and will give many years of service if you take some basic precautions.

- Do not allow any liquids or foreign objects to enter the *Axiom*. If any liquids are spilt onto the *Axiom*, the *inside* should be cleaned and dried as soon as possible. Only suitably qualified personnel should remove the covers and perform any such maintenance.
- Do not apply excessive force to any of the controls. Spare parts and service are available from your LSC agent, but prevention is better than cure.
- If your *Axiom* is to be used "on the road", then you should use the optional flight case to protect the desk.
- When the *Axiom* is not in use, protect it with the optional vinyl desk cover.
- When connecting any devices to the *Axiom*, make sure that all connections are correct before switching on the power. If any doubt exists, obtain the assistance of qualified personnel.

LABELLING YOUR AXIOM

Areas are provided below the faders for you to write identifying labels. You may either place a strip of tape on which to write, or you may write directly onto the acrylic surface of the *Axiom* with a spirit based marker pen. Any such labels may be removed with a soft cloth moistened with methylated spirits.

OPTIONS

The following options are available;

- Analogue output(s) (positive or negative 10 volt) to drive analogue devices such as analogue dimmers.
- 3.5 inch PC compatible Floppy Disk drive for the storage and recall of Shows.
- *Axiom* Floppy Disk "File Viewer" software that runs under "Microsoft Windows"©.
- 12 V Halogen gooseneck desk lamp. An inbuilt power/mounting socket is provided.
- Vinyl desk cover.
- Flightcase.

The *Axiom*, with its in built "HELP" screens, "operator prompts", intelligent flashing of valid keys to be pressed and colour coded faders, is extremely user friendly. You will find that you can operate the majority of the basic functions without referring to this manual. However, we do suggest that you take the time to read the manual because there are some very special features that need to be fully understood in order to get the most out of your *Axiom*.

MODELS

This manual covers all three models of the *Axiom*. All models have similar features and **vary only in the number of channels and scene masters that they support and their memory capacity.**

The three models are:

Axiom 12/24

Axiom 24/48

Axiom 36/72

The *Axiom* may be operated in any of three modes and the number of channels that may immediately be controlled by individual channel *faders* will vary, depending upon the current mode.

The model numbers above refer to the number of channels for each model in the different modes.

- In "WIDE preset" mode, there is an individual channel fader and solo key for every channel, up to the maximum number supported by that model. This number of channels is the higher number indicated in the model number above.
- In "Preset" and "Scene" modes, there is an individual channel fader and solo key for **half** of the maximum number of channels. This number of channels is the lower number indicated in the model number above.

For example, the *Axiom* 12/24 in preset and scene modes provides faders and solo keys for channels 1 to 12 and in wide preset mode it provides faders and solo keys for channels 1 to 24.

In this manual, the lower half of the channels are referred to as the **low** channels and the upper half are referred to as the **high** channels

In the above example of an *Axiom* 12/24, channels 1 to 12 are the low channels and channels 13 to 24 are the high channels.

At any point in this manual where the model affects the operational description, the text will describe the 12/24 channel model followed by the other two models in brackets.

For example,

"Press one of the 12 (24,36) <SOLO/ASSIGN> keys"

or

"The Yellow preset has faders for channels 1 to 12 (24,36)".

KEYSTROKE TERMINOLOGY

Certain keystroke terminology will be used to describe the particular operations being undertaken.

GENERAL KEYS

Any text enclosed in these symbols, < > , refers to when that particular key needs to be **pressed**.

For example; Press <PAGE> means to press the page key located to the left of the LCD screen.

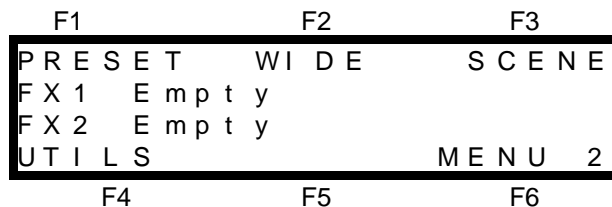
SOLO/ASSIGN keys are often abbreviated to S/A. The term S/A is often used on the *menus* of the *Axiom*'s LCD screen. If the key to be pressed is a SOLO/ASSIGN key (of which there are many) then it will be identified by naming it as follows; <SOLO/ASSIGN> (Name) or the shortened version <S/A> (Name) or <SOLO> (Name).

For example; Press; <SOLO/ASSIGN> (GRAB), refers to the Grab master's SOLO/ASSIGN key or press; <SOLO/ASSIGN> (5) refers to the channel 5 SOLO/ASSIGN key.

FUNCTION KEYS

The six function keys located above and below the LCD screen have varying functions depending upon the current state of the *Axiom*. Function keys are described by enclosing them in [] these brackets e.g. [F3 SCENE] refers to the top right function key when menu 2 is displayed. Pressing [F3 SCENE] would put the *Axiom* into "SCENE" mode.

The "current" function of each function key (if any), is indicated on the LCD screen in **UPPER CASE** letters adjacent to each key. Generally, any text on the LCD screen that is in both upper and lower case is information text only.



In the example above, function keys 1, 2, 3, 4, and 6 have current functions.

The *Axiom* utilises a "tiered" menu system. The menus allow you to make choices by pressing the appropriate function key. The choice that you make may present a further menu allowing further choices, or it may return you to the previous menu level.

To assist your understanding of when a particular choice has taken you to the next menu level or returned you to the previous level, the boxed function key labels *in this manual* are arranged from left to right across the page depending upon their level in the menu structure.

For example, pressing; [F4 UTILS] reveals the "UTILITIES" menu which contains the PREFS function. Pressing; [F5 PREFS] reveals the next menu level from which you can disable the DBO key by pressing; [F1 DBO], [F5 DISABLE].

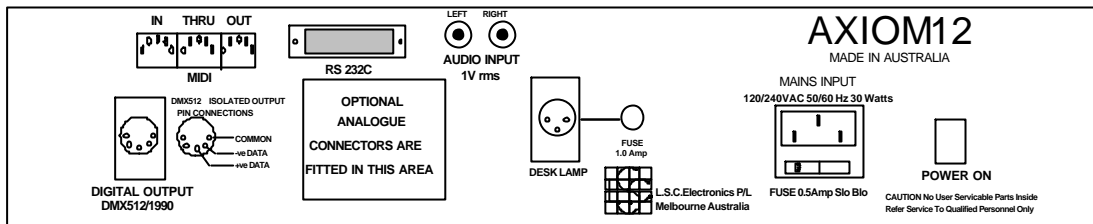
SOFTWARE

LSC Lighting Systems has a policy of continuous improvement of its products. As the *Axiom* is a computerised lighting desk, its software is subject to this policy as new features are added and existing features improved.

The software version of your *Axiom* is momentarily displayed on the LCD screen when the *Axiom* is switched on or may be viewed on the "ABOUT" screen via the "UTILS" menu.

REAR PANEL CONNECTIONS

All connections to the *Axiom* are located on the rear panel. The diagram of the rear panel below shows the layout of an *Axiom 12*. The *Axiom 24* and *Axiom 36* differ only in the number of optional analogue connectors that may be fitted.



Axiom 12 Rear Panel

MAINS INPUT

An IEC mains input socket is located on the rear panel and a mains lead is provided. The *Axiom* has been designed to operate from a variety of mains voltages. Before switching on, ensure that the correct setting has been set for your local mains supply. The current setting is indicated in a window on the fuse holder located in the base of the mains input socket.

The 120 position enables the *Axiom* to operate on a voltage range from from 85 to 130 Volts AC, 50 or 60 cycles per second (Hz)

The 240 position enables the *Axiom* to operate on a voltage range from from 170 to 260 Volts AC, 50 or 60 cycles per second (Hz)

If the setting is incorrect, squeeze the tabs on the side of the fuse holder and slide it out. Rotate the voltage select insert to reveal the correct voltage setting in the window. Replace the holder.

Plug the mains lead into the MAINS INPUT socket and connect it to a source of mains power.

DIGITAL OUTPUT (DMX 512/1990) CONNECTOR

A 5 pin female AXR connector provides an optically isolated DMX512/1990 digital signal for connection to your devices to be controlled, (dimmers, scrollers, moving fixtures etc). DMX512 is the industry standard *digital control* system for the transmission of control data between lighting equipment. DMX512 utilises a single pair of wires on which the information to control up to 512 channels is transmitted. When good quality data cables are used, DMX512 cable runs may be up to 1,000 metres in length.

If your equipment to be controlled, (dimmers, moving lights, scrollers etc) accepts a DMX512 signal, then simply connect a data cable from the DMX512 output of the *Axiom* to the DMX512 input of your equipment and set the required channel address on your equipment.

The pin connections for the DIGITAL OUTPUT connector are printed on the rear of the *Axiom* adjacent to the connector.

Note: *DMX512/1990 together with some typical setups and address settings are described in "Appendix A" at the end of this manual.*

SWITCHING ON

At this point, with the mains power and DMX connected, the *Axiom* is ready to be operated. Simply switch on the "POWER ON" switch located beside the mains input connector. The inbuilt neon in the switch will glow and the *Axiom* will commence its start up procedures. After briefly displaying the opening screen, the *Axiom* will commence operating in exactly the same state that it was in when it was last switched off. All the scenes, stacks, chases, patches etc will be as they were.

If you are starting a new lighting session, LSC recommends that you RESET the *Axiom* to avoid being confused by previous settings.

FUSE

The mains fuse is located in a slide out tray in the base of the mains input socket. Should the fuse blow remove the mains lead and slide out the fuse tray. Pop out the blown fuse and replace it with a 0.5 Amp slow blow fuse. A spare fuse is provided in the slide out fuse tray.

OTHER CONNECTORS

The following connections are only required if you wish to access some of the *Axiom's* additional features.

AUDIO INPUT CONNECTORS

Audio signals may be used to vary the intensity of lights in sympathy with the variations in the audio level. This is known as STL (Sound To Light) effects. Two RCA type connectors are provided to which you may connect a stereo audio signal for STL's. The audio signal should be normal "LINE LEVEL". Refer to the "STL" section for details on how to operate the STL function.

MIDI CONNECTORS

MIDI (**M**usical **I**nstrument **D**igital **I**nterface) is an international standard for data communication between musical instruments, computers and other equipment such as lighting desks.

Refer to the "MIDI" section for details on how to operate the MIDI functions.

RS 232C CONNECTOR

The RS 232C connector is a serial port that may be connected to a computer or VDU, allowing you to download the *Axiom* memory contents for viewing or printing and also for the previewing of Scenes, Stacks, Chases or the *Axiom's* output. A Serial Printer may also be connected. Refer to the "PRINT" and "TERMINAL" sections in the "UTILITIES" section for details.

DESK LAMP CONNECTOR

The optional goose neck desk lamp is connected to this socket. The socket provides both power and mounting for the lamp. If you have purchased the optional desk lamp, simply plug the goose neck into the connector and adjust the position of the lamp to illuminate the front panel. The desk lamp is separately fused from the main *Axiom* power supply. Should the desk lamp fuse blow, replace it with a 1 amp fuse.

ANALOGUE output CONNECTORS (OPTIONAL).

The **optional** analogue outputs provide an analogue control voltage (0 to positive 10 volts or 0 to negative 10 volts) on a one wire per channel basis to control older analogue dimmers.

Wiring details of the analogue connectors are given in "APPENDIX B".

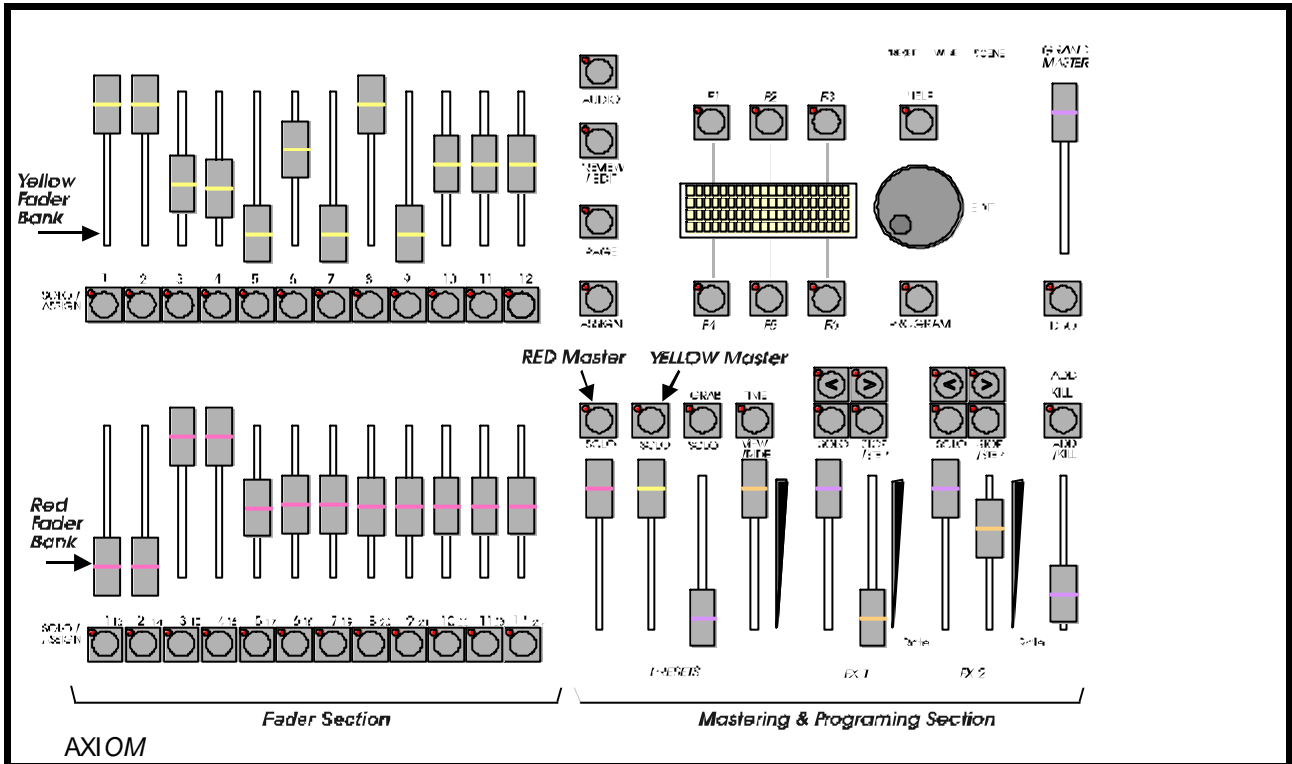
Section 4: GUIDED TOUR

LAYOUT

The front panel of the Axiom is divided into two main areas;

- The **fader** section on the left, consisting of the Yellow (upper) fader bank and the Red (lower) fader bank and their associated SOLO/ASSIGN keys.
- The **mastering and programming** section on the right.

Note: The size of the fader bank area varies depending upon the model, as it provides a fader for every channel. The mastering and programming section is identical for all models.



Front panel layout of an Axiom 12/24.

PRESET FADERS

The Yellow preset faders control the levels of channels 1 to 12 (24, 36).

The Red preset faders have different functions depending upon the current "MODE" of the Axiom as selected by the <MODE> key (see below).

- PRESET mode. They control the levels of channels 1 to 12 (24, 36). (A duplicate of the Yellow preset).
- WIDE Preset mode. They control the levels of channels 13 (25, 37) to 24 (48, 72).
- SCENE mode. They become Scene masters. There are 12 PAGES of memory for the Scene masters. You determine what each PAGE contains when you program (or copy) scenes into them.

Below each fader is a S/A (SOLO/ASSIGN) key with an integral red indicator LED. They may be used to:

- SOLO (flash or bump) the contents of their fader. (See also SOLO level and ADD/KILL key below).
- Provide a NUMERIC ENTRY function. When the "number" of a channel, scenemaster scene, stack, chase, etc needs to be selected, the appropriate <S/A> key "number" is pressed.

Below each **Red** fader are two numbers;

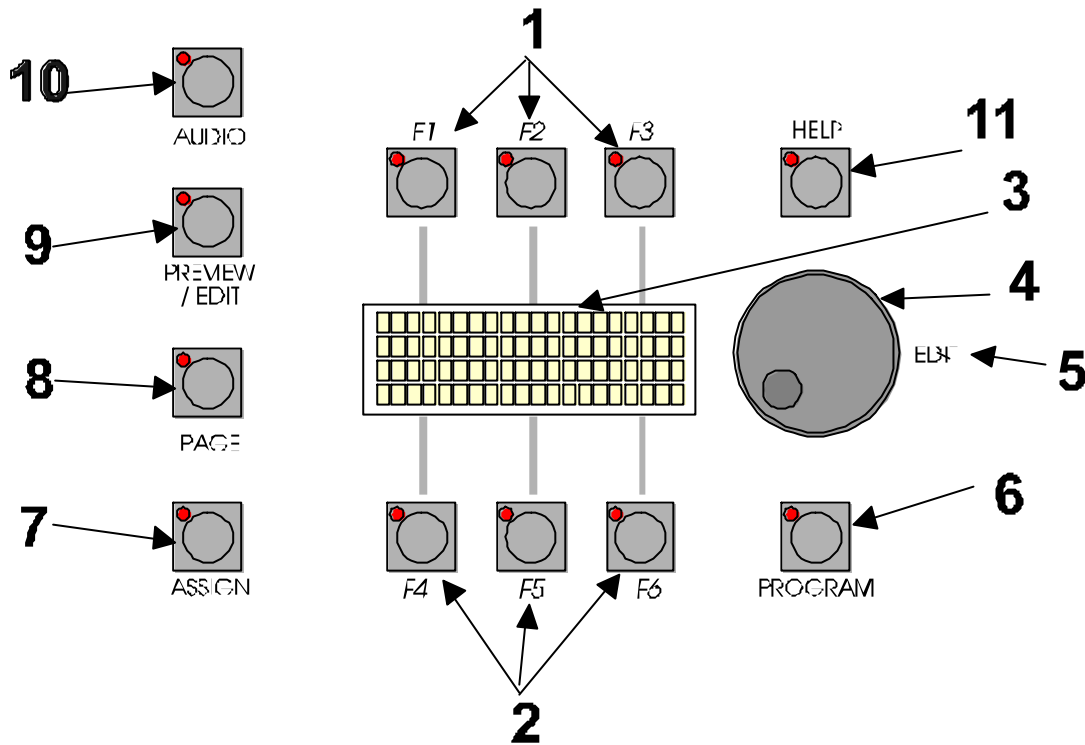
- The **LARGER** font is used for scenemaster scene, stack, chase, patch or page number entry. It also indicates the channel number in PRESET mode.
- The **SMALLER** font is used for channel number entry when previewing, editing or softpatching. It also indicates the channel number in WIDE mode.

When you are required to make a numeric entry, only valid S/A keys will be active and their LED will light. The brightness of each S/A key LED is proportional to the level of its channel:

- In normal operation, they indicate the level of their channel at the *output* of the Axiom.
- In Preview/Edit mode they indicate the level of their channel in the Scene or Step being previewed or edited.
- The S/A LED of a master will flash *slowly* whilst a timed fade is in progress

PROGRAMING SECTION

Extensive **Programming Editing** and **Previewing** facilities for Scenes, Chases, Stacks Patches & Sound to Light are provided by the LCD screen with its six associated function keys, dedicated keys and Edit Wheel. The function keys, LCD screen and edit wheel also provide access to user preferences, program lockout and passwords, floppy disk storage and recall, MIDI setups, diagnostics etc.



1&2. Function keys.

Six function keys (F1 to F6) located above and below the LCD screen have varying functions depending upon the current state of the Axiom. The "current" function (if any) of each function key is generally described on the LCD screen in UPPER CASE TEXT adjacent to that key. The Axiom uses an interactive "tiered" menu system utilising the LCD screen and function keys that guide you through all Programming Editing and Previewing operations. See "MAIN MENU" below for more details.

3. LCD Screen

A 20 character by 4 line back lit LCD (Liquid Crystal Display).

4. EDIT Wheel.

continuously rotatable and is used to:

- Adjust the level of channels or set fade times when editing.
- Set fade times when programming.
- Adjust STL audio levels.
- Scroll any messages on the LCD screen.
- Scroll through the dimmers on the Patch screen.
- Scroll through characters when entering names and labels.
- Manually control the time of a fade that was previously a timed fade in progress and has been taken over by the "TIME RIDE" function.

5. EDIT Wheel indicator.

Lights when the Edit Wheel is active.

6. PROGRAM key.

when pressed, it places the *Axiom* in Program mode. You may then choose to program a Scene, Stack, Chase, STL or Patch.

7. ASSIGN key.

when pressed, it places the *Axiom* in Assign mode. You may then choose to assign a Scene, Stack or Chase, to a master or select a particular STL or Patch number.

8. PAGE key.

when pressed, it places the *Axiom* in page select mode and displays the current page number.

9. PREVIEW/EDIT key.

when pressed, it places the *Axiom* in Preview /Edit mode. You may then choose to Preview or Edit any Scene, Stack, Chase, STL, the currently assigned patch or the contents of the Grab master or either FX master.

10. AUDIO key.

when pressed, it places the *Axiom* in STL "adjust" mode, allowing access to the frequency band sensitivity controls and overall volume control so that the currently assigned STL effect may be quickly optimised for varying audio signals.

11. HELP Key.

may be pressed at any time, irrespective of the mode or menu level that the *Axiom* is currently in. The help key indicator will light and the LCD screen will display a brief description of the purpose of the *current menu level* and tell you what to do to achieve the desired result. As some help screens contain more details than can be displayed on the screen at one time, you may page through the text with the **F5** (page up) and **F6** (page down) function keys or use the EDIT WHEEL to *scroll* up and down through the text. To exit from the help screen, simply press the help key a second time.

MAIN MENUS

There are four main menus on the LCD from which to choose. They are labelled in the bottom right of the screen as MENU 1, MENU 2, MENU 3 and MENU 4.

Pressing; [F6 MENU] will change to the next sequential menu with MENU 4 looping back to MENU 1. In this way you may step through all menus by repeated presses of; [F6 MENU]. As a short cut, you can always return immediately to MENU 1 from any other main menu by pressing; [F5], which is one of the lit but "unlabelled" function keys mentioned above.

From any of the four main menus, other menus may be selected by pressing *active* function keys, or any of the six dedicated keys. The choice that you make may present further menus allowing further choices, or it may return you to the previous menu level.

As a general rule, you may return to the previous menu level in one of three ways.

- Selecting "DONE" will accept any changes that you have made in a particular menu and return to the previous menu with all settings updated
- Selecting "CANCEL" will ignore any changes that you have made in a particular menu and return to the previous menu without updating any settings.
- Pressing any of the six dedicated keys a *second* time will cancel that selection and return to the previous menu without updating any settings.

MENU 1

Main MENU 1 provides the following functions and information.

	F1	F2	F3	
	E D I T - > P x x S y y		T R I M	
	FX 1 : S t k	# # S t p	# #	<
	FX 2 : C h s	# # S t p	# #	→→
	P x x	T x M x x S	M E N U 1	
	F4	F5	F6	

Pressing F1 will access the "Quick EDIT" function allowing you to quickly edit the indicated → Page xx, Scene yy, (the latest scene to be faded up). Refer to "Quick EDIT" in the "SCENES" section for details.

Pressing F3 will access the Output TRIM function. Refer to the "OUTPUT TRIM" in the "GUIDED TOUR" section for details.

If a Stack or Chase has been assigned to either of the FX masters, then the Stack or Chase number and its current step are shown in the middle two lines adjacent to the FX1: and FX2: labels. (The diagram above shows a STAck assigned to FX1 and a CHaSe assigned to FX2).

If a stack is assigned to an FX master, then its current state is shown on the right of the screen using the following symbols;

- < Current step (the stack is idle).
- ^ Crossfading to next step.

If a chase is assigned to an FX master, then its current state is shown on the right of the screen using the following symbols;

- Running forward
- ←← Running reverse
- Stopped
- ← Bounce
- ç Single Shot

The bottom line gives the "current" page as "Pxx". Beside the page number, the setting of the Time fader is given in minutes and seconds, or seconds and tenths of seconds, depending upon the position of the Time fader.

The bottom line also indicates that this is MENU 1 and that F6 will change to the next MENU.

MENU 2

Main MENU 2 provides the following functions and information;

F1	F2	F3
P R E S E T	W I D E	S C E N E
F X 1 : S t k	# # S t p	# # <
F X 2 : C h s	# # S t p	# # →→
U T I L S		M E N U 2
F4	F5	F6

You may change the mode (PRESET, WIDE, or SCENE) that the Axiom is operating in by pressing the appropriate function key.

The information given beside the FX1 and FX2 labels is identical to that in MENU 1.

The bottom line indicates that the F4 key will access the "UTILities" menu, that this is MENU 2 and that F6 will change to the next MENU.

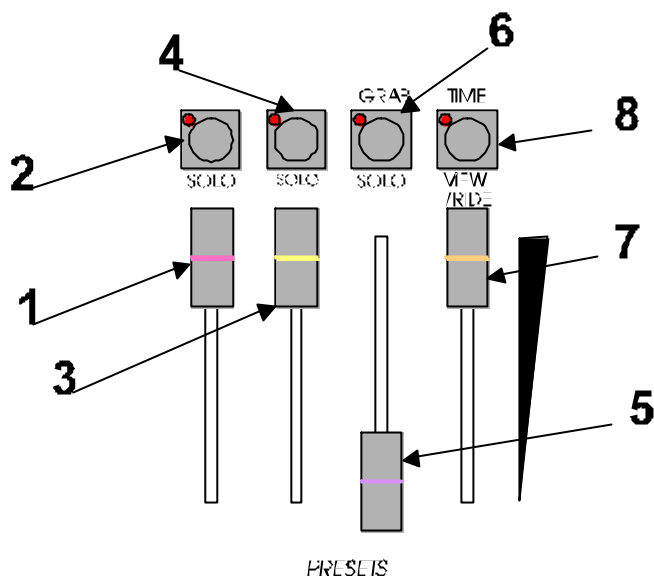
MENUS 3 AND 4

MENU 3 and MENU 4 are identical to each other, except that MENU 3 gives expanded details about the state of FX1 and MENU 4 gives expanded details about FX2.

The FX masters may have either a Stack or a Chase assigned to them (or they may be empty) and the information on the menus will differ slightly depending upon what is assigned.

Details and an example of menu 3 with a Stack assigned are given in the "STACKS" section and details and an example of menu 4 with a chase assigned are given in the "CHASES" section.

PRESET MASTERS

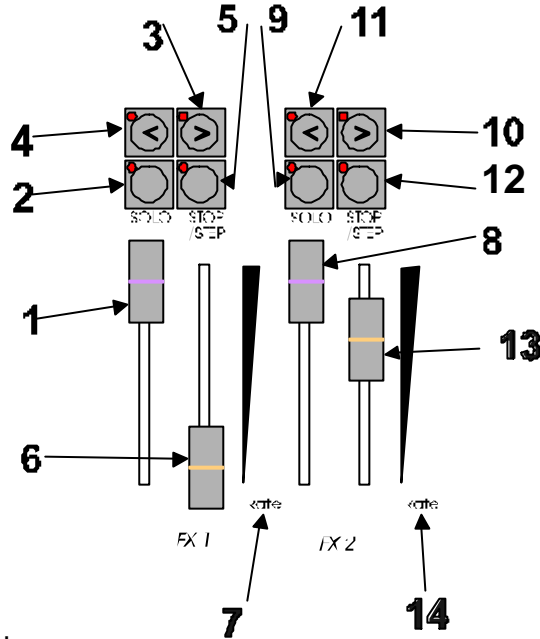


- 1.** Red Preset Master.
Controls the overall level of the Red preset, be it the high channels in "Wide preset" mode, low channels in "Preset" mode or Scenes in "Scene" mode.
- 2.** Red Solo/Assign key.
Solo's (flashes) the Red preset to the level set by the Add/Kill master. The brightness of its red indicator (LED) shows the level of the Red master at the output of the *Axiom*. It also will flash *slowly* whilst a timed fade is in progress.
- 3.** Yellow Preset Master.
Controls the overall level of the Yellow preset, (the low channels). The operation of the Yellow preset master may be inverted (full level at lower position) via the "UTILITIES" menu.
- 4.** Yellow Solo/Assign key.
Solo's (flashes) the Yellow preset to the level set by the Add/Kill master. The brightness of its red indicator (LED) shows the level of the Yellow master at the output of the *Axiom*. It will also flash *slowly* whilst a timed fade is in progress.
- 5.** Grab Master.
Controls the overall level of the contents of the Grab master. This may consist of a "Grab", a "STL" effect or an assigned "Scene".
- 6.** Grab Solo/Assign key.
Solo's (flashes) the contents of the Grab master to the level set by the Add/Kill master. In conjunction with the Assign key, it performs the "GRAB" function to load the grab master, or selects the grab master when required for other various functions, as prompted by the LCD screen. The brightness of its red indicator (LED) shows the level of the Grab master at the output of the *Axiom*. It also will flash *slowly* whilst a timed fade is in progress.
- 7.** Time Fader.
Controls the fade time of the Preset masters and may be assigned to control the fade time of any Scene master.
- 8.** Time View/Ride key.
Allows the "programmed" fade time of a Scene master or Preset master to be VIEWed or allows you to take over a timed fade in progress and RIDE it manually.

Note: Although the View/Ride key is located above the time fader it is not directly associated with it in the way that a Solo/Assign key is associated with a fader. The time fader merely allows a readily adjustable means of setting a common fade time for all masters that have the Time master assigned as their time source.

FX (EFFECTS) 1 & 2 MASTERS

The Axiom provides two FX masters which may be used to control the playback of "Stacks" or "Chases". The FX masters provide comprehensive control over their output. Their output level is controlled by their master fader and their output may also be flashed with their SOLO key. Their effects may be set to run automatically, may be started, stopped, changed in direction, manually stepped, instantly snapped to their next or prior step and their rate of stepping may be programmed in memory or manually controlled with their own rate fader. The operation of the FX keys vary depending upon whether a Stack or a Chase is assigned. The precise functions are described in the "STACK" and "CHASE" sections.



FX 1 and FX2 are two **identical** effects masters that provide comprehensive playback facilities.

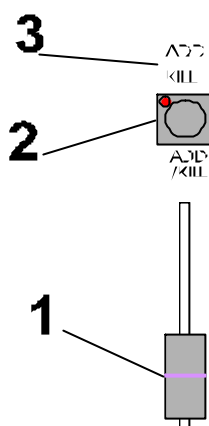
- 1.** FX1 Master.
Controls the overall level of FX1.
- 2.** FX1 SOLO/ASSIGN key.
Solo's (flashes) FX1 to the level set by the Add/Kill master. The brightness of its red indicator (LED) shows the level of the FX1 master at the output of the Axiom. The indicator will flash when the FX master is a valid choice in response to a selection request from the Axiom.
- 3.** FX1 Forward > key.
Generally crossfades a stack in the forward direction or runs a chase in the forward direction.
- 4.** FX1 Reverse < key.
Generally crossfades a stopped stack in the reverse direction or runs a chase in the reverse direction.
- 5.** FX1 STOP/STEP key.
Stops an executing fade in a Stack.
Stops a running chase. Steps a stopped chase.
- 6.** FX1 Rate fader.
Provides manual control of the rate of chase or the fade time of a stack.
- 7.** FX1 Rate fader indicator.

Lights when the rate fader is active.

Numbers 8 to 14 apply to FX 2 and perform functions which are identical to the controls for FX1.

ADD KILL MASTER.

The ADD/KILL section affects the output of the *Axiom* when any of the SOLO/ASSIGN keys are pressed. The default behaviour of the SOLO/ASSIGN keys is to act as "SOLO" (flash) keys. Their effect on the output of the *Axiom* is determined by the setting of both the ADD/KILL mode key and the level of the Add/Kill Master. When a solo key is pressed, you may choose to simply ADD its channels to the output or to KILL the normal output *and* ADD its channels



The Add/Kill section works in conjunction with the SOLO/ASSIGN keys.

1. ADD/KILL MASTER

sets the level to which any HTP channels, scenes, presets, or FX, will be flashed when their respective SOLO/ASSIGN key is pressed.

2. ADD/KILL key

toggles the Add/Kill mode between "Add" and "Kill".

toggles the Add/Kill mode between "Add" and "Kill".

- In ADD mode, soloed channels add to the current output.
- In KILL mode, soloed channels replace the current output.

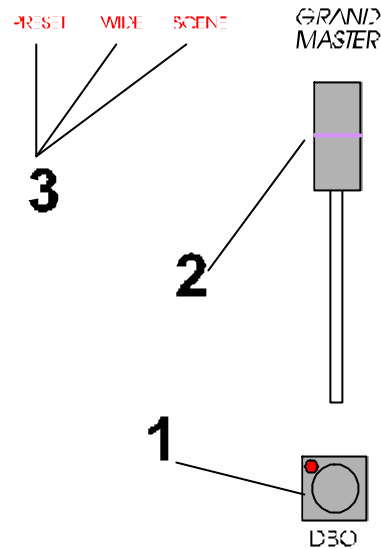
Note : *Multiple Solo/Assign keys may be pressed at the one time.*

3. Add/Kill MODE indicator.

The **current** mode is always indicated by a red backlit indicator above the Add/Kill key.

GRAND MASTER

The "Grand Master" has overall control of the level of all HTP channels in the *Axiom*. Below the grand master is the DBO (Dead Black Out) key.



1. DBO (**D**ead **B**lack **O**ut) key.

Pressing the DBO key will instantly kill the output of the desk. The operation of the DBO key may be varied by the user via the "UTILITIES" menu. The options are:

- Enabled (press to DBO / press **again** to unDBO)
- Disabled (DBO key is inoperative)

2. GRAND MASTER.

controls the level of the total output (of all HTP channels) of the *Axiom*.

3. MODE INDICATORS

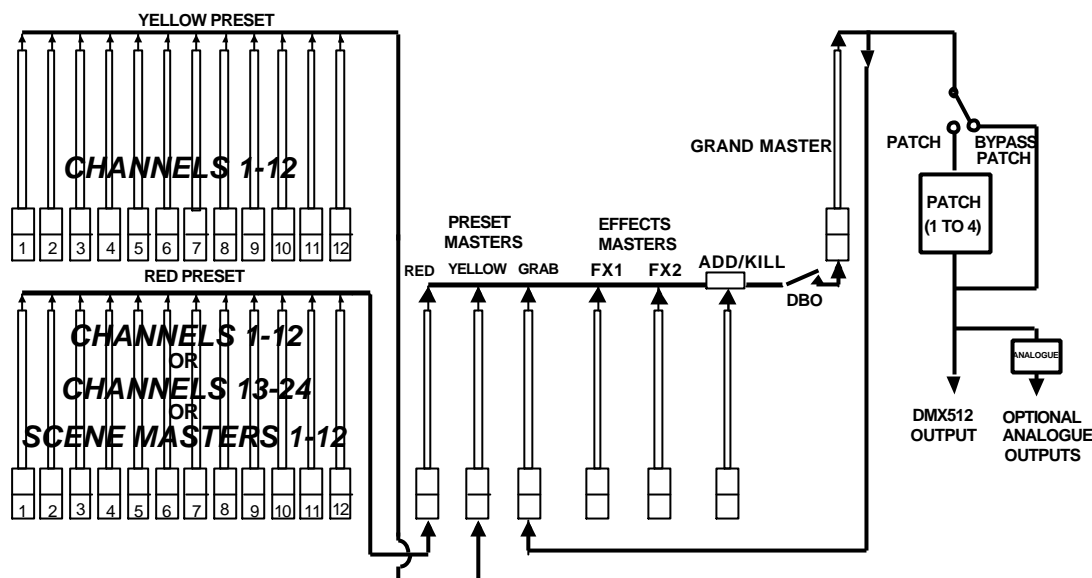
show the current operating mode (Preset, Wide preset or Scene) of the *Axiom*. The required mode is selected using the function keys via menu 2. The **current** mode is always indicated by a red backlit indicator(s).

Note; In WIDE Preset mode, both the WIDE and PRESET indicators are lit.

AXIOM STRUCTURE

The **basic** structure a 12/24 channel *Axiom* is shown in the following simplified block diagram. The larger *Axiom* models differ only in the number of channels provided. The bold lines show the flow of channel level information through the *Axiom*.

This description applies only to HTP channels. LTP channels do not behave like HTP channels in that they are not influenced by the level of any preset master, grab master, either FX masters or the Grand master. LTP channels are described in the "MOVING FIXTURES " and "PATCH" sections. In the descriptions of the various operating modes later in this section, the patch is omitted (bypassed) to simplify the diagrams.



Simplified block diagram of a 12/24 Axiom.

The patch is shown **bypassed**, hence, **all channels** are **HTP** types, (as LTP types can only be set in the patch). Bypassing the Patch and dealing with HTP channels only, simplifies the explanation and operation of the Axiom.

The output of the Yellow preset, (the low channels), is under control of Yellow preset master and feeds into the Add/Kill section. The output of the Red preset, which may be the low channels or the high channels or scenes, depending upon the mode of operation, is under control of the Red preset master and feeds into the Add/Kill section. The contents of the grab section which may be either grabs ("snapshots"), a scene, or a STL (Sound To Light) effect, is under the control of the Grab master and also feeds into the Add/Kill section.

The two **FX** (Effects) **masters**, which may contain either stacks or chases, are under the control of their individual FX masters and are also fed to the Add/Kill section.

All of the above outputs enter the Add/Kill section which controls the **total** output when any Solo/Assign key is used for Soloing, (flashing).

The output of the Add/Kill section is fed to the DBO (Dead Black Out) key and onto the Grand Master which controls the entire output.

The output of the Grand Master may be fed to the patch (where desk channels may be patched to different dimmer outputs) or the patch may be bypassed (as shown).

MODES OF OPERATION

The Axiom has 3 modes of operation;

- PRESET • WIDE • SCENE

The different modes only affect the operation of the RED preset faders.

- PRESET mode. The Red preset controls the levels of channels 1 to 12 (24, 36), (a duplicate of the Yellow preset).
- WIDE Preset mode. The Red preset controls the levels of channels 13 (25, 37) to 24 (48, 72).
- SCENE mode. The Red preset faders become SUBMASTERS and control the levels of scenes that may be programmed or copied into the submasters. Twelve pages of scene memory are available.

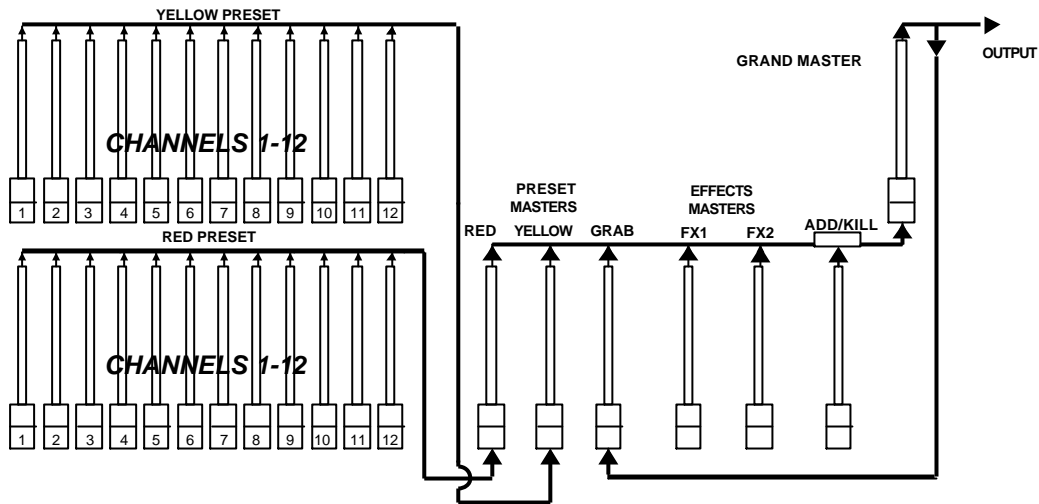
You may freely change modes at any time during your operation of the Axiom and the current mode is **always shown** by the MODE indicators beside the Grand master.

Each mode has its particular advantage for different types of operations.

PRESET MODE

Two identical presets (Yellow and Red) provide duplicate faders for the low channels, 1 to 12 (24, 36). The output of each preset is controlled by its own Preset master.

The fade times of the preset masters are set by the time fader.

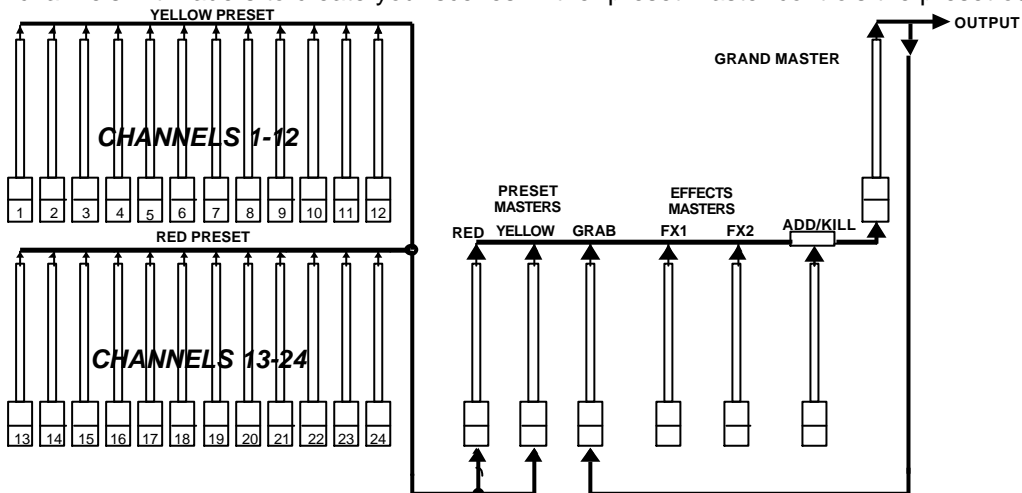


Simplified block diagram of a 12/24 Axiom in **PRESET** mode.

This simple mode of operating is most useful in unrehearsed situations where the next “look” needs to be created blind “on the fly”. The channel faders provide instant “hands on” control of any channel level.

WIDE PRESET MODE

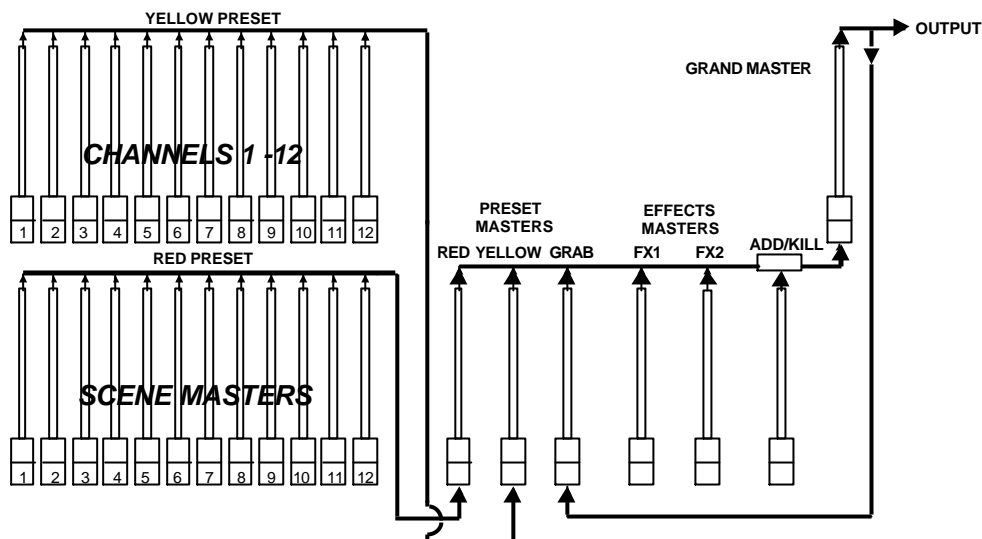
Wide preset mode utilises both the red *and* yellow fader banks as a *single* manual preset of 24 (48, 72) channels. The yellow faders control the low channels and the red faders control the high channels. There is an individual fader for **every** channel. This is most useful when you are PROGRAMMING scenes as you can access ALL channels with faders to create your scenes. Either preset master controls the preset output.



Simplified block diagram of a 12/24 Axiom in **Wide** preset mode.

SCENE MODE

In Scene mode the faders of the red fader bank become Submasters containing **scenes**. There are 12 (24,36) Scenemasters with 12 pages of memory available.



Simplified block diagram of a 12/24 Axiom in **SCENE** mode.

Note; Scenes can be programmed, previewed or edited and all channels may be controlled via the edit wheel whilst operating in any of the three modes.

MEMORY STRUCTURE

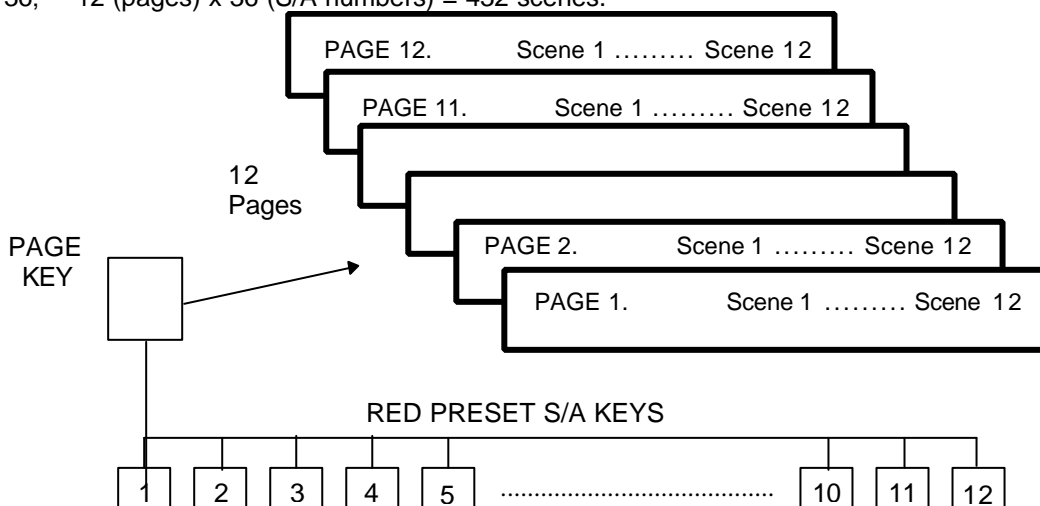
Memory is divided into several areas.

- Scenemaster memory defined by PAGE and Red preset number.
- Chase memory defined by Red preset S/A number.
- Stack memory defined by Red preset number.

SCENEMASTER MEMORY

Scenemaster scenes are stored in the Red Preset Scenemasters. There are 12 PAGES of memory with 12 (24,36) scene numbers in each page. The PAGE key selects the page and the RED Preset S/A keys select the scene number. The **contents** of each number in each page is determined by what you **program** into them. The memory capacity of each model is;

- Axiom 12; 12 (pages) x 12 (S/A numbers) = 144 scenes.
- Axiom 24; 12 (pages) x 24 (S/A numbers) = 288 scenes.
- Axiom 36; 12 (pages) x 36 (S/A numbers) = 432 scenes.

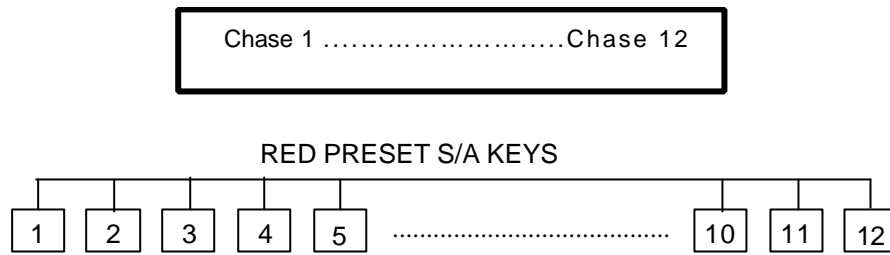


Axiom 12 Scene Memory

In Scene mode, when you change pages, the scenes from the selected page are automatically assigned to their respective scene masters.

CHASE MEMORY

- There are 12 (24, 36) chases.

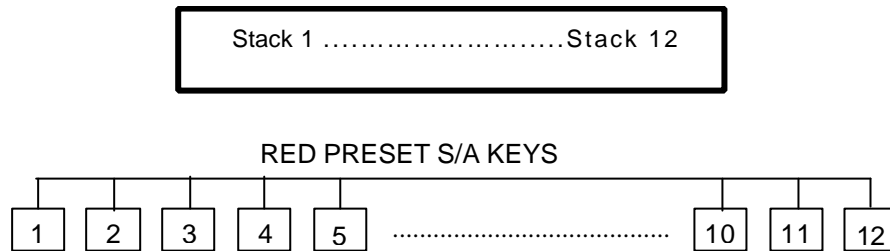


Axiom 12 Chase Memory

The Red Preset S/A keys are used to select Chases that may be assigned to the FX masters.

STACK MEMORY

- There are 12 (24,36) stacks.



Axiom 12 Stack Memory

The Red Preset S/A keys are used to select Stacks that may be assigned to the FX masters.

MODE /PAGE FREEZE

A "FREEZE" feature prevents the contents of any Red preset fader from being changed if it is active when a different PAGE or MODE (Preset, Wide or Scene) is selected.

The current contents of any active fader is held until such time as the active fader is faded down below about 5%. When it is faded down, it will be automatically updated with its pending assignment for the new mode or page. This prevents scenes, chases or channels "crashing in" on stage if their fader is contributing to the output when a different mode, or page is selected.

FREEZE INDICATORS

RED PRESET

Whenever there is a pending scene or channel due to a MODE/PAGE FREEZE, the indicator in the VIEW/RIDE key will flash. To see which fader(s) is pending, quickly tap and release <VIEW/RIDE>. The indicators in the <S/A> keys of any pending red preset faders will now flash together with the VIEW/RIDE key. To exit from VIEW mode either press; <VIEW/RIDE> again, or press; [F6 DONE].

GRAB MASTER

The Grab master is a multi function master. It can be used as;

- A Grab master.
- A Scene master.
- A STL (Sound To Light) master.

You change its function by simply assigning either a Grab, a Scene or a STL to it.

GRAB MASTER

The Grab master allows you to "GRAB" and maintain the current output of the Axiom in the Grab master. The Grab master takes a "snapshot" of the Axiom's output and maintains the look. This allows the master(s) currently producing the output to be faded down so that the next look may be preset blind.

The Grab master is often referred to as a "Phantom" preset. To "Grab" the output of the Axiom, press; <ASSIGN> <SOLO> (GRAB).

Note; Mode/Page freeze rules apply. See "MEMORY STRUCTURE" for details.

By default, the fade time for the Grab master is controlled by the Time Fader (beside it). The contents of the Grab master (including its fade times), may be previewed and edited, exactly the same as a scene master. Refer to "PREVIEWING A SCENE" and "EDITING A SCENE" in the "SCENES" section. Refer to the "TUTORIAL" section for typical "Grab" operations.

SCENE MASTER

Any Scene from any Page may be assigned to the Grab master. The Grab master then performs like any other Scene master. The fade times are determined by the time settings that have been programmed into the assigned Scene. To assign a scene from any page of memory, to the Grab master press; <ASSIGN> [F6 SCENE] <PAGE> <S/A> (page number optional) <S/A> (scene number) <S/A> (Grab master).

Note; Mode/Page freeze rules apply. See "MEMORY STRUCTURE" for details.

The Scene in the Grab master may be previewed and edited, exactly the same as a scene master. Refer to "PREVIEWING A SCENE" and "EDITING A SCENE" in the "SCENES" section.

STL MASTER

Any of the 12 (24, 36) STL effects may be assigned to the Grab Master. To Assign an STL press; <ASSIGN> [F2 STL] <S/A> (STL number), <S/A> Grab). The Grab master acts as a master controlling the overall level of the STL effect. Refer to the "STL (Sound To Light)" section for full details on STL effects.

Note; Mode/Page freeze rules apply. See "MEMORY STRUCTURE" for details.

SOLO

The following discussions refer to HTP channels. LTP channels and their actions when SOLO/ASSIGN keys are pressed are described in the "MOVING FIXTURES AND SCROLLERS" section.

OVERVIEW

The SOLO section of the Axiom utilises the SOLO/ASSIGN keys to provide extensive soloing control of channels and masters. "Soloing" is sometimes known as "flashing" or "bumping". You may Solo any channel or multiple channels, any Scenemasters, any Preset master or any multiple combination of the above at the one time. The only limit is your ability to hold down multiple keys. The Solo function is a momentary action. As soon as **all** Solo keys are released, normal output is restored. There are no times associated with the SOLO function. All actions are instantaneous.

ADD/KILL MODE

You may select what effect the Solo keys have on the *output* of the Axiom, by selecting either ADD mode or KILL mode. Pressing the ADD/KILL key will toggle from one mode to the other.

Kill mode is indicated when LED indicator in the ADD/KILL key flashes.

- In ADD mode, pressing any SOLO key will simply add the solo'ed channels to the output (at the SOLO fader level) without having any effect on the current output of the Axiom.
- In KILL mode, pressing any SOLO key will add the solo'ed channels to the output (at the SOLO fader level) and at the same time it will KILL (black out) all other output of the Axiom.

SOLO FADER

The SOLO fader sets the solo'ed *level* for individual channels at the output of the SOLO section. For the contents of any Scenemaster or FX master, it sets the *percentage* of the channel's *programmed* level. For example, if the Solo fader is set to its mid (50%) position;

- Soloed **channels** will come on at a level of 50%.
- If a scene is Soloed and it contains a channel at a level of 80% then that channel will come on at 40% (50% of 80%).

Warning; Setting the SOLO LEVEL fader to minimum and the ADD/KILL mode to KILL will cause all of the SOLO keys to act as DBO (Dead Black Out) keys because pressing a SOLO key will cause its channel(s) to come on at 0% and all normal output to be killed.

Hint; To safeguard against inadvertently "flashing" any lights on stage or killing the output, you can set the SOLO LEVEL fader to minimum and the ADD/KILL mode to ADD. Pressing any SOLO key will now have no affect

FADE TIMES

The *Axiom* utilises times in the following manner;

MANUAL FADES

CHANNEL FADERS, ADD/KILL, & GRAND MASTER

Individual CHANNEL faders, the ADD/KILL master and the GRAND MASTER operate manually. They may not be programmed with times. All solo (add/kill) actions occur instantaneously.

TIMED FADES

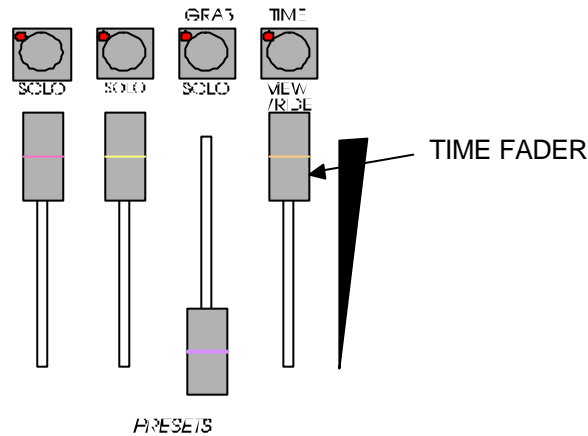
The times that are used when a timed fade is executed may come from various sources depending upon where the fade is occurring.

- For HTP channels, the time may come from the Time fader, the Rate fader or it may be programmed in memory.
- For LTP channels, the time is always programmed in memory.

TIME SOURCES

TIME FADER

The Time fader always controls the fade time for the Red and Yellow Preset masters. It may also be used to control the fade times of Scene masters and the Grab master.



The longest time (11 minutes) is when the Time fader is at its top position and the shortest time (0 seconds, or fully manual) is when the Time fader is at its bottom position. The intermediate times that can be set are on a sliding scale starting with increments of 0.1 seconds at the bottom position and gradually increasing until the increments are in minutes at the top position.

The current time setting of the Time fader is always displayed on the bottom line of main menus 1, 3 and 4, for example a setting of 1.9 seconds is shown as;

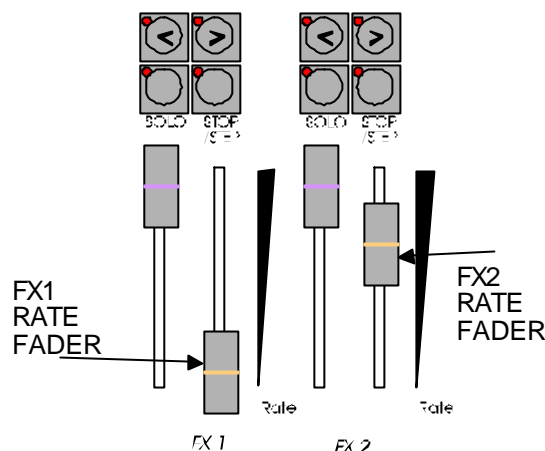
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EDIT - > P 1 S 1          T R I M
FX 1 : E m p t y
FX 2 : E m p t y
P 0 1 T 1 . 9 S          M E N U 1
    
```

This display may be in seconds and tenths of seconds, for example; **'T 7.3 S'** which indicates a fade time of 7.3 seconds or in minutes and seconds or; **'T 1m 30s'** which indicates a fade time of 1 minute and 30 seconds.

RATE FADERS

Each of the FX masters has its own Rate fader which may provide manual control of the rate of a chase or manual control of the fade times of a stack.



The fade time of a step in a stack is adjustable between 0 seconds and 11 minutes, exactly the same range as provided by the Time fader above.

The rate of a chase is adjustable from 0 to 999 BPM (Beats Per Minute).

If a Rate fader is active, its red backlit "RATE" indicator is lit and its setting is displayed on the screen. Menu 3 gives the setting for FX1 and menu 4 gives the setting of FX 2. Rate fader settings are distinguished from programmed settings by the letter "M" (manual) beside the time reading.

PROGRAMMED TIMES

Scenes, Steps in a Stack and Chases may have their times programmed in memory. This allows every scene, step, and chase to have its own exclusive time.

PRESET MASTERS, SCENE MASTERS, FX MASTERS

For these sections of the *Axiom*, the influence of time settings varies depending upon the type of channel, either **HTP** or **LTP**.

HTP CHANNELS

PRESET MASTERS

Both the Red and Yellow Preset masters always fade at the rate set by the time fader.

The setting of the time fader is shown at the bottom of the LCD screen on menus 1, 3 & 4.

When a Preset master is moved, the output of that master will always progress towards the current position of that master at a rate set by the time fader.

For example, if a fade time of 3 seconds has been set, then the Preset master must be moved from one end to the other in less than 3 seconds for the fade to take 3 seconds to execute. If the Preset master was only faded to the half way position, then the fade would take 1.5 seconds to reach that point and then stop. If the Preset master was then moved to the end of its travel, the fade would take another 1.5 seconds to complete.

A fully manual fade is achieved by setting the Time fader to 0 seconds. The fade will then instantly follow the position of the Preset master movement.

SCENE MASTERS

Just like a Preset master, a Scene master's fade will always progress towards the current position of the fader at a rate set by the fade time.

Unlike a Preset master, a Scene master may derive its fade time either of two sources and you may program separate IN (up fade) and OUT (down fade) times for every scene. When you program or edit a scene, you may choose to change the time source from the Time fader (the default setting) to a time that you set via the function keys or edit wheel.

The IN time may be set to either;

- MAN (Time Fader)
- Programmed time.

The OUT time may be set to either;

- = IN (a copy of the IN time)
- MAN (Time Fader)
- Programmed time.

Apart from its unique fade times, the programmed timed fade is identical in operation to a Time fader fade in that the fade will always progress toward the current position of the Scene master at a rate set by the time settings. On upward movements of the Scene master the IN time will be used and on downward movements of the Scene master the OUT time will be used.

As before, a fully manual fade is achieved by setting a fade time of 0 seconds. This may be either a Time fader setting of 0 seconds or a programmed time of 0 seconds.

FX MASTERS

STACKS

When you program or edit a Stack, you may choose to set the time source from either the Rate fader or a Programmed time that you set via the function keys or edit wheel. You may program separate IN (up fade) and OUT (down fade) times for every step.

The IN time may be set to either;

- MAN (Rate Fader)
- Programmed time.

The OUT time may be set to either;

- =NXT (a copy of the IN time of the **NEXT** step in the stack)
- MAN (Rate Fader)
- Programmed time.

When the > key on an FX master is pressed the transition from one step to the next step of the stack will be a DIPLESS crossfade with the outgoing step fading out in its OUT time and the incoming step fading in its IN time. If the outgoing step is programmed with its OUT time set as OUT =NXT, then the OUT time used for this outgoing step will be equal to the IN time of the Next (*incoming*) step.

Refer to the "STACKS" section for more details.

CHASES

When a **Chase** is assigned to an FX master, it will step at the programmed rate or the rate may be manually controlled by that FX master's Rate fader. Chases usually 'snap' from step to step but they may also be programmed to **fade** from step to step and the fade *time* may be set to be a percentage of the step *rate*. Refer to the "CHASE" section for more details.

The FX master **level** faders operate manually. They may not be programmed with times.

LTP CHANNELS

LTP channels are fully explained in the "MOVING FIXTURES " section. The following description only gives a brief overview of LTP channels with respect to times.

PRESET MASTERS

LTP channel levels are not influenced by the **Preset** masters and hence any settings of the **Time** fader are irrelevant.

SCENE MASTERS

Every scene may have an individual LTP fade time programmed into it.. When a scene is faded up, all the LTP channels in that scene will fade up at the LTP fade time programmed into that scene. This fade up occurs as soon as the Scene master is raised above and continues irrespective of the any further fader movement.. When a scene is faded down, all LTP channels **do not change**. Each LTP channel will only change when another scene master containing that LTP channel is faded up from the fully down position. This new level may be any value including zero.

FX MASTERS

Scenes that contain LTP channels and that are assigned to a step in a Stack or a Chase will respond in the same manner as they do when controlled by a Scene master (above) in that they will only change to a new level if they are programmed into the incoming step. When a step in a stack is fading out, the LTP channels will not fade unless they have a new level in the incoming step. An individual LTP time may be programmed for every step. By default, the LTP time of each scene will be used in each step, however you may modify these times independently of the original scene LTP times.

LTP channels are only used when you are controlling Moving fixtures or colour scrollers.

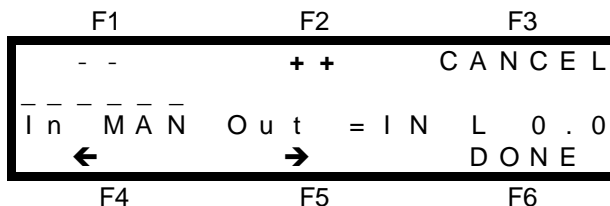
DEFAULT TIMES

When you are programming times, the *Axiom* will offer you "default" time settings for you to use. The factory default times are;

In MAN

Out =IN (for scenes) =NXT (for stacks)
 L (LTP) 0.0

You may set your own default times. From menu 2 press; [F4 UTILS], [F5 PREFS], [F5 TIMES], [F1 TIME]. The following menu appears;



You select the time that you wish to alter by positioning the highlight bar (----) over the time name by using the F4 ← and F5 → function keys. When a time is selected, it may be quickly varied by using the EDIT wheel or it may be incremented in single steps with the F2 ++ key or decremented with the F1 -- key. A time may be snapped to minimum or maximum by tapping F1 or F2 once, then quickly pressing again and **holding**.

When the IN time is incremented above the "MAN" (Time fader) setting, it changes to a "programmed" time. When a "programmed" IN time is decremented below 0.0 seconds, it changes back to "MAN". In a similar fashion, when the OUT time incremented, it changes from "=IN" to "MAN" and when incremented again it changes to a "programmed" time. When a "programmed" OUT time is decremented below 0.0 seconds, it changes back to "MAN" and when decremented again it changes to "=IN". Setting a default OUT time of "=IN" will result in scene default OUT times of "=IN" and stack default OUT times of "=NXT"

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. These values will be used by the Axiom when you use the "rapid programming" techniques described in the "SCENES" and "STACKS" sections.

You can quickly restore the default times back to their factory settings by pressing; [F4 UTILS], [F5 PREFS], [F5 TIMES], [F2 FACTRY], [F6 OK].

FADE IN PROGRESS INDICATION.

When a timed fade is occurring on any master (either from the Time fader or a Programmed time), and regardless of whether it is a HTP time or a LTP time, the indicator LED on that Masters SOLO/ASSIGN (S/A) key will flash quickly to indicate that a timed fade is in progress.

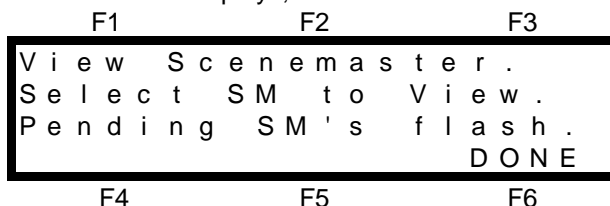
VIEW/RIDE

As its name implies, the VIEW/RIDE key is a multi function key.

- It permits you to VIEW the current contents and output level of any Channel faders, Scene masters, Preset masters or the Grab master together with the fade times and a *dynamic* readout of the "time to go" on any fade in progress.
- It allows you to temporarily RIDE (vary) any programmed fade time in any Scene master or in a scene assigned to the Grab master.
- It flashes to indicate that a Scene master or channel fader has a 'PENDING' scene or channel due to a 'Mode/Page Freeze'.

VIEW

To view the contents of any Channel fader, Scene master, Preset master or the Grab master, quickly tap (and release) the VIEW/RIDE key and the screen displays;



As prompted by the screen, press the S/A key of the Channel fader, Scene master, Preset master or Grab master that you wish to view. The screen will display the information for your selection as shown below.

F1 F2 F3

```

E n d   - - - s           L v l   # # # %
P x x   S y y   - '
I n   # . #   O u t   # . #   L   # . #
S M   # #   V i e w   S c n   D O N E
    F4             F5             F6
    
```

The bottom line tells you that this fader is SM (Scene Master) number ## and that you are Viewing a Scn (Scene). The actual page number and scene number of the scene that is currently assigned to this scene master are given on the second line together with the scene name (if any) shown as ' ' above.

The third line gives the current In, Out and L (LTP) fade times for this master.

The top line gives an *dynamic* readout of the time to go to the *End* of any fade that is in progress on this master. The top line also gives a *dynamic* readout of the Lvl (Level) of this master at the OUTPUT of the Grand master (but prior to the patch). This level may be different to the current fader position due to a fade time being executed.

To view the contents of a different fader or master simply press the S/A key for that fader or master. You may switch between any master or any fader without exiting this mode.

- If you view a Preset master or the Grab master, the display is similar to a Scene master but without the scene details.
- If you view a Channel fader, the display only gives the channel number and the dynamic readout of the Lvl (Level) of the channel at the OUTPUT of the Grand master (but prior to the patch). HTP channels are shown in the range 0% to 100%. LTP channels are shown as either a level in the range 000 to 255 or N/C (Not Connected), if the fader does not currently have control of the channel.

To exit from VIEW mode either press; <VIEW/RIDE> again, or press; [F6 DONE].

RIDE

Ride allows you to temporarily vary the programmed fade time in any Scene master or in a scene assigned to the Grab master. This allows you to vary a programmed scene fade time "on the fly". It is invaluable when unexpected changes occur in a performance and you need to slow down a fade or quickly end a long fade. The variation that you make is only applied whilst the RIDE function is assigned to the particular Scene master. If you assign the RIDE key to another Scene master or de-select RIDE, then the varied Scene master will revert to its original programmed time setting.

The variation that you can make is in the form of a percentage change to the programmed time.

- When you select RIDE, the fade RATE is at 100% of the programmed time. That is, the fade time is unaltered.
- To speed up the fade, you can increase the programmed time by up to 400%.
- To slow down the fade, you can decrease the programmed time, down to 0%, that is, you can stop the fade.

To ride the fade time of any Scene master, press and HOLD the VIEW/RIDE key until the RIDE Scene master screen appears, (about 1 second).

```

          F1             F2             F3
R i d e   S c e n e m a s t e r .
S e l e c t   S M   t o   R i d e .
                                D O N E
    F4             F5             F6
    
```

As prompted by the screen, press the S/A key of the Scene master that you wish to ride. The screen will display the information for your selection as shown below. The EDIT WHEEL becomes active and is used to set the PERCENTAGE change to the fade RATE. You may 'RIDE' the fade by making continuous adjustments to the RATE of the fade and so speed it up or slow it down, whilst the fade is in progress.

To ride a different Scene master simply press the S/A key for that fader. You may switch between any Scene masters without exiting this mode.

```

          F1             F2             F3
E n d   - - - s           P x x   S y y
L v l   # # # %           R a t e   # # # %
I n   # . #   O u t   # . #   L   # . #
R i d e   S c n M s t r : # #   D O N E
    F4             F5             F6
    
```

This menu is very similar to the VIEW menu described above, but it also includes the

'Rate ### % 'readout which is the current percentage change that you are making to the programmed time. To exit from RIDE mode either press; <VIEW/RIDE> again, or press; [F6 DONE].

OUTPUT TRIM

OVERVIEW

Output TRIM provides a *rapid* method of varying the level of any channel that has a level above zero on the output of the *Axiom*. It affects both HTP and LTP channels. The channel levels at the output of the Grand master flow through the Output TRIM section and then to the output of the *Axiom*. The Output TRIM section allows you to trim the level of any channel at the output of the Grand master, either increasing it by up to 400% or decreasing it to 0% (off). You might like to think of the Output TRIM section as a group of channel "trimpots" on the output.

Typical applications where a channel has to be trimmed;

- A fixture has been knocked and is misfocused.
- An actor has not hit their correct spot hence the light is too dark or too bright.
- A complex lighting look is on stage and a channel needs to be rapidly trimmed and a scene programmed. There is no time to determine from which master, masters, FX master or channel fader the channel level is coming from. In fact it may be coming from several at the one time. By utilising output TRIM, you can **instantly** adjust the channel level and program the scene.

TRIMMING CHANNELS

Output TRIM is accessed from MENU 1. Press; [F3 TRIM] and the Output TRIM menu appears.

F1	F2	F3
* * O U T P U T T R I M * *		
S e l e c t c h a n n e l t o		
T R I M a n d t h e n u s e		
e d i t w h e e l . C A N C E L		
F4	F5	F6

Press the <S/A> key of the channel that you wish to trim. The EDIT wheel indicator lights to show that it is active and the screen changes to show;

F1	F2	F3
* * O U T P U T T R I M * *		
T r i m m i n g c h a n n e l # #		
P r e s e n t o u t p u t x x x		
T r i m m e d 1 0 0 % E N D		
F4	F5	F6

Where ## is the channel number and xxx is the present output level of that channel.

- HTP channels are shown as a level between 0% and 100%.
- LTP channels are shown as a level between 000 and 255.

The initial trim is 100% of its level at the output of the Grand master. That is, the level of a channel is unaltered. Rotate the EDIT wheel to trim the channel level. As you trim a channel, its actual level at the output of the *Axiom* is displayed on the screen. Channels may be trimmed *down* to 0% (i.e. fully OFF) or by *up* to 400% of their internal level. It is not possible to turn on channels that are off because to increase a level of 0 by 400% still results in a level of 0.

Hint; If you wish to turn on channels in a scene using the EDIT wheel, you can use the Quick EDIT function described in the "SCENES" section.

After trimming a channel, you may select other channels to trim by simply pressing their <S/A> keys. When you have finished trimming, press; [F6 END]. The menu will ask;

F1	F2	F3
C A N C E L		
* * O U T P U T T R I M * *		
K e e p M o d i f i c a t i o n s ?		
N O		Y E S
F4	F5	F6

- Select [F3 CANCEL] to return to the previous screen and continue trimming
- Select [F4 NO] to instantly restores **all** trimmed levels to their original levels.
- Select [F6 YES] to maintain all the trimmed levels.

RESTORING TRIMMED CHANNELS

INDIVIDUAL CHANNELS

When you use Output TRIM, when the menu asks you if you want to keep the modifications and you select [F5 YES], the trim will be maintained on the modified channel(s) until such time as that channel(s) no longer has a level at the output of the Grand master. The Output TRIM section monitors the output of the Grand master and if the level of a trimmed channel is greater than 0, even if it is coming from a different source, the trim will be maintained. When the channel is no longer detected on the output, the TRIM is cancelled. The next time that the channel appears, it will be at its correct (untrimmed) level.

ALL CHANNELS

When you use Output TRIM, when the menu asks you if you want to keep the modifications, if you select [F4 NO], **all** trimmed levels are restored to their original levels. This includes any channels that were still being trimmed by previous trimming actions. Alternately, you may fade the Grand master fully down and up again or tap DBO twice. SCENES

Section 5: TUTORIAL

The following tutorial covers the BASIC principles involved in operating the *Axiom*. It does not cover every feature but it does provide sufficient information to allow you to perform most of the common functions. By following the sections in order, you will quickly learn how easy the *Axiom* is to operate.

Always remember that you can press the **HELP** key at any time that you need assistance.

RESETTING THE AXIOM

When the *Axiom* is switched on, it displays an initial message on the LCD screen and then configures itself exactly as it was when it was last switched off. All the scenes, stacks, chases, patches etc will be exactly as they were.

If you are starting a new show, it is preferable to reset the *Axiom*. This will erase everything that has been "Programmed" into the *Axiom*, so that you may make a fresh start. If the current programs in the *Axiom* are needed in the future, you should save them onto the optional floppy disk before resetting. The *Axiom* has many powerful features that you may use, however if you do not reset the *Axiom* prior to a new lighting session, previous settings, especially in patches and LTP channels may give unexpected results.

Hint: If your *Axiom* is fitted with a floppy disk, it is wise to save your programming to disk at the end each session with the *Axiom*. In this way, you can always reload your shows in the event of the *Axiom* being reset by someone else.

To reset the *Axiom*, look at the bottom right corner of the LCD screen. If it does not read: "MENU 2" as shown below,

F1	F2	F3
P R E S E T	W I D E	S C E N E
F X 1 : E m p t y		
F X 2 : E m p t y		
U T I L S		M E N U 2
F4	F5	F6

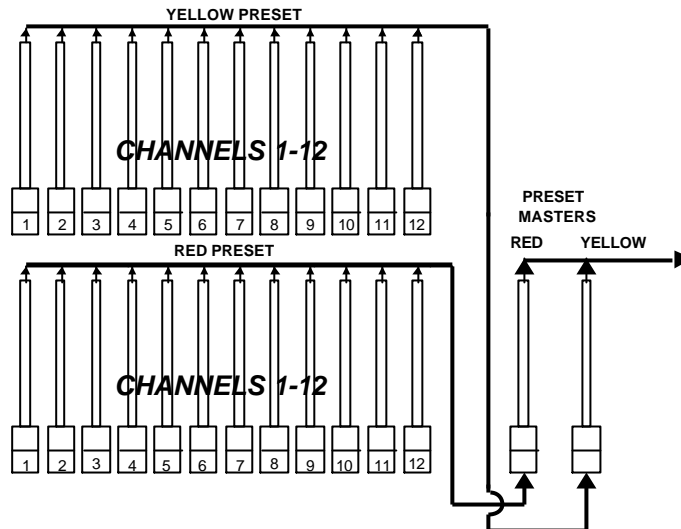
repeatedly press, [F6 MENU], until it does read "MENU 2". Menu 2 provides access to the UTILitieS menu. Press; [F4 UTILS], [F1 MORE], [F2 RESET], [F1 TOTAL].

The screen warns you that this action will clear all memory from the desk! To proceed with the reset, press; [F6 YES]. The screen asks you to confirm by pressing; [F4 YES]. The *Axiom* takes a moment to perform the reset and then returns to MENU 2 in Preset mode.

PRESET MODE

OVERVIEW

Preset mode provides a simple means of setting up a lighting "LOOK" on stage with a dedicated fader for each of the low channels and a Preset master controlling the overall level. The two presets are colour coded for easy identification. The yellow channel faders are under the overall control of the yellow Preset master and the red channel faders are under the overall control of the red Preset master.



You create a lighting look by fading up your required channels on one of the colour coded presets and fading up the same colour preset master. By keeping the other preset master faded down, another look can be preset on the duplicate set of channel faders of the other colour coded preset without the channels being revealed on stage. At the appropriate time, (the lighting "CUE"), the new look is revealed by fading up its Preset master whilst the first look is faded down with its Preset master. The *next* look may now be prepared on the preset that has just been faded down.

SELECTING PRESET MODE

The different modes of operation are selected by pressing the appropriate function keys on main menu 2. Preset mode was *automatically* selected when you reset the Axiom. If at any time the Axiom is not in Preset mode, repeatedly press; [F6 MENU], until main menu 2 appears and then press; [F1 PRESET].

The current mode of the Axiom is **always shown** by the red backlit labels located above the HELP key.

Hint; You can quickly change to menu 2 from any other main menu by performing the following keystrokes; [F5], (changes to menu 1) [F6 MENU 1] (steps from menu 1 to menu 2). This allows you to change to menu 2 without having to read the actual menu numbers from the screen.

CREATING A LIGHTING LOOK

We will now create a lighting look on the Yellow preset. Pull every fader on the Axiom to its lower limit. Now fade up the Grand master and the Yellow Preset master to maximum (top limit). Fade up channel 1 on the Yellow fader bank. The fixture(s) connected to dimmer output 1 fade up on stage. Fade up channel 3 on the Yellow fader bank and the fixture(s) connected to dimmer output 3 come on. You can "balance" the look that you are creating by adjusting the intensities of the individual channels. This is done by setting the positions of the individual channel faders on the yellow preset. The brightness of the red indicators in the channel S/A keys give you a visual indication of their channel's intensity.

PRESETTING THE NEXT LOOK

The next look can now be "preset" on the Red preset. As the Red Preset master is faded down, any channels that are faded up on the Red preset will not be revealed on stage. Fade up channels 2 and 5 on the Red preset and set them to the level that you desire.

CROSSFADING TO THE NEXT LOOK

To perform a crossfade from the Yellow preset to the Red preset, simply fade UP the Red Preset master whilst at the same time, fade DOWN the Yellow Preset master. Channels 2 and 5 will fade up on stage whilst channels 1 and 3 will fade down.

Hint: You can obtain different effects by simply varying the timing of your UP fades and DOWN fades. If you fade UP fully before commencing your DOWN fade, you will have a period where both looks are on at the same time. If you fully fade DOWN before commencing your UP fade, then the stage will dip to black between the two looks. The most pleasing crossfades are often accomplished by starting only with the UP fade and then commencing the DOWN fade when the incoming look is just starting to become visible on stage.

As the Yellow Preset master is now down, the next look may be preset on the Yellow channel faders without being revealed on stage. (In lighting terms, this is known as working "BLIND"). Fade down channels 1 and 3 and

fade up channels 4 and 7. Crossfade to this new look by fading UP the Yellow Preset master and fading DOWN the Red Preset master.

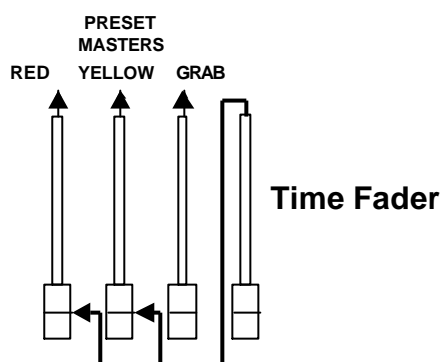
In this manner, whilst one preset is faded up, a new look can be created on the preset that is faded down and then the crossfade to the next look is performed with the Preset masters. The entire show may be performed by fading between the varying looks on the red preset and the yellow preset.

The Preset mode is most useful in "unrehearsed" or "adlib" situations where each lighting look must be created quickly and immediate control of any channel is desired.

TIMED PRESET FADES

The fades that you have been performing on the Red and Yellow Preset masters in the previous section have been "manual" fades. That is, the fades have directly followed the actual positions of the Red and Yellow Preset master faders. The speed that you move the fader determines the time of the fade. This is because the Time fader was set to 0 seconds.

You can **accurately** control the time of these fades by using the Time fader to set the required duration. The Time fader is ALWAYS ACTIVE on the Preset masters.



The Time master always controls the fade times of the Preset masters

The Time fader acts on the masters that it controls in the following manner.

When a Master is moved, the fade will always progress toward the current position of that Master at a rate determined by the Time fader. This applies no matter in which direction the Master is moved. If the Time fader is set to say 5 seconds, and a Master is quickly faded fully up, then the actual fade up will take 5 seconds. If you do not bring the Master fully up, then the fade will only fade up to the level of the Master and then stop. If the Master was only faded up half way, and the Time fader was set to 5 seconds, then the fade up would reach the Masters position and stop in 2.5 seconds. Likewise, if the Master was then returned to fully down, the down fade would take 2.5 seconds.

The manual fades that we performed in the previous section were achieved by simply setting the Time fader at its lower limit, a time setting of 0 seconds. It therefore has no affect on the Preset masters. When the Time fader is faded up, its time setting increases.

To see the current fade time setting, change to menu 1 by pressing; [F5]. This is a short cut key that will always change directly to menu 1 from any of the other three main menus. The actual time setting is shown on the bottom line of LCD screen on main menus 1, 3 & 4 in the form; **T 0.0 s**

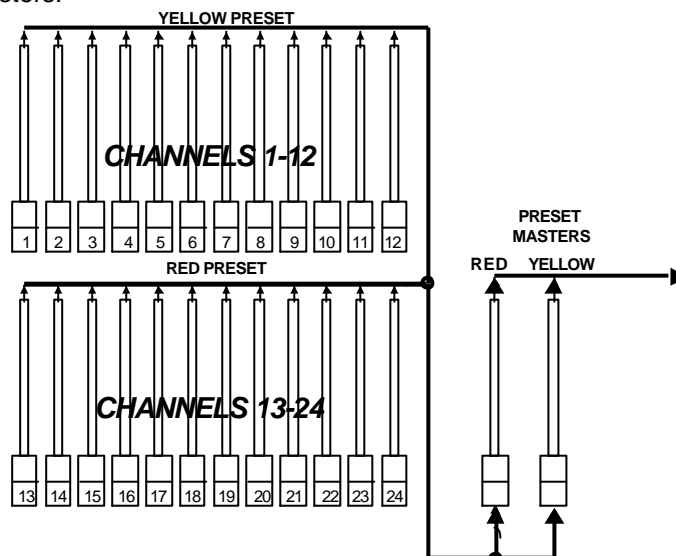
Fade up the Time fader and observe the fade time setting change on the screen. Set the Time fader to 6 seconds and *quickly* perform a crossfade between the Red and Yellow Preset masters as you did in the previous section. The crossfade now takes *exactly* 6 seconds. Notice that the LED's in the SOLO/ASSIGN keys for the Red and Yellow Preset masters flash whilst the crossfade is occurring. The flashing indicates that a timed fade is in progress. You can view the progress of the crossfade with the "VIEW/RIDE" feature.

Hint: This flashing is especially useful when a long fade time is being executed, because the actual physical position of a master may be misleading as it does not represent the actual level of the masters output. If you have some unexplained output from the Axiom, check to see if any master's SOLO/ASSIGN key is flashing, indicating that a timed fade is in progress.

WIDE Preset MODE

OVERVIEW

WIDE preset mode provides instant access to ALL AVAILABLE CHANNELS with a dedicated fader for every channel. The number of channel faders is 24 (36, 72). The output of all this single WIDE preset is under control of either of the Preset masters.



Simplified block diagram of a 12/24 Axiom in **WIDE** preset mode.
The bold lines show the flow of channel level information.

SELECTING WIDE PRESET MODE

To change to WIDE Preset mode, repeatedly press; [F6 MENU] until main menu 2 appears and then press; [F2 WIDE]. The WIDE and PRESET red indicators light.

CREATING A LIGHTING LOOK

Pull every fader on the Axiom to its lower limit. Now fade up the Grand master and the Red preset master to maximum (top limit). Fade up channel 1 on the Yellow fader bank. The fixture(s) connected to dimmer 1 fades up on stage. Fade up channel 3 on the Yellow fader bank and the fixtures connected to dimmer 3 come on. Fade up the first fader on the Red fader bank. This will cause the fixture connected to dimmer 13 (25, 37) to fade up on stage. The faders on the red fader bank control the higher channel numbers that are printed in the smaller font size below each channel fader.

All of the channels are under the control of the Red **or** the Yellow Preset master. You can "balance" the look that you are creating by adjusting the intensities of the individual channels. This is done by setting the positions of the channel faders on the two fader banks.

You may fade this "look" up and down with either the Red Preset master or the Yellow Preset master and of course, you may use the Time fader to set the fade time.

Although you do not have a second preset on which to create the next look, the advantage of "WIDE Preset" mode is that you have access to the maximum number of channels that are available on the *Axiom*. This is most useful when you start to program "Scenes" in a later section.

The *Axiom* still permits you to perform crossfades to another look even when you are in WIDE Preset mode by utilising the Grab master as a "phantom" preset as described in the next section.

GRAB MASTER

Preset mode allowed you to preset looks and crossfade between them using the Red and Yellow presets, but it did not allow you control of the higher channels.

WIDE Preset mode allowed access to all (low and high) channels but it did not allow crossfades to other preset looks as there was only **one** preset.

The Grab master allows you to utilise the best features of both Preset and WIDE Preset modes. The Grab master is always available for you to use no matter which mode you are operating in but it is of most use when operating in WIDE preset mode.

As you know from the previous section, WIDE preset mode allows you to create a look using any of the channels, up to 24(48, 72) channels. However, you could not preset another look "blind" and then crossfade to it. The Grab master overcomes this problem by allowing you to "GRAB" and maintain the current output of the *Axiom* in the Grab master. The Grab master effectively takes a "snapshot" of the *Axiom*'s output and maintains the look, allowing the Preset master(s) to be faded down so that the next look may be preset *blind* using the channel faders.

The Grab master is often referred to as a "Phantom" preset.

We will use the look that you created in the previous section using the Red preset master in WIDE preset mode. To "Grab" this look, (the output of the *Axiom*), press; <ASSIGN> and then press; <SOLO> (GRAB).

Fade up the Grab master to full so both the Red preset master AND the Grab master are contributing identical looks to the output of the *Axiom*. Fade down the Red preset master and there is no change on stage. The look of the Red Preset master has been "Grabbed" and is being maintained on stage by the Grab master.

You may now preset the next look blind, using any of the channel faders.

To crossfade to the next look, simply fade up the Red preset master whilst fading down the Grab master. (This is similar in operation to Preset mode). In order to create the next look, you must once again "Grab" the current look in the Grab master so that you can free the Red Preset master. As before, press; <ASSIGN>, <SOLO> (GRAB) to "Grab" this look.

Once again, the Grab master now holds a duplicate of the *Axiom*'s output so it may be faded up without any affect on stage. Now fade down the Red Preset master (again there is no change on stage) and create the next look "blind" on the channel faders. You may continue to "Preset" and "Grab" for every new look that you require.

Note; The fade time of the Grab master is also controlled by the Time master.

SCENES

All of the "looks" that you have created in the previous sections have been made on a "one off" basis. That is, they have not been programmed into the memory of the *Axiom*. If you needed to re-use a look that you had previously created, then you need to remember all of the channels and their respective levels together with the fade times (if any), that were involved. The *Axiom* allows you to "Program", (also known as "store" or "record" on some desks), any of the looks that you create. When you program a look it is known as a **Scene**.

Scenes are created on the *Axiom* by establishing the lighting look that you require on the output and then programming this look into the memory in a selected page and scene number. The lighting look that you program as a scene may be made up of any combinations of channels, presets or other scenes.

Scene mode, (described later), provides a method of replaying scenes and fading between them.

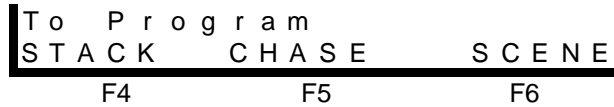
Scenes may be Programmed whilst the *Axiom* is in any of the three operating modes, (Preset, WIDE preset or Scene).

The following description gives you the *basics* of how to program, playback, preview and edit scenes

PROGRAMMING A SCENE

To Program a Scene, firstly create a look on stage as described earlier. When you are happy with the look, press; <PROGRAM>. The menu offers the following options;

F1	F2	F3
P A T C H	S T L	C A N C E L
C h o o s e	O b j e c t	



You will also notice that the S/A keys below the lower fader bank will flash twice. They indicate the scene numbers. Any scene numbers that are already programmed will continue to flash. You may select "SCENE" as the object to program and then proceed to program all the parameters for that scene, such as fade times and name as prompted by the menus. Such comprehensive programming of scenes takes several keystrokes to complete and would be time consuming to do when time is short, such as in a fast moving rehearsal where you need to quickly create a look, program it as a scene and immediately create the next look.

The *Axiom* provides two methods of programming scenes.

- Rapid scene programming.
- Comprehensive scene programming.

RAPID SCENE PROGRAMMING

Rapid scene programming uses the technique of "double clicking" as used with a computer mouse to select an object and enter it in the one operation. This rapid programming technique uses all the default settings (default fade times, no scene name and current page) for the scene .

Note; You may set your own default fade times. Refer to the "GUIDED TOUR" section for details.

As mentioned above, the S/A keys below the lower fader bank flashed twice when you pressed the program key. These S/A keys correspond to scene numbers. To rapidly program the current look into scene 1 (of the *current* page), double click S/A key 1. This completes the programming operation and a brief message will appear on the screen confirming that "Page 1, Scene 1" HAS BEEN SAVED.

Now create a different look using the channel faders. When you are happy with the look, program it as scene 2 by pressing; <PROGRAM> and the S/A keys flash twice as previously, but this time S/A key 1 continues to flash. This flashing tells you that scene 1 already exists and if you program scene 1 you will overwrite the previous scene 1.

To program this new scene as scene 2; double click; <S/A> (2) and the screen will confirm your action with a brief message noting that "Page 1, Scene 2 HAS BEEN SAVED".

Create another 4 different looks and program them as scenes 3 through 6. You will use these scenes in later sections.

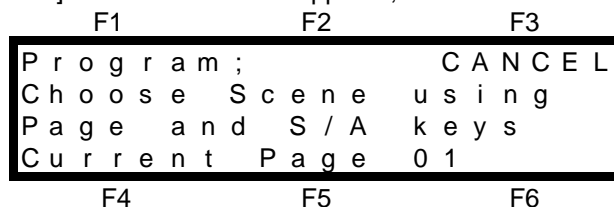
Recapping, to rapidly program a scene (in the current page), press; <PROGRAM>, double click; <S/A> (scene number)

You can program up to 12 (24, 36) scenes on each page and there are 12 pages available.

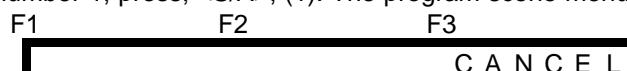
PROGRAMMING SCENES IN OTHER PAGES

When you used the rapid programming techniques above, you programmed your scenes in to the *current* page of the *Axiom* (and with the default settings of fade times and no scene name).

There are 12 pages of memory available and you may program a scene into any page. To program a scene into a page other than the current page you must use the comprehensive technique. Press; <PROGRAM> and the PROGRAM menu appears. Instead of double clicking your scene number, select SCENE as the object to program by pressing; [F6 SCENE] and the next menu appears;



You are asked to select a page in which to program the scene. The current page is shown on the bottom line as Page 01. We will program this new scene as Page 2 Scene 1. To select the page, press; <PAGE>. The page key lights, the twelve page number S/A keys flash and the screen prompts you to select your page by pressing the appropriate S/A key. Press; <S/A> (2). The page key red indicator goes out and the screen shows your selection. To select scene number 1, press; <S/A>, (1). The program scene menu appears,



```

P 0 2   S 0 1   -   '   '
I n   M A N   O u t   =   I N   L   0 . 0
N A M E           T I M E S           S A V E
F4                F5                F6
    
```

You may now choose to complete the programming of the scene with the factory default fade time settings of "In" time MAN (from the Time fader), "Out" time =IN (equal to the IN time) and LTP time of 0 seconds by pressing; [F6 SAVE]. The screen will confirm your action with a brief message noting that "Page 2, Scene 1 HAS BEEN SAVED".

PROGRAMMING A SCENE WITH FADE TIMES AND A NAME

We have programmed several scenes with default settings for fade times. We will now program another scene, but we will use some of the other scene programming functions and program the scene into the current page as scene 9 with a programmed IN fade time of 10 seconds, an OUT fade time of 5 seconds and a name of 'Cue 3'. Create a look using the channel faders and then to program this look as scene 9 press; <PROGRAM>, [F6 SCENE], <S/A> (9) and the program scene menu now appears,

```

F1                F2                F3
C A N C E L L
P 0 1   S 0 9   -   '   '
I n   M A N   O u t   =   I N   L   0 . 0
N A M E           T I M E S           S A V E
F4                F5                F6
    
```

To program the fade time setting press; [F5 TIMES]. The program time menu appears;

```

F1                F2                F3
- -                + +                C A N C E L L
- - - - -
I n   M A N   O u t   =   I N   L   0 . 0
←                →                D O N E
F4                F5                F6
    
```

You may program the settings for the In, Out and L (LTP) times in the scene. The "In" fade time for this scene is shown as being manual (In MAN), because it is controlled by the setting of the time fader. The "Out" fade time for this scene is shown as being equal to the In time (Out =IN). The LTP fade time is shown as 0.0 seconds. LTP times are not covered in this tutorial section. Refer to the "MOVING FIXTURES " and "SCENES" sections for details on LTP times. The IN time may be set to either;

- MAN (Time Fader)
- Programmed time.

The OUT time may be set to either;

- = IN (a copy of the IN time)
- MAN (Time Fader)
- Programmed time.

The LTP time may only be a programmed time.

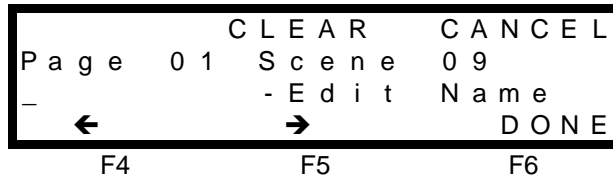
You select the time that you wish to program by positioning the highlight bar (----) over the time by using the F4 ← and F5 → function keys. When a time is selected, it may be quickly varied by using the EDIT wheel or it may be incremented in single steps with the F2 ++ key or decremented with the F1 -- key. If you hold down either F1 or F2, they will auto repeat. A time may be snapped to minimum or maximum by tapping F1 or F2 once, then quickly pressing again and **holding**.

The In time is already highlighted so simply rotate the EDIT wheel (or use the F2 key) until the In fade time is 10.0 seconds.

To program the Out time, press; [F5 →] to move the highlight bar over the Out time and then rotate the EDIT wheel (or use the F2 key) until the Out fade time is 5.0 seconds. As the times are now correct, press; [F6 DONE]. The screen now returns to the previous menu which now shows the programmed times. To program the name press; [F4 NAME]. The program name menu appears;

```

F1                F2                F3
    
```



The Name of the scene is entered into the area below the word Page. A cursor is in the first character position. The Edit Wheel lights to show that it is active. We wish to enter the name 'Cue 3'. Rotate the EDIT wheel to select the first character, C. You may scroll through the set of UPPER case and lower case letters, numbers and various other characters by rotating the Edit Wheel in either direction. When the character C is displayed, press; [F5 →] to move the cursor to the right and select u as the next character using the EDIT wheel. Repeat the procedure to program the rest of the name then press; [F6 DONE] to accept the name and return to the previous menu.

To complete the programming of the scene, press; [F6 SAVE] and a brief message will confirm that:
 "Page 01 Scene 09 HAS BEEN SAVED"

SCENE PLAYBACK

To playback any of the individual scenes that you have programmed, you must select SCENE mode. In SCENE mode, the red faders act as a bank of 12 (24, 36) SCENE MASTERS with 12 pages of scenes available. When you select SCENE mode, all the scenes from the *current* page are automatically assigned to their corresponding Scene masters. The output from all of the Scene masters is under the control of the Red Preset master.

Scene mode is selected with the function keys. To change to Scene mode, repeatedly press; [F6 MENU] until main MENU 2 appears and then press; [F3 SCENE].

To reveal scene 1 on stage, fade up both Scene master 1 (Red fader 1) and the Red Preset master.

To crossfade to scene 2, fade up scene master 2, whilst at the same time fading down scene master 1. Cross-fading between scenes is similar in operation to cross-fading between the Red and Yellow presets described earlier. By factory default, these scenes that you have programmed use the Time fader as their time source for timed fades. Set the Time fader to a fade time of 5 seconds and crossfade to scene 3. Notice that the Scene master S/A keys flash whilst the timed fade is in progress. Now crossfade to scene 9. Scene 9 has an programmed In time of 10.0 seconds. Scene 3 fades OUT in 5 seconds (as set by the Time fader) and scene 9 fades IN in 10.0 seconds (as programmed in the scene). The flashing of the scene master S/A keys show the different fade duration's. Fade down scene 9 and note that it fades out in 5 seconds.

PAGING THE SCENE MASTERS

You may assign (load) **all** of the Scene masters from a different page of memory by simply selecting a new page number as the *current* page. To change to a different page, press; <PAGE>, <S/A> (the page number). When the new page is selected, the scenes in that page are immediately assigned, in order, to their respective scene masters, 1 through 12 (24,36). Scene 1 will be assigned to Scene master 1, Scene 2 will be assigned to Scene master 2, and 3 to 3, 4 to 4 etc, etc.

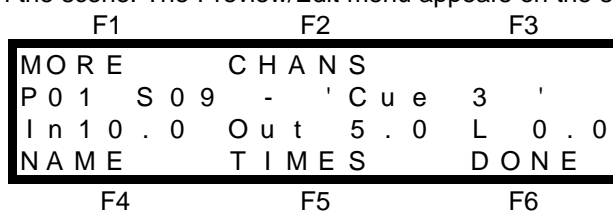
MODE/PAGE FREEZE

"Mode/Page freeze" rules apply when a different page is selected or a different Scene is assigned. This prevents scenes "crashing in" on stage if a scene master is contributing to the output when the page is changed. The VIEW/RIDE key flashes when a change of scene is pending.

PREVIEWING SCENE MASTERS

You may preview the channels, times and name that are programmed in a scene assigned to a scene master prior to fading up the scene. To preview scene 9, press; <PREVIEW/EDIT>, [F5 SCENE], <S/A> (9).

The channel S/A key indicators now provide a preview of all the channels in the scene and their *intensities* reflect their individual levels in the scene. The Preview/Edit menu appears on the screen;



This shows that this is page 1 scene 9 and the In time for this scene is a programmed time of 10.0 seconds and the Out time is a programmed time of 5.0 seconds. The function keys are used if the scene is to be edited as described in the next section.

Whilst the *Axiom* is in preview mode, you can preview other scenes in the current page by simply pressing their S/A keys. To preview scene 2, press; <S/A> (2). The menu shows the details for scene 2.

F1	F2	F3	F4	F5	F6
M O R E	C H A N S				
P 0 1	S 0 2	-	'	'	
I n	M A N	O u t	=	I N	T 0 . 0
N A M E	T I M E S			D O N E	

Notice that the In time source for this scene is the Time fader (Man) and that the Out time is equal to the In time. To preview Page 2 Scene 1, press; <PAGE>, <S/A> (2), <S/A> (1).

NOTE; The contents of the scenes that you preview (name, times, channels and levels), can be automatically displayed on a Video Terminal or computer connected to the RS232C port on the rear of the Axiom. Refer to the "UTILITIES" section for details.

To de-select preview either press; <PREVIEW/EDIT> a second time, or from the preview menu press; [F6 DONE].

EDITING SCENES

Editing scenes is an extension of Previewing scenes. To edit a scene, you must first preview the scene as described above. Once you are in the Preview Scene menu, you may edit the various contents of the scene by selecting the appropriate function key. Select from either "MORE", "CHANS", "NAME", or "TIMES". Editing times is exactly the same procedure as programming times described earlier.

EDITING CHANNEL LEVELS

To edit the channel levels in scene 1, preview scene 1 as described above and then press; [F2 CHANS] and all the channel S/A keys flash twice to show that they are valid choices and they then indicate their respective levels in the scene. The level of **any** channel, not only those already programmed in the scene, may be edited by pressing the S/A key of the desired channel.

We will edit the level of channel 3, so press; <S/A> (3) and the Edit wheel becomes active and can be used to edit the level of channel 3 by simply rotating the wheel. Set channel 3 to a level of 50% as displayed on the bottom line of the screen.

Now adjust the level of channel 23 by simply pressing; <S/A> (23) and using the Edit wheel to set the level to 80%. If you vary the level of a channel, you may toggle it to its previous level by pressing; [F1 TOGGLE] and then toggle it back to its edited level by again pressing; [F1 TOGGLE]. To complete the editing of channel levels in scene 1 press; [F6 DONE] and to save the changes that you have made press; [F6 DONE], [F6 YES]. A complete description of all of the editing functions including "QUICK EDIT" can be found in "EDITING A SCENE" in the "SCENES" section.

There are many other features and functions available when working with scenes that are fully described in the "SCENES" section.

STACKS

A **Stack** is a list of steps consisting of scenes or channels or snapshots (of the *Axiom* output), that are programmed in the order that they are to be replayed. If all the scenes in a "show" have been programmed as a "stack", then the entire show may be played back on a single FX master. At each lighting cue, a press of the ">" forward key will perform a "dipless" crossfade to the next step in the stack. The *Axiom* can program up to 12 (24,36) stacks and there may be up to 99 steps in a stack but as stacks may be "linked" together, the maximum number of steps may be much higher.

The following description gives you the basics of how to program a stack consisting of scenes 2, 4 and 1, followed by channel 8 and ending with scene 9. The first four steps will be programmed with the default times, but for the fifth step, we will program an IN fade time. We will then assign the stack to FX 1 and play the stack whilst varying the fade times with the Rate fader and observing the main menu displays. We will stop a crossfade from one step to the next before it completes and then restart it and also observe the programmed time execute for the fifth step. For full details on stacks, refer to the "STACKS" section.

PROGRAMMING A STACK

To program stack 1 press; <PROGRAM> [F4 STACK] <S/A> (1) (stack 1). As the first step is to be a scene, press; [F1 SCENES]. This displays the "Select Scenes" programming menu and all scene S/A keys will flash twice, and then all the scene numbers that you have programmed will continue to flash. To program scenes 2, 4 and 1 into the first three steps press; <S/A> (2) <S/A> (4) <S/A> (1). The step number in the menu automatically increments with every scene number that you enter and observe that the screen now shows that step 3 contains P01 S01, (Page 1 Scene 1).

The next step in the stack will be a single channel so we close the Select Scenes programming menu by pressing; [F6 DONE] and select Channels by pressing; [F2 CHANLS]. This displays the "Select Channels" programming menu and all channel S/A keys flash. To program channel 8 as step 4 press; <S/A> (8). As we only wish to program one step as a single channel press; [F6 DONE].

In all the previous steps we have simply selected the type of object for the steps (scenes, chans or output) and then entered the numbers of the objects. When we did this, we accepted the default settings for the fade times for each step (the fade times originally programmed in each scene if the step was a scene) but this time we will program an In time for the step.

To program a scene as the next step, press; [F1 SCENES] then to select scene 9 as the step, press; <S/A> (9). As before, the Select Scenes programming menu appears.

F1	F2	F3
F L A G		U N D O
" C u e 3	" S t p 0 5	P 0 1 S 0 9
I n 1 0 . 0	O u t = I N	L 0 . 0
L A B E L	T I M E S	D O N E
F4	F5	F6

Notice that the fade time settings are a *copy* of those originally programmed into the scene. We will now program our own fade time for this step. When we do this, it will affect only this step of stack 1 and will not alter the fade times programmed for scene 9 when replayed on a scene master. To program a fade time for this step, press; [F5 TIMES] and the program time menu appears. This menu is the same as that for programming a scene fade time as described "PROGRAMMING A SCENE WITH A FADE TIME AND A NAME" earlier in this section. Use the Edit wheel or the [F1 -] key to set the In fade time to 4 seconds and then press; [F6 DONE]. As the stack is now finished, press; [F6 DONE] [F6 DONE] [F6 YES] and the programming of the stack is completed.

PLAYING A STACK.

To play a Stack we must firstly assign the stack to one of the FX masters. To assign stack 1 to FX master 1, press; <ASSIGN> [F4 STACK] (all programmed stack S/A keys flash) <S/A> (1) (stack 1). Both FX master S/A keys now flash prompting you to select an FX master. Press; <S/A> (FX 1) and stack 1 is assigned to FX 1 as indicated on main menus 1, 2 and 3. To see an expanded view of the state of FX master 1, repeatedly press; [F6 MENU] until menu 3 is displayed.

F1	F2	F3
F X 1 : S t k 0 1		
>		
^ 0 1	P 0 1 S 0 2	M 0 . 0 s
P 0 1 T 6 . 0 s		M E N U 3
F4	F5	F6

To play the stack, fade the FX 1 level fader up to maximum and set a fade time of 3.0 seconds with the FX 1 Rate fader. The Rate fader will set the fade time for incoming steps if the letter M (Manual) appears to the left of the fade time value for that step. The RATE indicator below the Rate fader also lights to show that it is active. The second line of the menu shows the *current* step and the third line shows the *next* step (currently the first step of the stack). The FX master was previously empty, so our stack loaded with step 0 (blank) on the output. Step 1 of our stack has a Manual (M) IN fade time as set by the position of the FX 1 Rate fader. To crossfade to step 1 press ; > (the forward key) and step 1 (Page 1 Scene 1) will fade up in 3.0 seconds. The STOP/STEP key flashes while the fade is in progress. When the fade completes, step 1 becomes the current step (shown on line 2) and now shows its OUT fade time (= IN). Step 2 loads as the next step. Step 2 is also a manual fade step (M displayed beside fade time and RATE indicator lights). Set the Rate fader to 8.0 seconds and then crossfade to step 2 by pressing; > (the forward key). Whilst the fade is in progress, you may vary the fade time with the Rate fader or stop the fade by pressing; <STOP/STEP> and then restart the fade in the

forward direction by pressing; > (the forward key) or restart the fade in the reverse direction by pressing; < (the reverse key). The next step cannot be started until the current step has been completed.

The next step in the stack will automatically load when the crossfade has completed. When it does load, you may crossfade to it by once again pressing the > (forward) key. When a step with a programmed time loads as the next step, the RATE indicator extinguishes and the fade will occur in the programmed time when the > key is pressed.

Many more functions exist to control, preview and edit stacks. For full details on stacks, refer to the "STACKS" section, .

CHASE

A chase is very similar to a stack in that it is a list of steps that are to be replayed in order. A Chase differs from a stack in that it is designed to step continuously from one step to the next and to automatically repeat the list when it has reached the end.

Up to 99 steps may be programmed for each chase and up to 12 (24, 36) separate chases may be programmed into the memory.

The program chase menu, like the program stack menu, allows you to select a different object (CHANNEL, SCENE, OUTPUT or LINK) for each step and it also allows you to program many other parameters for each chase. For full details on chases, refer to the "CHASE" section.

For this tutorial, we will program chase 10 consisting of channels 1, 2, 3, 4, 5 and 6.

PROGRAMMING A CHASE

To program a chase as chase 10, press; <PROGRAM> [F5 CHASE] <S/A> (10), (chase 10). As the first step is to be a channel, press; [F2 CHANLS]. This displays the "Select Channel" programming menu and all channel S/A keys flash to show that they are valid choices. To program channels 1, 2, 3, 4, 5 and 6 as the six steps press; <S/A> (1) <S/A> (2) <S/A> (3) <S/A> (4) <S/A> (5) <S/A> (6). The step number automatically increments with every channel number that you enter. As this completes all of the channels in the chase, press [F6 DONE]. To accept the default setting for the STATE, MODE and RATE of the chase, press; [F6 DONE] [[F6 YES]. The programming of the chase is completed. These default setting will give you a conventional forward running chase that you may edit when you actually see it on stage.

PLAYING A CHASE

To play a Chase we must firstly assign the chase to one of the FX masters. To assign chase 10 to FX master 2, press; <ASSIGN> [F5 CHASE] and all programmed chase S/A keys flash, <S/A> (10) and both FX master S/A keys flash, <S/A> (FX 2) and chase 10 is assigned to FX 2 as indicated on main menus 1, 2 and 4.

The STOP/STEP key flashes at the default *rate* for the chase. To reveal the chase, fade the FX 1 level fader up to maximum. To manually adjust the rate simply move the FX2 Rate fader through its range until the RATE indicator lights. The Rate fader now controls the chase rate. The state of a chase is best seen from main menu 1 by pressing; [F5]. The →→ symbols on the third line of menu 1 indicate that the chase is running forwards. To stop the chase, press; <STOP/STEP> (FX2) and the STOP/STEP key lights, the chase stops and menu 1 shows □ (Stopped) as the chase state. Press; > and the chase starts again. Press; < and the chase reverses as indicated by ←← on the menu. Stop the chase again by pressing; <STOP/STEP> and then manually STEP the chase in the direction that it was previously running by repeatedly pressing; <STOP/STEP>. Press; and the chase starts again in the forward direction.

Many more functions exist to control, preview and edit chases. Refer to the "CHASE " section for details.

CONTROLLING A CHASE - KEYSTROKE SUMMARY

KEY	ACTION
<STOP/STEP>	STOPS a running chase. STEPS a <i>stopped</i> chase in the direction indicated by the currently lit direction key. This stepping will be the direction that the chase was running prior to being stopped.
When the chase is STOPPED, the indicator in the STOP/STEP key is lit .	
> (Forward)	STARTS a stopped chase and runs it forward . Changes the DIRECTION of a reverse running chase (runs it forward). Changes a BOUNCE chase into a normal forward chase. SNAPS a forward running chase to the next step.
< (Reverse)	STARTS a stopped chase and runs it backwards .

Changes the DIRECTION of a forward running chase (runs it backwards).
 Changes a BOUNCE chase into a normal reverse chase.
 SNAPS a backward running chase to the next step.

Hold >, Tap < Selects **BOUNCE** mode.
 Hold <, Tap > Also selects **BOUNCE** mode.
 > Deselects Bounce mode (runs forward).
 < Deselects Bounce mode (runs reverse).
 Hold Stop/Step, Tap > Selects **SINGLE SHOT** mode.
 > Runs a forward Single Shot.
 < Runs a reverse Single Shot.
 Hold Stop/Step, Tap < De-selects single shot mode.

To take manual control of the chase rate, match the position of the Rate fader to the programmed chase rate. The backlit RATE indicator lights when the Rate fader takes control.

The following symbols are displayed on main menus 1 and 2 when a chase is assigned to an FX master;

→→	Running forward
←←	Running reverse
□	Stopped
→←	Bounce
→ς	Single Shot

SOLO (ADD/KILL)

You may Solo (flash) any HTP channel or multiple channels, any Scene masters, any Preset master, Grab master or any FX master. Two different solo modes may be selected;

- In ADD mode, pressing any SOLO key will simply add the solo'ed channels to the output (at the add fader level) without having any affect on the current output of the *Axiom*.
- In KILL mode, pressing any SOLO key will add the solo'ed channels to the output (at the add fader level) and at the same time it will KILL (black out) the current output.

ADD MODE

When the *Axiom* is in ADD mode the ADD indicator above the ADD/KILL key is lit. If it is not lit, press; <ADD/KILL> to select ADD mode and light the indicator. Set the Add/Kill Level fader to the fully up position. To solo channel 11 press; <S/A> (channel 11) and channel 11 is added to the output at full level.

To solo scene 4, ensure that the *Axiom* is in SCENE mode and then press; <S/A> (Scene master 4) and scene 4 is added to the output. To solo channel 8 at 50%, set the Add/Kill Level fader to 50% and then press; <S/A> (channel 8) and channel 8 is added to the output at 50%.

KILL MODE

To select KILL mode, press; <ADD/KILL> to light the KILL indicator. Set the Add/Kill Level fader to the fully up position. To solo channel 3 press; <S/A> (channel 3) and channel 3 is added to the output at full level and all other output from the *Axiom* is killed. To solo scene 2 at 50 % of its programmed level, set the Add/Kill Level fader to the mid position and press; <S/A> (scene 2) and scene 2 is added to the output at 50 % of its programmed level and all other output from the *Axiom* is killed. To solo a chase that is assigned to FX 1, set the Add/Kill Level fader to the fully up position and then press; <S/A> (FX 1) and the chase is revealed whilst all other output from the *Axiom* is killed.

Hint; You can create some stunning visual effects with the ADD/KILL modes and the SOLO keys. For example, when lighting a musical item, if a particular Scene master only contains the lights for the drummer, and the rest of the stage lighting is coming from other masters, then by setting the mode to KILL and the level to full, pressing the SOLO key for the drummers scene master at the appropriate time in the song will highlight the drummer and kill all the other stage lighting. This can be especially effective if you Solo a Chase on one of the FX masters.

Section 6: SCENES

OVERVIEW

A SCENE is a programmed (stored or memorised) group of channels, together with their respective levels, fade times and a descriptive 'name'. Scenes are created on the *Axiom* by establishing the lighting look that you require on the output and then programming this look into the memory in a selected page and scene number. Scenes may be programmed "blind" using the "PREVIEW/EDIT SCENE" function. A scene can be replayed on a scene master, or be included as a step of a stack or chase. A scene may also be assigned to the Grab master and scenes may be varied in level by an audio signal via the STL (sound to light) function. Scenes are arranged by page number and scene number. There are 12 pages with 12 (24,36) scenes in each page. In this manual, when referring to any particular scene, it is called Page xx, Scene yy, where xx is a page number between 1 and 12 and yy is a scene number between 1 and 12 (24,36). Individual IN, OUT and L (LTP) fade times may be programmed for every scene. The scene will fade up in the IN time and will fade down in the OUT time. These times may come from the Time fader or may be programmed in memory. The L time affects only LTP channels in the scene and is only used when controlling moving light fixtures or colour scrollers. You may enter and edit a descriptive name (up to 6 characters) for every scene. These scene names appear on the LCD screen whenever you "PROGRAM", "PREVIEW" or "EDIT" a scene and the names are always displayed in single quotation marks. If the *Axiom* is "LOCKED", you cannot program or edit scenes.

PROGRAMMING SCENES

Several methods are available to program scenes.

The *Axiom* provides two "rapid" programming methods and a "complete" programming method.

- Use a rapid method when time is short, such as in a fast moving rehearsal where you need to quickly create a look, program it as a scene and immediately create the next look. Rapid programming uses default fade times and no name. You can update all parameters at a later time via the EDIT function.
- Use the complete method to program all parameters of a scene.
- Scenes may also be programmed "blind".

SCENE PROGRAMMING (RAPID METHODS)

With rapid programming, the scene will be saved into the *current* page with a blank 'name' and with the default time settings. If you wish to use a different page, then select it *prior* to performing the rapid programming described below. You can set your own default time settings that rapid programming uses via the Utils menu. Rapid programming uses the technique of "double clicking" to *select* an object and *enter* it in the one operation.

METHOD 1

To rapidly program a scene;

- Create the look on the output that you wish to program into a scene.
- Press, <PROGRAM>. All scene S/A keys will flash twice to show that they are possible choices and all existing scene numbers (in the current page) will continue to flash.
- Double click the <S/A> (Red Preset) key of the scene number that you require.

This completes the operation and a brief message will appear on the screen confirming that;

" Page xx, Scene yy HAS BEEN SAVED".

Note; This technique will program the current lighting look into the selected scene in the current page without any warning as to the previous contents of that scene. Any previous contents will immediately be erased and replaced with your new scene.

METHOD 2

The second rapid programming technique allows you can program a scene almost as rapidly as described above, but it also allows the *Axiom* to warn you of any existing scene and it shows you the default time settings that will be used.

To rapidly program a scene;

- Create the look on the output that you wish to program into a scene.
- Press, <PROGRAM> and the standard programming menu appears. All scene S/A keys will flash twice to show that they are possible choices and all existing scene numbers (in the current page) will continue to flash.
- Press <S/A> (Red Preset) of the scene number that you require

Scenes

- If the scene exists the LCD screen will warn you and give you the option of continuing or not.
- If the scene does not exist, the scene programming menu appears showing the default settings.
- In either case, double click the <S/A> key of the scene number

This completes the operation and a brief message will appear on the screen confirming that;

" Page xx, Scene yy HAS BEEN SAVED".

In method 2, when the scene programming menu appears, you may program the times or name if you desire.

SCENE PROGRAMMING (COMPLETE DESCRIPTION)

To program a Scene, create the look that you wish to program on the output of the Axiom , then press; <PROGRAM>. The following menu appears;

F1	F2	F3
P A T C H	S T L	C A N C E L
C h o o s e	O b j e c t	
T o	P r o g r a m	
S T A C K	C H A S E	S C E N E
F4	F5	F6

Select; [F6 SCENE] and the next menu appears;

F1	F2	F3
P r o g r a m ;		C A N C E L
C h o o s e	S c e n e	u s i n g
P a g e	a n d	S / A
C u r r e n t	P a g e	x x
F4	F5	F6

If you want to program your scene into a page other than the current page use the PAGE keys to make your selection.

Note; If you select a different page from the "current" one, this will only apply for the programming action that you make. It will not change the "current" selection for the Scenemasters.

As each page is selected, all used scene numbers in that page will flash. Press the S/A key of the scene number into which you wish to program your scene. The program scene menu now appears,

F1	F2	F3
P x x	S y y	- ' ' C A N C E L
I n	I N	O u t O U T L 0 . 0
N A M E	T I M E S	S A V E
F4	F5	F6

The page and scene numbers are shown, as is the area for the scene 'NAME' between the quotation marks. The third line shows the default In, Out and L (LTP) time settings for the scene. The diagram above shows the factory default times but you may set your own default times if you wish.

PROGRAMMING SCENE FADE TIMES

To alter the fade time setting press; [F5 TIMES]. The time select menu appears;

F1	F2	F3
- -	+ +	C A N C E L
I n	I N	O u t O U T L 0 . 0
←	→	D O N E
F4	F5	F6

You may program the settings for the In, Out and L (LTP) times in the scene. The HTP channels in the scene will fade *up* in the IN time and will fade *down* in the OUT time. The L time affects only LTP channels in the scene.

The "In" time may be set to either;

- IN (IN Time Fader)
- Programmed time.

The "Out" time may be set to either;

- OUT (OUT Time Fader)

- = IN (a copy of the IN time)
- Programmed time.

The "L" (LTP) time may only be a programmed time.

The factory default settings for the three times are;

- In time from the IN Time fader (In IN)
- Out time from the OUT Time fader(Out OUT)
- L time of 0 seconds (L 0.0).

Refer to the " GUIDED TOUR " section for details on how to set your own default times.

You select the time that you wish to program by positioning the highlight bar (----) over that time using the [F4 ←] and [F5 →] function keys. When a time is selected, it may be quickly varied by using the EDIT wheel or it may be incremented in single steps with the [F2 ++] key or decremented with the [F1 --] key. If you hold down either [F1] or [F2], they will auto repeat. A time may be snapped to minimum or maximum by tapping [F1] or [F2] once, then quickly pressing again and **holding**.

When the In time is incremented above the IN (Time fader) setting, it changes to a programmed time. When a programmed In time is reduced below 0.0 seconds, it changes back to IN. In a similar fashion, when incremented, the Out time changes from OUT to = IN and then to a programmed time.

When the OUT time is set to "= IN", it will be the same as the IN time.

Refer to "FADE TIMES" in the " GUIDED TOUR " section and "REPLAYING SCENES" later in this section for further details on how these times operate.

When all the times have been programmed press; [F6 DONE] to return to the previous menu.

NAMING A SCENE

After following the instructions for Programming a scene (described above) press; [F4 NAME] and the program name screen appears. For details on how to program the characters in the NAME, refer to "NAMES AND LABELS" in the "UTILITIES" section.

SAVING THE SCENE

If you are satisfied with the look, 'Name' and the "Time" settings, you complete the programming function by pressing; [F6 SAVE] and a message on the screen confirms that;

"Page xx Scene yy HAS BEEN SAVED".

BLIND SCENE PROGRAMMING

New scenes may be programmed blind (not appearing on the output) by using any of the scene editing techniques described below. Simply PREVIEW/EDIT the new scene number. When you select the scene number, the Axiom will warn you that the scene is empty and ask if you wish to continue. Select YES, and create the scene with editing functions.

LTP CHANNELS IN SCENES

LTP channels are treated differently to HTP channels when scenes are being **programmed**.

When they are assigned to a *Fixture* number, they will normally only be stored in memory if their associated HTP channel has a level above zero when the scene is programmed.

Refer to the "MOVING FIXTURES " section for details.

REPLAYING SCENES

OVERVIEW

Scenes may be replayed in many ways;

- Scenemasters. In SCENE mode, the 12 (24,36) red preset faders become Scenemasters.
- Stacks. The contents of any step in a stack may be any scene. See the "STACKS" section for details.
- Chases. The contents of any step in a chase may be any scene. See the "CHASES" section for details.

FADE TIMES

The control that a Scenemaster exhibits over the channels in the scene that it contains depends upon the type of channel, HTP or LTP in the scene.

HTP CHANNEL FADE TIMES.

The level of all HTP channels in a scene is dependent upon the level of the fade. The level of the fade is dependent upon the physical position of the fader *and* the time settings for the Scene.

A fade will always progress towards the current position of the fader at a rate set by the In fade time for upward movements and the Out fade time for downward movements.

For example, for an In fade time of 3 seconds, the fader must be moved from the bottom to the top in less than 3 seconds for the fade to take 3 seconds to execute.

- A fully manual fade is achieved by setting In and Out fade times of 0 seconds. The fade will then instantly follow the position of the fader movement.
- A timed fade is achieved by setting the required In and Out times and then *quickly* moving the scene fader from one end to the other. The fade will follow over the relevant time period.

LTP CHANNEL FADE TIMES

LTP channels are only used when controlling moving lights and scrollers. Every scene has its own LTP fade time programmed into it. This “programmed” time is the *only* time source for any LTP channels in the scene. When a scene is faded up, all the LTP channels in that scene will fade up in the LTP fade time. This fade up occurs as soon as the fader is raised above zero. The LTP channels will fade up irrespective of the movement of the fader once it has advanced above zero. Once the fade has been initiated, the fader position has no effect on the LTP channels in the scene. When a scene is faded down, all LTP channels **DO NOT CHANGE**. Each LTP channel will only change in level when another scene that contains that LTP channel is faded up as this is recognised as the “latest” action. Hence the term “Latest Takes Precedence”. Refer to "MOVING FIXTURES " for more details.

SCENEMASTERS

The 12 (24,36) faders of the red fader bank act as Scenemasters when the *Axiom* is operating in SCENE mode. Any one of 12 pages of scene memory may be selected. The contents of each Scenemaster for each page is determined by what you program (or copy) into them. It may be a Scene or it may be empty. When you change pages, the scenes in the selected page are assigned, in order, to their respective scene masters, 1 to 12 (24,36).

To cycle through the pages of Scenemasters repeatedly press <PAGE>. To directly select a page, hold <PAGE>, tap <S/A> (1 to 12) (Red preset S/A keys)

Note; Freeze rules apply. See “MEMORY STRUCTURE” for more details.

- To reveal a scene on the output;
- select Scene mode
 - select the page that contains the scene.
 - fade up the Red Preset Master.
 - fade up the Scenemaster containing the scene.

PREVIEWING AND EDITING A SCENE

You may **Preview** the programmed channels and the fade times contained in any scene without revealing the scene on the output.

Editing a scene is an extension of Previewing a scene. You may edit the channel levels (including channels not already ON in the scene), the fade times and the name.

PREVIEWING A SCENE

To preview a scene press; <PREVIEW / EDIT>. The following menu appears;

F1	F2	F3
P A T C H	S T L	C A N C E L
C h o o s e O b j e c t		
T o P r e v i e w o r E d i t		
S T A C K	C H A S E	S C E N E
F4	F5	F6

Select SCENE as the object to preview by pressing; [F6 SCENE]. The next menu appears;

F1	F2	F3
A v a i l M e m	x x %	C A N C E L
C h o o s e S c e n e t o		
P r e v l e w w i t h P a g e o r		
B a n k a n d S / A k e y s		
F4	F5	F6

All scene <S/A> keys will flash twice to show that they are possible choices and all existing scene numbers (in the current page) will continue to flash. You are asked to select the page of the scene that is to be previewed. The *current* page is shown on the bottom line. If necessary, select a different Page then press the <S/A> key of the scene number that you wish to preview. The preview scene menu now appears,

F1	F2	F3
MORE	CHANS	
P x x	S y y	- ' '
I n	I N	O u t O U T L 0 . 0
NAME	TIMES	DONE
F4	F5	F6

PREVIEW SCENE MENU

The LED indicators in the channel S/A keys of any channels programmed in the scene will light and the *intensity* of the indicators reflect the levels of those channels. The programmed times and name are shown on the screen. (The factory default times are shown above). The name, times and channel levels of the scene will be displayed on a Video Monitor.

The functions of "MORE", "CHANS", "NAME", and "TIMES", are all used to **edit** the scene as described in "Editing a Scene", below..

Whilst the *Axiom* is in preview mode, you can preview other scenes in the current page by simply pressing their <S/A >keys or preview scenes in other pages by using the <PAGE> key, then the scene <S/A> key.

EDITING A SCENE

Any scene may be edited. You may edit the channel levels, the fade times, the name and you may also copy channel levels or copy or erase the entire scene.

There are *three* ways of editing a scene;

- PREVIEW/EDIT SCENE is accessed from the PREVIEW SCENE MENU (above). Once you are previewing the scene you may edit the various contents of the scene by selecting the appropriate function key. Select from either "MORE", "CHANS", "NAME", or "TIMES".
- QUICK EDIT allow rapid editing of channel levels of the last scene to be faded up.
- LIVE EDIT is accessed directly from the <Preview/Edit> key and allows easy editing of the fade times by allowing you to see the fades executing on the channel S/A keys.

PREVIEW/EDIT SCENE

Preview the scene (also described above) by pressing; <PREVIEW / EDIT>, [F6 SCENE], <PAGE> <S/A> (Optional), <S/A> (scene number).

This reveals the Preview Scene menu and the channel levels are previewed on the channel S/A key LED indicators.

F1	F2	F3
MORE	CHANS	
P x x	S y y	- ' '
I n	M A N	O u t = I N L 0 . 0
NAME	TIMES	DONE
F4	F5	F6

The functions of "MORE", "CHANS", "NAME", and "TIMES", are all used to *edit* the scene.

EDITING A CHANNEL LEVEL

To change the level of any channel in a scene, preview the scene (as described above), then press; [F2 CHANS]. Select the required channel by pressing it's <S/A> key. You may select any channel, not only those that already exist in the scene. When you select a channel, the channel edit menu appears;

F1	F2	F3
TOGGLE	REMOVE	CANCEL
P x x	S y y	C h n # # * T P
L e v e l :	* * *	
- -	+ +	DONE
F4	F5	F6

The Page (P) number and Scene (S) number are shown followed by the Channel (Chn) number that you have selected to edit. The "*TP" label shows the type of channel, either HTP or LTP.

The current level of the channel being edited is shown on the third line.

- HTP channels are shown as a level between 0% and 100%.
- LTP channels are shown as a level between 000 and 255.

When a channel is selected, its level may be quickly varied by using the EDIT wheel or it may be decremented in single steps with the [F4 -] key or incremented with the [F5 +] key. If you hold down either [F4] or [F5], they will auto repeat. A channel may be snapped to 0 or Full by tapping [F4] or [F5] once, then quickly pressing again and **holding**.

If you vary the level, a "+" or a "-" sign indicates the current level to be above or below the programmed level. If you return the channel to the programmed level the + or - sign will disappear.

If you have edited the channel level, you may instantly returned to the *original* programmed level by pressing [F1 TOGGLE]. To return to the *edited* level press [F1 TOGGLE] again. The channel may be "toggled" between its programmed level and its edited level by repeated presses of [F1 TOGGLE]. You can always identify the *edited* level by the "+" or "-" sign beside the current channel level. You may select other channels to edit by pressing their <S/A> keys. When all channel levels are correct press; [F6 DONE].

Hint; Use the "TOGGLE" function described above to compare different levels when you are balancing lights. You can keep making changes to the edited level using the edit wheel and then compare the changed level with the originally programmed level by using the "TOGGLE" function

REMOVING A CHANNEL

When you edit the level of a HTP channel to 0 %, the channel will be automatically removed from the scene when you complete the editing function. If you edit the level of a LTP channel to 000, the channel will still be included as part of the scene but with its level at 000. This is because 000 is a legitimate level for LTP channels. Refer to the "MOVING FIXTURES AND SCROLLERS" section for details. If you want to totally remove a LTP channel from the scene, you can do so by selecting the channel as if to edit its level and then press; [F2 REMOVE], [F6 YES]. You can also use the [F2 REMOVE] function to instantly set any HTP channel to 0%. When all channel level editing is complete, press; [F6 DONE] to return to the preview scene menu.

EDITING A SCENE NAME

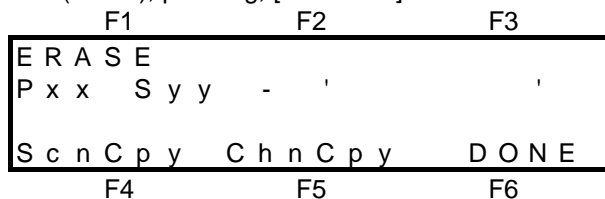
To edit the name of a scene, preview the scene (as described above), then press; [F4 NAME]. This will reveal the name editing menu. For details on how to edit the characters in the NAME, refer to "NAMES AND LABELS" in the "UTILITIES" section.

EDITING FADE TIMES

To edit the fade times of a scene, preview the scene (as described above), then press; [F5 TIMES]. This will reveal the Time editing menu. This is the same menu used for programming scene fade times and uses the same techniques. Refer to "PROGRAMMING SCENE FADE TIMES" earlier in this section for details. Also refer to "LIVE EDIT" later in this section.

MORE EDITING FUNCTIONS

When you are previewing a scene (above), pressing; [F1 MORE] will reveal the erase and copy menu.



ERASING A SCENE

In the above (MORE) menu, pressing, [F1 ERASE] will reveal a further menu asking you to confirm that you wish to erase the indicated scene. If you select [YES], the scene will be erased. Once erased, the scene may not be recovered! If you do not wish to erase the scene, select [CANCEL] .

COPYING A SCENE

In the above (MORE) menu, pressing, [F4 Scn Cpy] will allow you to make a duplicate of the scene being Preview/Edited, in a page number and scene number that you nominate. A message on the screen prompts you to select the page and scene number into which the copy is to be placed. Use the page key and the S/A keys to select the required page and scene number. When you make your selection the screen confirms your entries. Press; [F6 OK] to complete the copying process or press; [F6 CANCEL] to abort the process.

Note; When you make a copy of a scene, any scene that is currently programmed in the destination scene will be overwritten by the copy.

COPYING A CHANNEL LEVEL

You may copy the level of any channel in a scene to any other channel in the scene. In the above (MORE) menu, press, [F5 Chn Cpy], <S/A>(source channel), <S/A> (destination channel). The screen will display both the source and destination selections. You may change the destination channel by pressing; [F3 CANCEL], <S/A> (destination channel). Complete the copy by pressing [F6 OK].

Hint; Channel copy is especially useful when programming moving fixtures and scrollers. Once you have programmed the setting of a channel for a fixture, you may set other similar fixtures to the exact same settings by duplicating the channel levels using channel copy.

LIVE EDIT

Live Edit only operates in SCENE MODE. If a scene is currently assigned to a scene master, there are times when you may wish to *edit* the fade times, whilst at the same time fading the scene up and down to see the scene levels fade IN and fade OUT on the channel S/A key **indicators** (and on stage). Previewing and Editing of scenes as described earlier does not allow this as it uses the channel S/A key indicators to *preview* the **contents** of the scene on the S/A keys. The LIVE EDIT function shows the **output** of the scene master on the S/A keys as you fade the scene master up and down.

To Live Edit a scene, press; <PREVIEW/EDIT> <S/A> (The scene to be edited). This reveals the Preview Scene menu. When in the Preview Scene menu, pressing; [F5 TIMES] will reveal the Time editing menu. This is the same menu as for programming a scene fade time and uses the same techniques. Refer to "PROGRAMMING SCENE FADE TIMES" earlier in this section for details. As you edit the times you can fade the scene master up and down and see the results of your edit.

Hint: This feature is especially useful when you are programming scenes prior to a show when no dimmers or fixtures are connected to the Axiom . It allows you to see the relative fade times executing on the channel S/A key indicators as you are editing.

QUICK EDIT

Quick EDIT provides a *rapid* means of editing a Scenemaster scene. The editing that you can perform with Quick EDIT is limited to editing channel levels only, however, it is the way that the Scene is selected that makes Quick EDIT so useful.

Quick EDIT is accessed from menu 1. The top line of menu 1 contains the [F1 EDIT] function followed by an arrow pointing to a page/scene label. It shows the Page number and Scene number of the last scene that was faded **UP** (from zero). It is this scene that will be edited when you press [F1 EDIT].

F1	F2	F3
* *	Q U I C K	E D I T * *
P a g e	x x	S c n y y P u s h
S / A	f o r	c h a n n e l . U s e
e d i t	w h e e l .	C A N C E L
F4	F5	F6

Press the <S/A> key of the channel that you wish to edit and the screen changes to show the selected channel and its current level in that scene. Rotate the EDIT wheel to set the level of the channel. This is the same menu as described in "EDITING A CHANNEL LEVEL" described earlier. You may select other channels to edit by simply pressing their channel <S/A> keys.

When you have finished editing the scene press; [F6 DONE].

Section 7: CHASES

OVERVIEW

A chase is a list of steps that are to be replayed in order, stepping continuously from one step to the next and automatically repeating when it has reached the end. Each step in a chase may consist of either a channel, a scene, a snapshot of the *Axiom* output or a link to another chase. Up to 99 steps may be programmed for each chase and up to 12 (24, 36) separate chases may be programmed into the memory. You may enter and edit a descriptive name (up to 6 characters) for every Chase.

Chases may be programmed and run in any of the following modes;

- FORWARD
- REVERSE
- BOUNCE (Auto reverse at each end)
- SINGLE SHOT (Run once and stop) (in either direction)
- STOPPED
- MANUALLY STEPPED FORWARD
- MANUALLY STEPPED REVERSE

Chases may *snap* (instantly switch) from step to step or *crossfade* from step to step.

Chases may be replayed on either FX1 or FX2. When a chase is assigned to an FX master, it will automatically load with its programmed Rate, Direction, Mode (normal, single shot or bounce), State (running or stopped) and Fade settings. You may instantly switch between any mode whilst the chase is assigned and live on stage.

The chase RATE may be programmed into the chase memory in BPM (Beats Per Minute) or you may instantly and smoothly take manual control with the Rate fader of the FX master on which the chase is running. With the live edit function, if you change the Rate or Fade of a Chase on an FX master you can save the new settings in the Chase memory so that the next time the chase is assigned to an FX master it will operate exactly as it is now.

The contents of a chase may be previewed and edited, either in memory or directly on the FX master to which a chase is assigned. Any of the parameters may be changed and steps may be inserted or deleted.

If the *Axiom* is "LOCKED", you cannot program or edit chases.

PROGRAMMING A CHASE

CHASE PROGRAMMING - (RAPID METHOD)

To program a Chase with each step consisting of a **snapshot of the output** of the *Axiom*, press;

<PROGRAM>,

[F5 CHASE],

<S/A> (Red preset number)

[F3 OUTPUT]

Create the first look on the output, then to program it as the first step, press;

[F2 RECORD].

Create the next look on the output. To record this step, press;

[F2 RECORD].

Continue to create and record steps as above. When all desired steps have been recorded, complete the chase by pressing;

[F6 DONE], [F6 DONE], [F6 YES].

PLAYING THE CHASE

To assign and play the chase press <ASSIGN>, [F5 CHASE], <S/A>, (Chase number (red S/A number)) , <S/A> (FX master), then fade up the FX master.

CHASE PROGRAMMING (COMPLETE DESCRIPTION)

To program a Chase press; <PROGRAM>, [F5 CHASE] as the object to program. As you may program up to 12 (24, 36) separate chases you must give the chase a number. All valid S/A keys will flash twice to show that they are possible choices and then any *existing* chases numbers will continue to flash. Press the S/A key of the Chase number that you wish to Program. The program Chase menu appears;

```

          F1          F2          F3
  S C E N E S   C H A N L S   O U T P U T
  C h s   # #   S t p   0 0   F d   0 %
  '       '       '       1 0 0   B P M
  M O R E       L I N K       D O N E
          F4          F5          F6
  
```

The Chase (Chs) number (##) is shown on the second line as is the current Step (Stp) number and the Fade (Fd) setting which is automatically set to 0%. Below the Chase number is the area for the Chase 'NAME' between the quotation marks and beside the 'NAME ' is the chase rate which is automatically set to 100 BPM (Beats Per Minute). You may alter these "default" rate and fade settings later.

The top and bottom lines indicate the function key labels that select the objects that you may choose to program into each step of the chase. You may program either SCENES, CHANNELS, OUTPUT (snapshots of the Axiom output) or LINKS to other chases. The MORE function key allows you to program the chase 'NAME', 'RATE', 'FADE' and 'FLAGS'. More about these later.

Select which type of object you wish to program into the first step by pressing the appropriate function key. Typical chases will usually consist of either a number of channels (or a number of scenes or outputs) that follow each other. To assist rapid programming, when you select an object, the Axiom will enter the appropriate mode to accept a quantity of the same object on consecutive steps of the chase.

If for example, you select CHANLS, then the Axiom will go into "Select Channel" mode allowing you to program your selected channels onto consecutive steps of the chase by simply pressing the channel S/A keys in the order that you want them to chase. You may change to a different type of "object" on any step of the chase and as often as you like. A Chase may consist entirely of channels or scenes or snapshots, or it may be a mixture of a few channels followed by some snapshots and may end in a link to another chase. You determine the composition when you program or edit the chase.

PROGRAMMING SCENES IN A CHASE

If a Scene is programmed as a step in a chase, when that step is active, all the channels that are programmed into the scene will come on at their *programmed* levels.

To program a scene as a step in a chase, select the program chase menu as described above and then press; [F1 SCENE]. The select Scene menu appears;

```

          F1          F2          F3
  C h s   # #   S t p   # #   U N D O
  S e l e c t   S c e n e s   P x x S 0 0
  S / A   k e y s           D O N E
          F4          F5          F6
  
```

The Chase (Chs) number is shown on the second line as is the current Step (Stp) number. This is followed by the *current* Page number and Scene number.

You may now select the Scenes for each consecutive step and the Scene S/A keys flash twice to show they are valid choices and any *existing* scene numbers (in the current page) will continue to flash. If you wish to select a scene from a page other than the *current* page, you may change pages with the PAGE key.

Press the Scene S/A key of the scene number for step 1. Each time that you press a Scene S/A key, the Scene will be selected and entered into the NEXT step. In this way, the step number will *increment* every time that you enter a scene so all you have to do is press the scene number S/A keys in the order that you want them to chase and the steps are automatically created.

If you make an error you may step back and erase each step in order by pressing; [F3 UNDO]. When you have finished entering scenes, press; [F6 DONE]. The Program Chase menu returns.

You may now select a different object to program (into the following step) or if all the steps have been programmed you may press *either*; [F4 MORE] to program the 'NAME', RATE, FADE and FLAGS which are described later in this section *or* if the Chase is complete, press; [F6 DONE]. The Axiom will ask you to confirm and save the chase by pressing; [F6 YES].

PROGRAMMING CHANNELS IN A CHASE

When a channel is programmed as a step in a chase, it will come on at its maximum level when it is the current step of the chase. If you want more than one channel in a step of a chase or a channel at a level other than full, then you must either make the step a Scene or a Snapshot of the channel(s) at the required level(s). To program a channel as a step in a chase, select the program chase menu as described above and then press; [F2 CHANS] as the object to be recorded into the step. The select Channel menu appears;

F1	F2	F3
		U N D O
C h s	# #	S t p
S e l e c t	c h a n n e l	u s i n g
S / A	k e y s	D O N E
F4	F5	F6

The Chase (Chs) number is shown on the second line as is the current Step (Stp) number. This is followed by the channel number. You may now select the channels for each consecutive step and all the channel S/A keys flash to show that they are valid choices. Press the channel S/A key of that channel number for the indicated step. Each time that you press a channel S/A key, the Channel will be selected and entered into the NEXT step. In this way, the step number will *increment* every time that you enter a channel so all you have to do is press the channel number S/A keys in the order that you want them to chase and the steps are automatically created. If you make an error you may step back and erase each step in order by pressing; [F3 UNDO]. When you have finished entering channels, press; [F6 DONE]. The Program Chase menu returns. You may now select a different object to program (into the following step) or if all the steps have been programmed you may press *either*; [F4 MORE] to program the 'NAME', RATE, FADE and FLAGS which are described later in this section or if the Chase is complete, press; [F6 DONE]. The *Axiom* will ask you to confirm and save the chase by pressing; [F6 YES].

PROGRAMMING SNAPSHOTS IN A CHASE

To program the current OUTPUT of the *Axiom* as a step in a chase, select the program chase menu as described above and then press; [F3 OUTPUT]. The Record Output menu appears;

F1	F2	F3
P u s h - >>		R E C O R D
		U N D O
T o	r e c o r d	t h e
a s	S t e p	# #
	o f	C h s
		# #
		D O N E
F4	F5	F6

Each time that you press; [F2 RECORD], a snapshot of the current output of the *Axiom* will be recorded and entered into the NEXT step. Use the channel faders and, or scene masters, to create each lighting look then press; [F2 RECORD]. This programs the next step of the chase. Create the next look then program it as the next step by pressing; [F2 RECORD]. Continue to create and record each look as subsequent steps.

If you make recordings of the output and notice that the output was not what you wanted at the time, you may step back and erase each step in order by pressing; [F3 UNDO].

When you have finished entering snapshots, press; [F6 DONE]. The Program Chase menu returns. You may now select a different object to program (into the following step) or if all the steps have been programmed you may press *either*; [F4 MORE] to program the 'NAME', RATE, FADE and FLAGS which are described later in this section or if the Chase is complete, press; [F6 DONE]. The *Axiom* will ask you to confirm and save the chase by pressing; [F6 YES].

PROGRAMMING A LINK TO ANOTHER CHASE

The last step in a Chase may contain a LINK to another chase.

This allows not only very long chases to be created, but more importantly, it allows very complex chases to be very easily made, by linking together several short simple chases. Each chase may be programmed not only with its own steps, but also with its own Rate, Fade, and Flags. Thus, as one chase finishes and "Links" to another chase, the new chase will load and run with its own programmed settings which may be quite different to the previous Chase. The combinations and effects that you can create are enormous. When several chases are Linked together, the last chase can be linked back to the first chase, to make a complex multi speed/fade continuous chase. The last chase may be programmed so that it does not contain a Link. When the first chase

is run, it will be like a Single Shot effect until the last chase is reached. The last chase (without a Link) will then run as a normal looping chase.

To program a LINK as a step in a chase, select the program chase menu as described above and then press; [F5 LINK]. The LINK TO CHASE menu appears.

F1	F2	F3
A f t e r	S t e p	x x
L I N K	T O	C H A S E
S e l e c t	c h a s e	u s i n g
S / A	k e y s	Y E S
F4	F5	F6

The top line of the menu indicates the last step number that you have programmed. The LINK will be inserted in the next step. The S/A keys flash twice to show that they are valid choices and then all existing chase numbers will continue to flash. Press the S/A key of the chase number that you want to Link to. The second line of the menu indicates the number of the Chase that you have selected. To enter a Link press; [F6 YES], [F6 DONE]. The Axiom will ask you to confirm and save the chase by pressing; [F6 YES].

PROGRAMMING THE NAME, RATE, FADE AND FLAGS IN A CHASE

Note; These steps are optional. If you have time, it is advisable to name the chase, but you may do this later via Edit Chase. The default settings for the Rate, Fade and Flags will produce a standard chase.

To program the NAME, RATE, FADE and FLAGS, select the PROGRAM CHASE MENU as described earlier and then press; [F4 MORE]. The following menu is then displayed from which you may select the required object to program;

F1	F2	F3
F L A G S	R A T E	C A N C E L
C h s # #		F d x x x %
'		x x x B P M
N A M E	F A D E	D O N E
F4	F5	F6

PROGRAMMING THE FLAGS

You may set the way that the chase will operate when you **assign** it to an FX master by appropriately programming the FLAGS. To program the flags, from the MORE menu above press; [F1 FLAGS]. The FLAG menu appears;

F1	F2	F3
D I R	S T A T E	M O D E
→	R u n	N o r m a l
S e l e c t	h o w	t h e
s h o u l d	l o a d .	D O N E
F4	F5	F6

The three FLAGS and their possible settings are;

DIR ection	STATE	MODE
→ (Forward)	Run	Normal
← (Reverse)	Stop	S/shot
		(Single/shot)
		Bounce

The default settings of the three flags are, Forward, Run and Normal. If you do not select the flags menu, then this is how the Chase will load. You may change any of the flags by pressing the function key associated with each flag. [F1] changes the DIRection flag, [F2] changes the STATE flag and [F3] changes the MODE flag. Repeated presses of any key will step its flag through all of its possible states. When the flags are correctly set, press; [F6 DONE] to return to the previous menu.

MODE DESCRIPTIONS

- **NORMAL:** A conventional chase that steps from one step to the next and when it reaches the last step it loops around to the beginning and repeats the steps in the same order.
- **BOUNCE:** The chase runs but automatically changes direction when it reaches the last or first step. In this manner, it continuously “bounces” from end to end. On an FX master, the indicators in the “>”

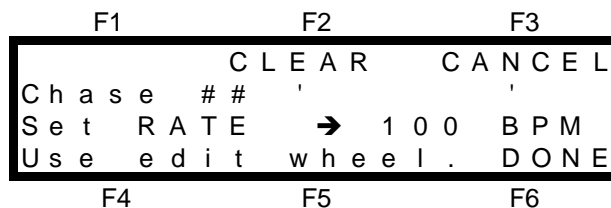
(forward) key and the “<” (reverse) key indicate bounce mode as each only flashes (at the chase rate), when the chase runs in its indicated direction.

- **SINGLE SHOT:** The chase is normally stopped. When it is started, it will run through its programmed steps once in the direction in which it is started. It will then stop and wait until it is manually started again in either direction.

Note; When the Chase is assigned to one of the FX masters it will load according to the settings of the flags, but you are then free to change the way the chase is operating by using the FX keys as described in "RUNNING A CHASE", later in this section.

PROGRAMMING THE RATE

You may set the RATE at which the chase will run when you **assign** it to an FX master. To program the RATE of the chase, select the MORE menu as indicated above, and then press; [F2 RATE]. The RATE menu appears;



The default rate setting is 100 BPM (Beats Per Minute). The Edit wheel lights to show that it is active. Rotate the Edit Wheel to set the rate that you desire. When the Rate is correct, press; [F6 DONE].

Hint; Unless you know the specific chase rate that you require, it is quicker to accept the default rate of 100 BPM and then visually set the rate by Editing the Chase when it has been Assigned to an FX master.

PROGRAMMING THE NAME

If you wish, you may give the chase a 'NAME' of up to 6 characters. To program the NAME of the chase, select the MORE menu as indicated above, and then press; [F4 NAME]. The NAME menu appears; For details on how to program the characters for the name refer to "NAMES AND LABELS" in the "UTILITIES" section.

PROGRAMMING THE FADE

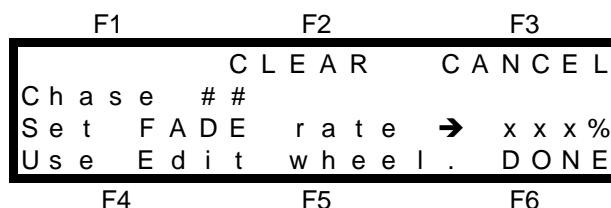
The transition from step to step may be a snap or a fade. The fade is programmed as a percentage of the chase rate.

For example, if the chase rate is set at 60 BPM (which is one step per second), then with Fade 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 Fade 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 cross fade and 50% of the Rate time is spent waiting before starting the next crossfade.

If the Fade 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.

To program the FADE of the chase, select the MORE menu as indicated above, and then press; [F5 FADE]. The FADE menu appears;



You may change the Fade setting by rotating the Edit Wheel. When the Fade setting is correct, press; [F6 DONE].

When the NAME, RATE, FADE and FLAGS are all correct, press; [F6 DONE]. The Program Chase menu returns. If the Chase is complete, press; [F6 DONE]. The Axiom will ask you to confirm and save the chase by pressing; [F6 YES].

PLAYING A CHASE

ASSIGNING A CHASE

To run a Chase, you must first ASSIGN it to either of the FX masters. When a Chase is assigned, it will load in the condition set by its programmed Flags, (refer above). These flags set its direction, state and mode. It will also load its programmed Rate and Fade settings.

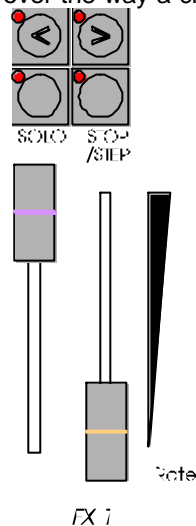
To assign a chase, press; <ASSIGN>, [F5 CHASE] <S/A> (Chase number), <SOLO> (FX1 or FX2).

When you choose "F5 CHASE" from the ASSIGN menu (above), the screen will prompt you to make a selection. All chase S/A keys will flash twice to show that they are possible choices and then any *existing* chase numbers will continue to flash. Press the S/A key for the Chase number you wish to assign. Chases may be assigned to either of the FX masters and the FX master's S/A keys will flash to indicate this.

To reveal the Chase, simply fade up the FX master to which you assigned the chase.

CONTROLLING A CHASE

The FX master provides comprehensive control over the way a chase is run.



You may control the overall level of the chase or you may "SOLO" (flash) the chase. You may control the direction, state and mode, simply pressing the correct key combinations as described below and you may manually control the rate. The key LED's, together with the menu screens display extensive information about the chase.

PROGRAMMED SETTINGS

The settings of a Chase when it is assigned to an FX master are determined by the programmed settings in memory. Changes that you make on the FX master appear on the output but do not affect the programmed settings. If you assigned the chase again, it will load with its original settings. You can save the changes that you make on the FX master by pressing; <PREVIEW/EDIT>, <SOLO> (FX master). You then have the option of saving the new settings in memory.

LEVEL

The FX master fader controls the overall level of all HTP channels in the chase. The chase may be flashed with the SOLO key of the FX master. When the level of a running chase is reduced below 5%, the chase is automatically stopped. When the chase level rises above 5% (via either the level fader or SOLO key) the chase automatically starts. The "auto stop" feature stops LTP channels from chasing when the chase is not visible on the output. This prevents unnecessary movement of moving lights and scrollers.

RATE

The current rate of a chase, whether it is running or stopped is visually displayed by the flashing of either the ">" (forward) key indicator or the "<" (reverse) key indicator. When a Chase is assigned to an FX master, the rate of

the chase is determined by the RATE setting, in Beats Per Minute, that was set when the chase was programmed or edited.

To manually control the Chase rate, move the FX Rate fader through its range until the RATE indicator lights. To change back to the programmed rate re-assign the chase to the FX master as described above.

DIRECTION, STATE, MODE

MANUAL CONTROL

The four keys above the FX master provide extensive control of the Direction, State and Mode of the Chase. You may change the **direction**, **state** and **mode** of an assigned Chase at any time by simply pressing the correct key combinations as described below.

KEY	ACTION
<STOP/STEP>	STOPS a running chase. STEPS a <i>stopped</i> chase in the direction indicated by the currently lit direction key. This stepping will be the direction that the chase was running prior to being stopped.

When the chase is STOPPED, the indicator in the STOP/STEP key is **lit**.

> (Forward)	STARTS a stopped chase and runs it forward . Changes the DIRECTION of a reverse running chase (runs it forward). Changes a BOUNCE chase into a normal forward chase. SNAPS a forward running chase to the next step.
-------------	---

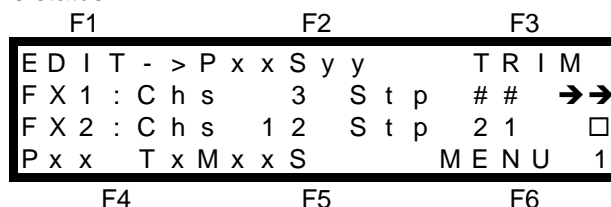
< (Reverse)	STARTS a stopped chase and runs it backwards . Changes the DIRECTION of a forward running chase (runs it backwards). Changes a BOUNCE chase into a normal reverse chase. SNAPS a backward running chase to the next step.
-------------	--

Hold >, Tap <	Selects BOUNCE mode.
Hold <, Tap >	Also selects BOUNCE mode.
>	Deselects Bounce mode (runs forward).
<	Deselects Bounce mode (runs reverse).
Hold Stop/Step, Tap >	Selects SINGLE SHOT mode.
>	Runs a forward Single Shot.
<	Runs a reverse Single Shot.
Hold Stop/Step, Tap <	De-selects single shot mode.

CHASE MAIN MENU DISPLAYS

MENUS 1 AND 2

The current state of an assigned chase is always displayed on main MENUS 1 and 2. They provide identical displays of the two FX masters status.



The second line gives details of FX 1 and the third line gives details of FX2.

The following symbols are used on the right of the screen to indicate the current state of an assigned chase.

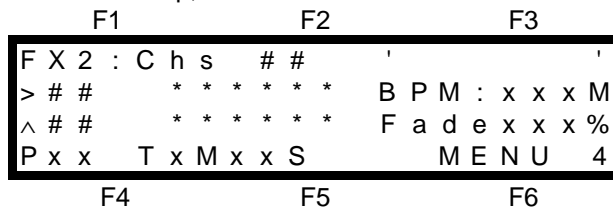
Symbol	State
→→	Running forward
←←	Running reverse
□	Stopped
→←	Bounce

→⌂ Single Shot

Main menus 1 and 2 are fully explained in the "GUIDED TOUR" section.

MENUS 3 AND 4

Main menus 3 and 4 show expanded details of FX masters 1 and 2 respectively, including the *current* and *next* steps together with the contents of each step, the chase RATE in BPM and the FADE setting.



MENU 3 SHOWING A CHASE ASSIGNED TO FX2

The top line tells you that this is the display for FX2 and indicates Chase (Chs) number (##), followed by the name of the chase if any.

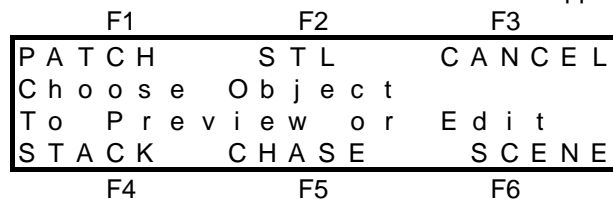
The second line details the *active* step in the Chase. The third line details the *next* step in the Chase. In both lines, the step number is given followed by details of the contents of that step. This may take the form of either a channel number, a page and scene number or the word "snapshot". This is indicated by ***** on the second and third lines in the diagram above.

Beside the *active* step contents is the chase rate in BPM. If the rate is controlled from the Rate fader, the letter M (Manual) follows the BPM value. Below the rate on the third line, the percentage fade setting is given.

PREVIEWING A CHASE

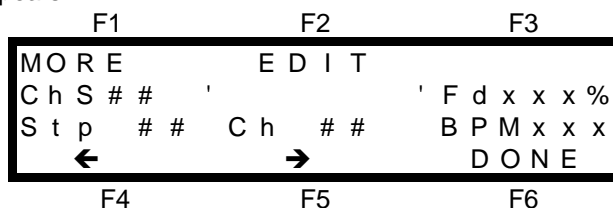
You may preview and edit the steps and programmed settings contained in a chase without revealing the chase on the output of the *Axiom* or whilst the chase is active.

To preview a chase press <PREVIEW / EDIT>. The PREVIEW / EDIT menu appears;



- To preview an FX chase stored in memory press; [F5 CHASE], <S/A> (Chase number).
- To preview an FX chase that is currently assigned to an FX master; press <SOLO> (FX master).

The Chase Preview menu appears.



The first line of the screen contains the MORE and EDIT function key labels. They are described in EDITING A CHASE, below.

The second line of the screen shows the Chase (Chs) number (##), Name (' ') and the Fade (Fd) setting. The third line shows the Step (Stp) number (##) followed by the contents of that step, (shown as a Channel in this diagram). The contents may of course be any of the following;

- Ch ## (Channel number ##)
- P xx S yy (Page xx Scene yy)
- Snp Sht (Snapshot of the output)
- LChs ## (Link to Chase number ##)

Beside the step contents, the chase Rate is shown in BPM (Beats Per Minute).

You may STEP through the chase in either direction by pressing either; [F4 ←] or [F5 →]. As you step the chase, the contents of each step will be displayed beside the step number, and the **channel levels** will be indicated by the intensity of their S/A key indicators.

If the TERMINAL PREVIEW function is ON, the contents of the step will be displayed on a Video Terminal or computer connected to the RS232C port. When you have finished previewing the chase you may either press; <PREVIEW/EDIT> or [F6 DONE].

EDITING A CHASE

There are two ways of editing a chase on the *Axiom*. You may edit a chase that is stored in memory or you may edit a chase that is currently assigned to an FX master.

EDITING A CHASE IN MEMORY

To edit a chase, you must first preview the chase as described above. Once you are in the PREVIEW CHASE menu, you may select from either "MORE", or "EDIT" to edit the chase.

1. MORE.

Pressing; [F1 MORE] will reveal the following menu.

F1	F2	F3
FL A G S	R A T E	F A D E
Ch a s e # #	F a d e x x x %	
'	B P M x x x	
N A M E	E R A S E	D O N E
F4	F5	F6

You may elect to edit either the FLAGS, RATE, FADE, or NAME or you may ERASE the chase by pressing the appropriate function key, [F1] to [F5] respectively.

The menus that are displayed when you select FLAGS, RATE, FADE, or NAME are exactly the same as in "PROGRAMMING THE NAME, RATE, FADE and FLAGS". They are described earlier in this section.

ERASING A CHASE

A chase may be erased from memory. To erase a chase, firstly preview the chase, then from the MORE menu above, press; [F5 ERASE]. The *Axiom* will ask you to confirm this action because once erased, the chase cannot be recovered.

2. EDIT.

From the PREVIEW CHASE menu, pressing; [F2 EDIT] will reveal the Edit Chase menu;

F1	F2	F3
I N S E R T	D E L E T E	M O D I F Y
Ch a s e # #	'	'
S t e p # #	- P x x S y y	
←	→	D O N E
F4	F5	F6

This menu again allows you to STEP through the chase in either direction by pressing either; [F4←], or [F5→].

As you step the chase, the contents of each step will be displayed beside the step number, and the channel levels will be indicated by the S/A key indicators in an identical fashion to PREVIEW CHASE above.

This menu varies from Preview Chase in that it allows you to INSERT new steps or DELETE existing steps at any point in the chase. If the step that you select is a Scene or a Snapshot, then you may also MODIFY (Edit) the channel levels.

INSERTING A STEP

To insert a step in a chase, select the EDIT CHASE menu above, then step the chase to the step PRIOR to the point where the new step is to be inserted and press; [F1 INSERT]. The Insert step menu appears;

F1	F2	F3
I n s e r t	s t e p	h e r e ?
←	→	^
	S t e p - # #	S t e p - # #
		Y E S
F4	F5	F6

The " ^ " on the bottom line indicates that the new step will be inserted between Step # # and Step # #.

If this is not the correct insertion point, you may step the insertion point in either direction with the [F4] and [F5] function keys. When the insertion point is correct, press; [F6 YES]. The step type menu appears;

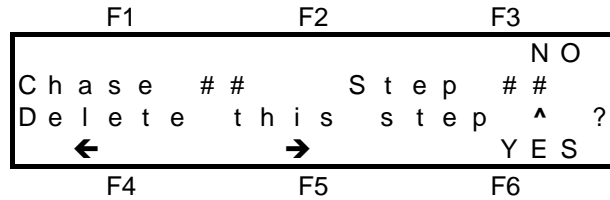
F1	F2	F3
S C E N E	C H A N L	O U T P U T
I n s e r t	w h i c h	a f t e r
S t e p # #	i n	C h a s e # #
	L I N K	D O N E

F4 F5 F6

Use the appropriate function key to select what type of step you wish to insert. This is very similar to Programming a Chase. Refer to "PROGRAMMING A CHASE" earlier in this section for details.

DELETING A STEP

To delete a step in a chase, select the EDIT CHASE menu above, then step the chase to the step that you wish to delete and press; [F2 DELETE]. The Delete step menu appears;



The step to be deleted is indicated by a " ^ ". If this is not the correct step to delete, you may step the chase in either direction, to the correct step to be deleted, with the F4 and F5 function keys. To delete the step press; [F6 YES].

MODIFYING A STEP

If a step in a chase is a scene or a snapshot, then the channel levels in that scene or snapshot may be modified (edited).

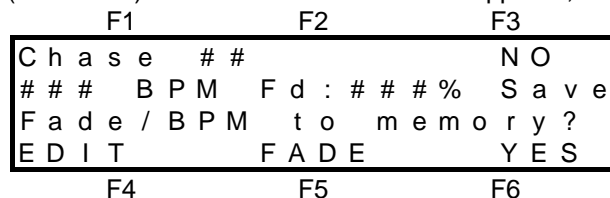
To modify a step in a chase, select the EDIT CHASE menu above, then step the chase to the step that you wish to modify and press; [F3 MODIFY]. The MODIFY function key only appears when the step that you select is a Scene or a Snapshot. If you wish to modify a step that is a single channel, delete the step then insert a step with the correct channel. When you select MODIFY, the screen asks you to select the channel whose level you wish to edit by pressing its S/A key. Modifying a step in a chase is exactly the same procedure as editing a scene.

Note; If the step that you choose to modify is a scene, the changes that you make are applied to the actual scene. If you then replay that scene on a scene master, you will see the "modified" version.

As "MODIFYING A STEP" is exactly the same procedure as "EDITING A SCENE" it is not described here. Editing a scene is fully described in "EDITING A CHANNEL LEVEL" in the "SCENES" section.

PREVIEW / EDITING AN ASSIGNED FX CHASE (LIVE EDIT)

If a chase is assigned to an FX master it may be directly edited on that master. To "Live Edit" a chase, press; <PREVIEW/EDIT>, <SOLO> (FX master). The Chase Live Edit menu appears;



- You can use the FX masters Rate fader to set the **Rate**.
- If you press; [F5 FADE] you can use the Edit wheel to set the percentage **Fade**.

The advantage of LIVE editing an FX chase over editing it in MEMORY is that you can use the FX master control keys and Rate fader to control the chase and see the results of your actions live on stage. When you are happy with the way the chase is performing you may save the new settings of RATE and FADE in memory by pressing; [F6 YES]. The next time that you assign the chase it will run as you see it now. If you press; [F3 NO] the chase will continue to run in its current edited form, but the changes will not be saved to memory. The next time that you assign the chase it will run as it did prior to the current editing.

If you wish to change any of the other chase settings, press; [F4 EDIT] and you will change to the standard EDIT CHASE menu. This allows you to Insert, Delete or Modify steps as described in "EDITING A CHASE IN MEMORY" above.

Section 8: STACKS

OVERVIEW

A Stack is a list of steps consisting of scenes or channels or snapshots (of the *Axiom* output), or a link to another stack, that are programmed in the order that they are to be replayed. The scenes, channels, snapshots or links may come in any order. The *Axiom* can program up to 48 (60) stacks and there may be up to 99 steps in each stack but as stacks may be "linked" together, the maximum number of steps may be much higher.

A Stack is designed to be played one step at a time with the transitions being a timed DIPLESS CROSSFADE executed by pressing the > (forward) key. Individual IN, OUT and LTP fade times may be programmed for every step. A step may be programmed to "AUTO STEP", that is it, it will automatically execute at the completion of the previous step. A step may be a "PAUSE", that is, at the completion of the previous step, it will count down a programmed PAUSE time, after which it will automatically execute the next step

You may enter and edit a descriptive NAME for every stack. In addition, every step in a stack may have its own LABEL.

Stacks may be replayed on either FX1 or FX2. The FX master allows comprehensive control over the assigned stack. Once a crossfade has been started, it may be stopped, started again in either the forward or reverse direction or snapped to completion, or snapped back to the start of the step. A stationary stack may be "stepped" (snapped, no times executed) in either direction.

The contents of a stack may be previewed and edited, either in memory or directly on the FX master to which a stack is assigned. Any of the parameters may be changed and steps may be inserted or deleted.

If the *Axiom* is "LOCKED", you may only replay stacks. You cannot program or edit them.

PROGRAMMING STACKS

STACK PROGRAMMING - (BRIEF DESCRIPTION)

To program a Stack, with each step consisting of a snapshot of the output of the *Axiom*, press;

<PROGRAM>,

[F4 STACK],

<S/A> (stack number) (any red S/A key).

[F3 OUTPUT].

Create the first look on the output, then to record it as the first step, press;

[F2 RECORD].

Create the next look on the output. To record this step, press;

[F2 RECORD].

Continue to create and record steps as above. When all desired steps have been recorded, complete the stack by pressing;

[F6 DONE], [F6 DONE], [F6 YES].

STACK PROGRAMMING (COMPLETE DESCRIPTION)

To program a Chase press; <PROGRAM>, [F4 STACK].

As you may Program up to 48 (60) individual stacks you must give the stack a number. The Red preset <S/A> keys are used for stack numbers. All stack number S/A keys will flash twice to show that they are possible choices and then any *existing* stacks numbers will continue to flash. Press the <S/A> key of the Stack number that you wish to program. The PROGRAM STACK MENU appears;

	F1	F2	F3	
S	C	C	O	
C	H	H	U	
E	A	A	T	
S	#	S	0	
t	#	t	0	
a		e		
k				
'				
N	L	D		
A	I	O		
M	N	N		
E	K	E		
	F4	F5	F6	

PROGRAM STACK MENU

The Stack number and current Step number are shown. Below the Stack number is the area for the Stack 'NAME'.

The top and bottom lines indicate the function key labels that select the *objects* that you may choose to program into each step of the stack. You may program either [SCENES], [CHANNELS], [OUTPUT] (snapshots of the *Axiom* output) or a [LINK] to another stack.

Select which type of *object* you wish to program by pressing the appropriate function key.

Typical stacks will usually consist of either a number of scenes or a number of channels or outputs that follow each other. To assist rapid programming, when you select an *object*, the *Axiom* will enter the appropriate mode to accept a quantity of the same *object* on consecutive steps of the stack.

If, for example, you select SCENES, then the *Axiom* will go into 'Select Scene' mode allowing you to program your selected scenes onto consecutive steps of the stack by simply pressing the scene S/A keys in the order that you want to play them.

A Stack may consist entirely of channels or scenes or snapshots, or it may be a mixture of a few scenes followed by some snapshots and may end in a link to another stack. You determine the composition when you program the stack. You may change to a different type of "*object*" on any step of the chase by returning to this menu via [F6 DONE] (below).

PROGRAMMING THE STACK NAME

If you wish, you may give the stack a 'NAME' of up to 6 characters.

Select the program stack menu as described above and then press; <F4 NAME>. The NAME menu appears. For details on how to program the characters in the NAME, refer to "NAMES AND LABELS" in the "UTILITIES" section.

Note; This step is optional. If you have time, it is advisable to name the stack but you may do this later via PREVIEW/Edit stack. If you choose not to program a name, then the name will be left blank.

PROGRAMMING SCENES IN A STACK

If a Scene is programmed as a step in a stack, when that step is executed, the output of the FX master will crossfade to the scene and all the channels that were programmed into the scene will come on at their *programmed* levels.

To program a scene as a step in a stack, select the PROGRAM STACK MENU as described above then press; [F1 SCENE]. The SELECT SCENE MENU appears.

F1	F2	F3
Stk ##	Stp ##	CANCEL
Select	Scenes	Page x
S/A	keys	using
F4	F5	F6

The Stack (Stk) number, current Step (Stp) number and the *current* Page (P) or and Scene (S) number are shown.

You may now select the Scene numbers to be entered into successive steps of the stack. To select a scene from a page other than the *current* page, select that page, then the scene number.

Press the Scene <S/A> key of the scene number for step 1 and the program step menu appears;

F1	F2	F3
FLAG		UNDO
"	" Stp ##	PxxSyy
In	MAN	Out = N X T
LABEL	TIMES	DONE
F4	F5	F6

The second line of the menu has the area for the step "LABEL" (a copy of the scene's name), plus the current step number together with the Page (P) and Scene (S) number.

The third line shows the In, Out and L (LTP) time settings for the step.

The top and bottom lines indicate the function key labels that select the parameters that you may choose to program for this step of the stack. You may choose [FLAG], [LABEL], or [TIMES].

Select each parameter you wish to program for this step by pressing the appropriate function key.

Note; These parameters of flag, label, and times are optional. If you have time, it is advisable to label the step and program the fade times, but you may do this later via PREVIEW/Edit stack.

If you choose not to program any of them, the default settings will be used for the un-programmed parameters.

- The default setting for the label is the scene name or if the scene had not been programmed with a name it will be blank.
- The default setting for the times is a copy of the scene's programmed times.
- The default setting for flag is for the step to be manually executed.

The programming of these optional procedures is described below under "FLAGS, LABELS AND TIMES IN STACK PROGRAMMING", later in this section.

Once you have programmed the first step as described above, and regardless of whether or not you choose to program the optional information, you may rapidly program further scenes as subsequent steps by simply pressing the scene number <S/A> keys in the order that you want them to appear. To select a scene from a page other than the *current* page, select that page, then the <S/A> scene number.

In other words, you may *completely* program a step by programming the optional information in each step or *rapidly* program a step by omitting any or all of the optional information and just selecting the scene.

If you make an error you may step back by pressing; [F3 UNDO].

When you have finished entering scenes, press; [F6 DONE]. The PROGRAM STACK MENU returns.

You may now select a different *object* to program (into the following step) and again you may use the rapid programming technique just described but for the new type of object.

If all the steps have been programmed press; [F6 DONE]. The *Axiom* will ask you to confirm and save the stack by pressing; [F6 YES].

PROGRAMMING CHANNELS IN A STACK

When a channel is programmed as a step in a stack, it will come on at full when it is the current step. If you want more than one channel in a step or a channel at a level other than full, then you must either make the step a Scene or a Snapshot of the channel(s) at the required level(s). Programming a channel into a step of a stack is very similar to programming a scene as a step.

To program a channel as a step in a stack, from the PROGRAM STACK MENU described above press; [F2 CHANS], as the object to be programmed into the step and the select channel menu appears.

F1	F2	F3
		C A N C E L
S t k # #	S t p # #	
S e l e c t C h a n n e l u s i n g		
S / A k e y s		
F4	F5	F6

The Stack (Stk) number, current Step (Stp) number are shown.

You may now select the channel numbers to be entered into successive steps of the stack and the channel S/A keys flash to show that they are valid choices.

Press the channel <S/A> keys of the channel number for the indicated step and the program step menu appears;

F1	F2	F3
F L A G		U N D O
"	" S t p # #	C h n # #
I n M A N	O u t = N X T	L 0 . 0
L A B E L	T I M E S	D O N E
F4	F5	F6

This menu is very similar to that for programming scenes as steps in a stack as described earlier. This menu differs only in that it shows the channel (instead of the scene) that you have selected for the indicated step of the stack.

You may now program the [FLAG], [LABEL], or [TIMES] for this step. Select each parameter you wish to program for this step by pressing the appropriate function key.

Note; These parameters of flag, label, and times are optional. If you have time, it is advisable to label the step and program the fade times, but you may do this later via PREVIEW/Edit stack.

If you choose not to program any of them, then the default settings will be used for the un-programmed parameters.

- The default setting for the label is the number of the selected channel. e.g. "Ch# 2"
- The default setting for the times are the default times as set in the UTILS menu.
- The default setting for flag is for the step to be manually executed.

The programming of these optional procedures is described below under 'FLAGS, LABELS, and TIMES IN STACK PROGRAMMING', later in this section.

Further channels may be programmed as steps by pressing their channel <S/A> keys. Each channel will be selected and entered into the NEXT step.

If you make an error you may step back by pressing; [F3 UNDO].

When you have finished entering channels, press; [F6 DONE]. The PROGRAM STACK MENU returns. You may now select a different *object* to program (into the following step) or, if all the steps have been programmed press; [F6 DONE]. The Axiom will ask you to confirm and save the stack by pressing; [F6 YES].

PROGRAMMING OUTPUT (SNAPSHOTS) IN A STACK

To program the current OUTPUT of the Axiom as a step in a chase, select the PROGRAM CHASE MENU as described above and then press; [F3 OUTPUT]. The Record Output menu appears;

F1	F2	F3
P u s h -]]	R E C O R D	C A N C E L
T o r e c o r d t h e o u t p u t		
a s t h e n e x t s t e p o f		
S t a c k # #		
F4	F5	F6

To RECORD the current output and program it into the current step press; [F2 RECORD]. A snapshot of the output will be taken and the program step menu appears;

F1	F2	F3
F L A G	R E C O R D	U N D O
"	" S t p # #	S n a p s
I n M A N	O u t = N X T	L 0 . 0
L A B E L	T I M E S	D O N E
F4	F5	F6

This menu is very similar to that for programming scenes or channels as steps in a stack as described above. This menu differs only in that it shows that a Snaps (Snap Shot) has been taken for the indicated step of the stack.

You may now program the [FLAG], [LABEL], or [TIMES] for this step. Select each parameter you wish to program for this step by pressing the appropriate function key.

Note; These parameters of flag, label, and times are optional. If you have time, it is advisable to label the step and program the fade times, but you may do this later via PREVIEW/Edit stack.

If you choose not to program any of them, then the default settings will be used for the un-programmed parameters.

- The default setting for the label is blank.
- The default setting for the times are the default times as set in the UTILS menu.
- The default setting for flag is for the step to be manually executed.

The programming of these optional procedures is described below under 'FLAGS, LABELS, and TIMES IN STACK PROGRAMMING', later in this section.

Further snapshots may be taken and each is entered into the NEXT step by pressing; [F2 RECORD].

When you have finished recording snapshots, press; [F6 DONE]. The PROGRAM STACK MENU returns.

You may now select a different *object* to program (into the following step) or, if all the steps have been programmed press; [F6 DONE]. The Axiom will ask you to confirm and save the stack by pressing; [F6 YES].

PROGRAMMING LINKS ("PAUSE" OR "LINK TO ANOTHER STACK")

A step in a stack may be programmed as a LINK. There are two types of LINK to choose from;

- PAUSE link.
- STACK link.

Both types of link are described below.

To program a LINK as the next step in a stack, from the PROGRAM STACK MENU described earlier, press; [F5 LINKS] and the LINK menu appears;

F1	F2	F3
P A U S E		U N D O
C h o o s e t y p e o f l i n k		
d e s i r e d a f t e r S t e p # #		
S T A C K		D O N E
F4	F5	F6

LINK MENU

PAUSE LINK

When a step containing a PAUSE LINK becomes the NEXT step, it will automatically count down its programmed PAUSE time, after which it will automatically crossfade to the next step. To program a PAUSE, from the LINK menu above press; [F1 PAUSE].

The screen shows;

F1	F2	F3
	Z E R O	C A N C E L
U s e	E d i t	w h e e l .
P A U S E	f o r	0 . 0 s
a f t e r	s t e p	# # D O N E
F4	F5	F6

Rotate the EDIT wheel to set the pause time as indicated on the screen. To complete the pause time setting press; [F6 DONE]. The screen returns to the previous menu.

In other words, when a pause is programmed, it automatically LINKS to the next step after a PAUSE.

STACK LINK

The last step in a stack may be programmed with a STACK link. When the step containing the STACK link becomes the NEXT step, it will *automatically* assign another stack that you specify, to the FX master. The last step of the first stack will crossfade to the first step of the second stack in exactly the same manner as the crossfade between two steps of the same stack would occur. This allows not only more than 99 steps to be executed, it allows very complex stacks to be easily made, by linking together short simple stacks which are easier to manage and edit.

To program a link to another stack as a step in a stack, from the LINK menu above press; [F4 STACK]. The screen shows;

F1	F2	F3
A f t e r	S t e p	x x N O
L I N K	T O	S T A C K 0 0 ?
S e l e c t	s t a c k	u s i n g
S / A	k e y s	Y E S
F4	F5	F6

The top line of the menu indicates the last step number that you have programmed. The LINK will be inserted in the next step. The red <S/A> keys flash twice to show that they are valid choices and then all existing stack numbers will continue to flash. Press the <S/A> key of the stack number that you want to Link to. If you make an error, you may simply press another S/A key. The second line of the menu indicates the number of the Stack that you have selected. To enter the Link press; [F6 YES], [F6 DONE]. If the Stack is complete, press; [F6 DONE]. The Axiom will ask you to confirm and save the stack by pressing; [F6 YES].

FLAG (AUTO STEP), LABELS, AND TIMES

As you program each step of a stack, you may choose to program any or all of the FLAG, LABEL, and TIME parameters for that step. If you choose not to program any of them, then the default setting for the particular parameter will be automatically programmed for you.

PROGRAMMING A FLAG (AUTO STEP)

A step may be programmed to 'AUTO STEP', that is, the step will automatically execute at the completion of the previous step. On main menus 2 and 3, an AUTO STEP is identified by an 'A' beside its step number. After programming the contents of a step, from the program step menu (described above) press; [F1 FLAG]. The FLAG menu appears;

F1	F2	F3
		N O
S t e p	# #	
A U T O	S T E P	T H I S S T E P ?
		Y E S
F4	F5	F6

Press; [F6 YES] to make this an AUTOSTEP.

LABELLING A STEP

You may program an individual LABEL for every step of a stack. (You may program a NAME for the whole stack). If you choose not to program a label, then the default labels will be automatically programmed for you. This makes stacks self documenting.

The default 'LABELS' for the different objects that you may program as steps are;

- **SCENES;**

If the step contains a scene then the default label will be the 'NAME' of the scene. If no name has been programmed for the scene, the label as displayed on menus 3 or 4 will be the page and scene number.

- **CHANNELS**

If the step contains a channel then the default label will be the channel number. If a 'LABEL' has been programmed for the channel in the patch, then the channel 'LABEL' will appear.

- **RECORD**

If the step contains a recording of the *Axiom* output then the default label will be blank when previewed, but the label as displayed on menus 3 or 4 will be 'SnpSht', (an abbreviation of "SnapShot").

Note; If you program a label for a step in place of the default label, then this new label only applies to that step. It does not change the source of the default label.

PROGRAMMING A LABEL

After programming the contents of a step, from the program step menu (described above) press; [F4 LABEL]. The edit label menu appears. For details on how to program the characters in the LABEL, refer to "NAMES AND LABELS" in the "UTILITIES" section.

PROGRAMMING STACK FADE TIMES

You may program an IN fade time, an OUT fade time and an L (LTP) fade time for every step in the stack. The HTP channels are controlled by the IN and OUT times. The LTP channels are controlled by the L time.

IN AND OUT TIMES

The incoming step will fade *up* in the IN time as programmed for that step.

The outgoing step will fade *down* in the OUT time as programmed for that step.

The IN time may be set to either;

- MAN (Rate Fader)
- Programmed time.

The OUT time may be set to either;

- =NXT (the same as the IN time of the NEXT STEP)
- MAN (Rate Fader)
- Programmed time.

The transition from one step to the next is in the form of a DIPLESS CROSSFADE.

L TIMES

When a step of the stack is executed, the LTP channels in this *incoming* step will fade to their programmed levels in the L time.

LTP channels will only change level if they are programmed in the *incoming* step. If they do not have a new level in the *incoming* step then they will remain at their previous (LAST) levels.

The LTP time may only be a programmed time.

DEFAULT TIMES

If you choose not to program times, then the default times will be automatically programmed for you.

Refer to the "TIMES" in the "DESK OVERVIEW" section for details on how to program your own default times.

The default times for each type of step are;

SCENES

The IN, OUT and L times will be a copy of those originally programmed into the scene.

If the scene was programmed with its fade time set by the Time fader, it will now be set by the position of the Rate fader of the FX master to which the stack is assigned.

If the scene was programmed with its OUT time as =IN, it will become =NXT, which is the IN time of the Next step in the stack.

CHANNELS AND OUTPUTS (SNAPSHOTS)

The IN time will be Manual (MAN) as set by the position of the Rate fader of the FX master to which the stack is assigned

The OUT time will be =NXT.

The L time will be 0.0 seconds.

PROGRAMMING STEP TIMES

After programming the contents of a step, from the program step menu (described above) press; [F5 TIMES]. The edit times menu appears;

F1	F2	F3
- -	+ +	C A N C E L
n	O u t = N X T	L 0 . 0
←	→	D O N E
F4	F5	F6

You may program the settings for the In, Out and L (LTP) times in the step.

You select the time to program by positioning the highlight bar (----) over the time by using the [F4 ←] and [F5 →] function keys. When a time is selected, it may be quickly varied by using the EDIT wheel or it may be incremented in single steps with the [F2 +] key or decremented with the [F1 -] key. If you hold down either [F1] or [F2], they will auto repeat. A time may be snapped to minimum or maximum by tapping [F1] or [F2] once, then quickly pressing again and **holding**.

When all the times are correctly programmed, press; [F6 DONE]. The program step menu returns. If all the steps have been programmed press; [F6 DONE], [F6 DONE]. The *Axiom* will ask you to confirm and save the stack by pressing; [F6 YES].

PLAYING A STACK**ASSIGNING A STACK**

In order to play a stack, you must first ASSIGN it to either of the two FX masters. When a stack is assigned, it will load the first step of the stack as the *next* step on the FX master. It will not disturb the *current* step of any previously assigned stack.

To assign a stack, press; <ASSIGN>, [F4 STACK], <S/A> (Stack number), <SOLO> (FX1 or FX2)

In the above procedure, when you choose [F4 STACK] from the ASSIGN menu, the screen will prompt you to make a selection. All stack S/A keys will flash twice to show that they are possible choices and then any *existing* stacks numbers will continue to flash.

If you do not wish to proceed with the assignment, press; <ASSIGN>. The function will be aborted without any changes being made.

CLEARING AN FX MASTER

When a stack is assigned to an FX master, it does not disturb the current output of the master. This feature allows you manually link stacks together. There may be times when you want to clear the current output of an FX master so that you can assign a stack and fade up the FX master without revealing any lights on stage. The first transition will then be a fade up from black to the first step.

To clear an FX master, press; <ASSIGN>, <SOLO> (FX master).

CONTROLLING A STACK

By utilising the controls of the FX master, you may;

- Control the overall level of the stack.
- 'SOLO' (flash) (bump) the stack.
- Control the crossfade times of a stack
- Start, stop or reverse a crossfade.
- Snap a stopped crossfade to its beginning or end.
- Snap an idle stack in either direction.

The red key indicators, LED bargraphs and the menu screens display extensive information about the stack.

LEVEL

The overall **level** of all HTP channels in the stack is controlled by the FX master fader.

There are no times associated with this master.

A stack may be 'solo'ed' by pressing the SOLO key of the FX master.

STEPPING A STACK

When a stack is idle, its output comes from the *current* step.

The step that will follow this step is called the *next* step.

When a crossfade is initiated, the *current* step becomes the *outgoing* step and the *next* step becomes the *incoming* step.

When the *last* step in a stack becomes the *current* step, the *first* step will become the *next* step.

INITIATING A CROSSFADE

To initiate a crossfade from the *current* step to the *next* step, press the > (forward) key. The crossfade will occur with the *incoming* step fading in, in its IN time and the *outgoing* step fading out in its OUT time. While the crossfade is *in progress*, the indicator in the STOP/STEP key will flash and both the > (forward) key and the < (reverse) key are **inactive**.

STOPPING A CROSSFADE

A crossfade *in progress* may be stopped by pressing the STOP/STEP key. When a crossfade has been stopped, the STOP/STEP key becomes inactive and the indicator in the STOP/STEP key lights.

You may now either continue the crossfade in either direction and the indicators in the > (forward) key and the < (reverse) key alternately flash to indicate this.

STARTING A STOPPED CROSSFADE

To start a stopped crossfade in the forward direction press the > (forward) key. The indicator in the > (forward) key will light, the crossfade will continue from the point where it was stopped and will crossfade in the remaining time.

To start a stopped crossfade in the reverse direction press the < (reverse) key. The indicator in the < (reverse) key will light, and the crossfade will occur in the same time that had expired when the crossfade was stopped. The indicator in the STOP/STEP key will flash for the duration of the crossfade.

SNAPPING A STOPPED CROSSFADE

You may snap (instant change, no times executed) a *stopped* crossfade to its beginning or end.

This requires you to hold down one key whilst at the same time tapping another key and then releasing the first key.

To snap a *stopped* crossfade to completion;

Hold Stop/Step, Tap > (forward)

To snap a *stopped* crossfade back to its starting point;

Hold Stop/Step, Tap < (reverse)

SNAPPING A STACK

If a stack is stationary (idle between steps), you may snap (instant change, no times executed) through the stack in either direction.

To snap a stack in the forward direction;

Hold Stop/Step, Tap > (forward)

To snap a stack in the reverse direction;

Hold Stop/Step, Tap < (reverse)

STACK MAIN MENU DISPLAYS

MENUS 1 AND 2

Main menus 1 and 2 show the stack number and the *current* step on the output of each FX master.

MENUS 3 AND 4

- Menu 3 gives expanded details on a stack assigned to FX 1.
- Menu 4 gives expanded details on a stack assigned to FX 2.

Menu's 3 or 4 show the state of *current* and *next*, or *outgoing* and *incoming* steps in the stack.

F1	F2	F3
F X 1 : S t k	x x	'
> # # "	"	= N X T
^ # # A "	"	M x x x s
I 0 . 0 s	O 0 . 0 s	M E N U 3
F4	F5	F6

MENU 3 SHOWING A STACK ASSIGNED TO FX1

In this example of menu 3, the top line tells you that this is the display for FX1 and indicates either a Stack (Stk) is assigned (or 'Empty' if the FX master has nothing assigned). The 'NAME' of the Stack is given on the top line between the single quotation marks.

When the Stack is **idle**, the second line details the *current* step (indicated by >) and the third line details the *next* step (indicated by ^).

When the Stack is **crossfading**, the second line details the *outgoing* step (indicated by ^) and the third line details the *incoming* step (indicated by >).

When the crossfade is complete, the incoming step clocks through to the second line and thus becomes the *current* step and a new *next* step appears on line three.

In both lines, the step number (##) is shown. If the letter 'A' appears after the step number, it indicates an Auto stepping step. The step number is followed by the 'LABEL' of the step.

Beside the label for the **current** step is the OUT fade time.

Beside the label for the **next** step is the IN fade time.

If the time for a step is coming from the Rate fader, then the letter M (Manual) precedes the time value and when you adjust the Rate fader, you see the fade time for the step change.

FADE RATE OF A STACK

When a stack is assigned to an FX master, the time of the crossfade from one step to the next is determined by the settings that have been programmed for each step of the stack.

HTP TIMES

The transition from one step to the next is in the form of a DIPLESS CROSSFADE.

The incoming step will fade *up* in the IN time for that step and the outgoing step will fade *down* in the OUT time for that step.

The IN time may be either;

- MAN (Rate Fader)
- Programmed time.

The OUT time may be either;

- =NXT (the same as the IN time of the Next step)
- MAN (Rate Fader)
- Programmed time.

RATE FADER (MANUAL)

If a step has the Rate fader programmed as the time source, then when that step is either the *current* step or the *next* step, the Rate fader indicator will **light** and the time setting of the Rate fader will be shown beside the letter M (Manual) on either menu 3 (FX1) or menu 4 (FX2).

Hint; The Rate fader is most useful when a stack has not been fully programmed due to lack of rehearsal time. The setting of the rate fader may be changed while a crossfade is in progress allowing you to speed up or slow down the crossfade.

LTP TIMES

When a step of the stack is executed, the LTP channels in this *incoming* step will fade to their programmed levels in the LTP time for that step.

LTP channels in the *outgoing* step will only change level if they have a new level in the *incoming* step. If they do not have a new level in the *incoming* step then they will remain at their previous (LAST) levels.

PREVIEWING A STACK

You may preview the steps and programmed settings contained in a stack without revealing the stack on the output of the *Axiom*.

There are two ways of previewing a stack on the *Axiom*. You may preview a stack that is stored in memory or you may preview a stack that is currently assigned to an FX master. Both methods are accessed from the PREVIEW / EDIT menu.

To preview a stack press; <PREVIEW / EDIT>. The PREVIEW / EDIT menu appears;

F1	F2	F3
P A T C H	S T L	C A N C E L
C h o o s e	O b j e c t	
T o P r e v i e w	o r	E d i t
S T A C K	C H A S E	S C E N E

F4 F5 F6

PREVIEWING A STACK IN MEMORY

After pressing the <PREVIEW/EDIT> key above, select [F4 STACK] as the object to preview. The screen will display the available memory and request that you choose a stack using the <S/A> keys. Press the <S/A> key of the stack number that you wish to preview and the Stack Preview menu appears;

F1	F2	F3
MORE	EDIT	
S # #	P 1 S 1	" "
In	MAN	Out = N X T L 0 . 0
←	→	DONE
F4	F5	F6

STACK PREVIEW MENU

The first line of the screen contains the MORE and EDIT function key labels. They are described in EDITING A STACK, below. The second line of the screen shows the Step (S) number (# #), the *contents* of the step, (shown as a Page 1 Scene 1 in this diagram), followed by the "LABEL" of the step. The *contents* may of course be any of the following;

Ch # # (Channel number # #)
 P xx S yy (Page xx Scene yy)
 Snp Sht (Snapshot of the output)
 LStk # # (Link to Stack number ##)

The third line shows the In, Out and LTP (L) times for the step..

You may STEP through the stack in either direction by pressing either; [F4 ←] or [F5 →].

As you step the chase, the parameters of each step will be displayed on the screen and the levels of the channels in that step will be indicated by the *intensity* of the channel S/A key indicators and on the video monitor. When you have finished previewing the stack you may either press; <PREVIEW/EDIT> or press; [F6 DONE].

PREVIEWING AN ASSIGNED STACK

You may directly preview a stack that is assigned to an FX master. Press; <PREVIEW/EDIT>. If a stack is currently assigned to an FX master, the <SOLO> key of that FX master flashes to show that it is a valid choice. Press the <SOLO> key of the FX master to which the stack is currently assigned.

This *directly* displays the STACK PREVIEW menu without the need to select a Stack and a number.

Notice that when you preview an "assigned" stack that the step that you initially see is "current" step on the effects master, whereas previewing a stack in memory initially shows you the "first" step.

All of the previewing functions are the same as previewing a stack in memory as described above.

EDITING A STACK

To edit a stack, you must first preview the stack as described above.

Once you are in the PREVIEW STACK menu, you may select from either [F1 MORE], or [F2 EDIT] to edit the stack. Pressing; [F2 EDIT] will reveal the Edit Stack menu.

F1	F2	F3
INSERT	DELETE	MODIFY
S # #	P x S y	" "
In	MAN	Out = N X T L 0 . 0
←	→	DONE
F4	F5	F6

This menu is similar to the Stack Preview menu shown above in that allows you to STEP through the stack in either direction by pressing either [F4 ←] or [F5 →] and preview the steps.

This menu varies from Preview Stack in that it allows you to [F1 INSERT] new steps at any point in the stack and also [F2 DELETE] or ,F3 MODIFY] existing steps.

INSERTING A STEP

To insert a step in a stack, preview the stack and then select [F2 EDIT] as described above. Step the stack with the [F4 ←] or [F5 →] function keys to the step PRIOR to the point where the new step is to be inserted and then press; [F1 INSERT]. The Insert step menu appears.

F1	F2	F3
I n s e r t s t e p h e r e ?		N O
S t e p - # # S t e p - # #		
←	→	^
		Y E S
F4	F5	F6

The '^' symbol on the bottom line indicates where the new step will be inserted (between Step ## and Step #). If this is not the correct insertion point, you may step the insertion point with the [F4 ←] or [F5 →] function keys. When the insertion point is correct, press; [F6 YES]. The step type menu appears;

F1	F2	F3
S C E N E	C H A N L	O U T P U T
I n s e r t w h i c h a f t e r		
S t e p # # i n S t a c k # #		
L I N K		D O N E
F4	F5	F6

Use the appropriate function key to select which type of step you wish to insert. Inserting a step is very similar to Programming a Stack in that you select either a Scene, Channel, Output or Link as the object to insert. Refer to 'PROGRAMMING A STACK', earlier in this section, for further details.

DELETING A STEP

To delete a step in a stack, "PREVIEW" the stack and then select [F2 EDIT] as described above. Step the stack with the [F4 ←] or [F5 →] function keys to the step that you wish to delete and then press; [F2 DELETE]. The Delete step menu appears;

F1	F2	F3
P x x S y y		N O
'	S t e p # #	
D e l e t e t h i s s t e p	^	?
←	→	Y E S
F4	F5	F6

The step to be deleted is indicated by a '^'. If this is not the correct step to delete, step the stack, to the correct step with the [F4 ←] or [F5 →] function keys. To delete the step press; [F6 YES].

MODIFYING A STEP

To modify a step in a stack, "PREVIEW" the stack and then select [F2 EDIT] as described above. Step the stack with the [F4 ←] or [F5 →] function keys to the step that you wish to modify and then press; [F3 MODIFY]. The modify step menu appears;

F1	F2	F3
F L A G	C H A N S	
S # #	P x S y	"
I n M A N	O u t = N X T	L 0 . 0
L A B E L	T I M E S	D O N E
F4	F5	F6

You may FLAG a step to "autostep" or edit the [LABEL], [TIMES] or [CHANS] (channel levels) of the step. The [F2 CHANS] function key is only available if the step that is being edited contains a scene or a snapshot. It allows you to modify the *level* of any channel including channels that are not currently in the scene or snapshot.

MODIFYING THE FLAG OR LABEL

The *Modifying* of the FLAG or LABEL is the same as the *Programming* of these parameters. Press the appropriate function key for the parameter you wish to modify. Refer to 'PROGRAMMING A FLAG (AUTO STEP)' and "LABELING A STEP" earlier in this section for details on programming each parameter.

MODIFYING THE TIMES

The *Modifying* of the TIMES is the same as the *Programming* of the TIMES. However, if you are editing a Stack that is currently assigned to an FX master, the effect of your editing is "**live**". You may edit the time and then test the results by running the step on the FX master.

Press the] (forward) key to perform the crossfade. If the time is not right, snap the step backwards (hold [STOP/STEP, tap [(reverse)), edit the time and try the step again.

Refer to 'PROGRAMMING STACK FADE TIMES" earlier in this section for details on programming times.

MODIFYING CHANNEL LEVELS

To modify the level of a channel in the scene or snapshot in the step, from the above menu press; [F2 CHANS]. Press the <S/A> key of the channel you wish to modify. When you select a channel, the channel edit menu appears;

F1	F2	F3
T O G G L E	R E M O V E	C A N C E L
S t k # #	S t # #	C h n # # * T P
L e v e l :	* * *	
- -	+ +	D O N E
F4	F5	F6

The Stack (Stk) and Step (St) numbers are followed by the Channel (Chn) number that you have selected to edit. The "*TP" label shows the type of channel, either HTP or LTP.

The current level of the channel being edited is shown on the third line.

- HTP channel levels are shown as a level between 0% and 100%.
- LTP channels are shown as a level between 000 and 255. This allows you to use the maximum accuracy of the DMX signal when controlling moving fixtures.

When a channel is selected, its level may be quickly varied by using the EDIT wheel or it may be decremented in single steps with the [F4 -] key or incremented with the [F5 +] key. If you hold down either [F4] or [F5], they will auto repeat. A channel may be snapped to 0 or Full by tapping [F4] or [F5] once, then quickly pressing again and holding.

When you vary the level of a channel a "+" sign will appear beside the level indication if you **increase** its level above the programmed level or a "-" sign will appear if you **decrease** its level below the programmed level. If you return the channel to the originally programmed level, then the + or - sign will disappear.

If you have edited the channel level (as indicated by the presence of a + or - sign), then you may instantly return to the *original* programmed level by pressing; [F1 TOGGLE]. To return to the *edited* level that you had just adjusted simply press; [F1 TOGGLE] a second time. The channel may be "toggled" between its programmed level and its edited level by repeated presses of; [F1 TOGGLE]. You can always identify the edited level by the "+" or "-" sign beside the current channel level.

You may select other channels to vary by simply pressing their <S/A> keys.

When all channel levels are correct press; [F6 DONE].

Note; If the step that you choose to modify is a scene, the changes that you make are applied to the actual scene. If you then replay that scene on a Scene master, you will see the "modified" version.

MORE EDITING FUNCTIONS

From the PREVIEW STACK menu, pressing; [F1 MORE] will reveal the following menu.

F1	F2	F3
	E R A S E	C A N C E L
S t a c k # #		
S t a c k	N a m e =	' '
N A M E		D O N E
F4	F5	F6

EDITING A STACK NAME

From the above menu, press; [F4 NAME] to edit the NAME of the stack. For details on how to program the characters in the NAME, refer to "NAMES AND LABELS" in the "UTILITIES" section.

ERASING A STACK

From the above menu, pressing; [F2 ERASE], [F6 YES] to erase the stack.

The complete keystroke sequence to erase a Stack is; <PREVIEW / EDIT>, [F4 STACK], <S/A> (Stack number) [F1 MORE], [F5 ERASE], [F6 YES].

Section 9: STL (Sound To Light)

OVERVIEW

The *Axiom* is fitted with two RCA type jacks to accept a stereo audio signal. A mono audio signal may be connected to either of the two inputs. The audio signal should have a nominal level of 1 volt RMS (line level). The audio is split into *three* frequency bands (bass, mid, high) and you may assign a scene to each frequency band. The audio signal from each band is used to modulate (vary) the level of its assigned scene. The louder the sound, the brighter the light. Therefore, with a typical music track fed into the *Axiom*, the assigned scenes will flash in time with the music. The Scene assigned to the BASS will vary in level in sympathy with the bass frequencies of the audio input (such as bass drum etc). The Scene assigned to the MID will vary in level in sympathy with the mid frequencies of the audio input, and the Scene assigned to the HIGH will vary in level in sympathy with the high frequency sounds (such as cymbals etc).

PROGRAMMING A STL

You may Program up to 12, (24, 36) individual STL's.

There are four steps in programming a STL;

- Firstly, the scenes to be modulated by the sound are programmed.
- Secondly, the programmed scenes are assigned to their respective frequency bands.
- Thirdly, the STL is assigned to the Grab master.
- Lastly, the audio levels are adjusted for the desired amount of modulation for the STL.

PROGRAMMING SCENES

The Scenes that are to be modulated by the three audio frequency bands are normal Scenes that you program in the usual way and may consist of any number of channels. Refer to the "SCENES" section for details.

PROGRAMMING SCENES INTO A STL

To program scenes into a STL press; <PROGRAM> to reveal the program menu, then select [F2 STL] as the object to program. All active S/A keys will flash twice to show that they are possible choices and then any *existing* STL numbers will continue to flash. Press the S/A key of the STL number that you wish to program.

F1	F2	F3
B A S S	M I D	H I G H
E m p t y	E m p t y	E m p t y
C h o o s e b a n d t o a l t e r		
f o r S T L x x D O N E		
F4	F5	F6

The screen shows that all bands are Empty, that is, there are no Scenes programmed to any of the bands. Choose a frequency band to which you wish to program a scene. To Program a Scene to the BASS band, press; [F1 BASS] and the BASS Scene select menu appears. Now select the desired Scene. If the scene is in the current page, simply press the S/A key of the scene number. All scene S/A keys will flash twice to show that they are possible choices and all existing scene numbers (in the current page) will continue to flash. If the scene is in a different page use the PAGE and S/A keys. The program STL menu returns, but with the Page and Scene number that you have just programmed to the BASS displayed under the BASS function key label. Scenes are programmed to the MID and HIGH frequency bands in the same manner as the BASS scene was programmed. Press; [F2 MID] to program a Scene to the Mid frequency band. Press; [F3 HIGH] to program a Scene to the High frequency band.

When the desired Scenes (or blanks) have been programmed to the three bands, press; [F6 DONE] and the Name menu for the STL appears. By default, the STL name will be 'STL xx' where xx is the STL number that you are programming. If this name is acceptable simply press; [F6 DONE] or accept the name. If you wish to enter your own name, you may clear the current name by pressing; [F2 CLEAR] and then enter your own name. For details on how to program the characters in the NAME, refer to the 'NAMES AND LABELS' in the "UTILITIES" section.

ASSIGNING A STL

To Assign an STL press; <ASSIGN>, [F2 STL], <S/A> (STL number), <S/A> (Grab).

When you choose STL from the ASSIGN menu, the screen will prompt you to make a selection and the 12 (24, 36) STL number S/A keys will flash twice then all existing STL S/A keys will continue to flash. Press the S/A key for the STL number that you wish to assign. STL effects may only be assigned to the Grab master and the

STL

Grab master's S/A key will flash to indicate this. Press the flashing Grab S/A key, and the STL will be assigned to the Grab master.

To reveal the effects of the STL, simply fade up the Grab master. If the Grab master was already above zero, fade down the Grab master and then fade it back up to full as 'Mode/Page freeze' rules apply. Refer to the "MEMORY STRUCTURE" in the "GUIDED TOUR" section for details on 'Mode/Page freeze'.

If the audio signals are of sufficient volume, the scenes programmed into the STL will begin to flash.

The Grab master acts as a master controlling the overall level of the STL effect.

PROGRAMMING STL AUDIO LEVELS

As mentioned above, the audio signal is split into three frequency bands. The *Axiom* allows you to adjust the *overall* audio level (volume) as well as the *individual* audio levels in each of the three bands. These four level settings are saved as part of every STL that you program. Audio levels vary considerably from source to source and may also vary considerably within a single music track. You may often need to make adjustments to the level settings to get optimum results.

To allow rapid access to the STL level settings, the *Axiom* provides a dedicated AUDIO key, located above the Preview/Edit key. When the AUDIO key is pressed, it brings up the STL level adjust menu. As only one STL may be assigned to the Grab master at any one time, simply pressing <AUDIO>, will allow the current STL to be adjusted.

	F1	F2	F3
	B A S S	M I D	H I G H
	S T L	x x	
	C h a n g e	w h i c h	G a i n
	V O L U M E		D O N E
	F4	F5	F6

You may choose to vary the level of any of the four adjustable parameters, namely, the gain settings for each of the frequency bands, BASS, MID, HIGH, or overall VOLUME of the STL. Each parameter is selected by pressing the appropriate function key, F1, F2, F3 or F4, respectively. All of these keys will bring up a similar menu. It is best to set the overall VOLUME first so press; [F4 VOLUME]. The following menu appears.;

	F1	F2	F3
		Z E R O	C A N C E L
	■ ■ ■ ■ ■ ■ ■ ■ ■ ■		<
	E d i t	W h e e l	f o r S T L
	V o l u m e	= 5 0 %	D O N E
	F4	F5	F6

The second line on the screen forms a *dynamic* 'bar graph' audio level indicator. The louder the volume, the more of the black squares shown above will appear. The EDIT wheel acts as a volume control, allowing you to adjust the overall volume as indicated by the bargraph. With an audio signal connected to the *Axiom* input, adjust the volume so that the bargraph averages around the mid point with occasional peaks reaching maximum level.

When you are happy with the volume setting press; [F6 DONE]. Select each frequency band in turn and adjust the gain of each for satisfactory levels. When all the scenes are modulating satisfactorily, press; [F6 DONE].

This completes the programming of the STL.

AUDIO INDICATOR

The indicator in the AUDIO key also acts as a volume indicator. It indicates the overall volume setting. It is not influenced by the frequency band gain settings.

Hint; The indicator in the AUDIO key will always flash when an audio signal is present on the input to the Axiom provided that the overall volume setting is high enough. No matter what state the Axiom is in, you can always see that an audio signal is present by the flashing of the audio key indicator.

PREVIEWING A STL

Previewing a STL takes two forms,

- previewing the scenes.
- previewing the audio levels.

PREVIEWING STL SCENES

You may preview the scenes that are programmed into a STL. Press <PREVIEW / EDIT>, then select STL as the object to preview by pressing; [F2 STL] or, if the STL is currently assigned, press; <S/A> (Grab Master). The STL Preview/Edit menu appears.

F1	F2	F3
B A S S	M I D	H I G H
P x x S y y	P x x S y y	P x x S y y
'	S T L x x	
N A M E		D O N E
F4	F5	F6

This Preview STL menu indicates the PAGE number shown as Pxx and the SCENE number shown as Syy that is programmed to each of the frequency bands. The STL name and the number are also given.

To preview or edit the actual *contents* of the scenes, refer to "PREVIEWING A SCENE" and "EDITING A SCENE" in the "SCENES" section.

PREVIEWING STL AUDIO LEVELS

You may preview the audio levels of the currently assigned STL by pressing; <AUDIO>. The STL level adjust menu appears. This is exactly the same menu that you accessed when you programmed the STL audio levels above and fully described in 'PROGRAMMING STL AUDIO LEVELS' above. The flashing of the indicator in the AUDIO key also provides a constant preview of the overall audio level.

EDITING A STL

Editing a STL takes three forms,

- Editing the actual scenes.
- Changing the assigned scenes.
- Editing the audio levels.

EDITING STL SCENES

The scenes that are assigned to an STL are normal scenes that you program and edit in the usual manner. Refer to the "SCENES" section for details on how to edit scenes.

CHANGING ASSIGNED SCENES

To change the Scenes that are programmed into a STL, you must first preview the STL as described above. Once you are in the Preview STL menu, you may change the various Scenes that are assigned to each frequency and edit the name. Referring to the Preview STL menu shown above, to change the scene that is programmed to any of the frequencies press the function key that corresponds to that frequency. The scenes are changed in exactly the same way as when they were programmed. Refer to 'PROGRAMMING STL SCENES' above for details. You may also edit the name of the STL by pressing; [F4 NAME] which displays the edit name menu. The name is edited in exactly the same way as it was originally programmed.

EDITING STL AUDIO LEVELS

The procedure for *Editing* STL audio levels is exactly the same as the procedure for *Programming* STL audio levels. Again, only the currently assigned STL may have its audio levels edited. The procedure is described in 'PROGRAMMING STL AUDIO LEVELS', above.

Section 10: PATCH

OVERVIEW

The patch allows you to patch (connect) dimmer outputs to desk channel numbers.

There are four patches stored in memory or the patch may be bypassed. When the patch is bypassed, the dimmer outputs are directly connected to their matching channel numbers.

A 1 to 1 patch may be automatically programmed into any patch and patches may also be copied or erased. Each of the four patches may be given a 'NAME' and each channel may be given a global "LABEL".

When a patch is assigned, it allows the *Axiom* to control up to 240 dimmer outputs.

- Any of the 512 dimmer outputs may be patched to any of the 24 (48,72) channels.
- Each dimmer output may only be patched to any one channel at a time.

Two different types of dimmer, HTP (Highest Takes Precedence) or LTP (Last Takes Precedence), may be selected for each dimmer output in the patch and each dimmer may also be assigned to a *fixture* number. LTP dimmer outputs and *fixture* numbers are used when controlling moving fixtures and scrollers. A library of popular moving fixtures allows automatic programming of channel types and *fixture* numbers.

Every HTP dimmer to channel patch is fully *proportional* and every LTP dimmer to channel patch is a fixed unity patch. Refer to the "MOVING FIXTURES AND SCROLLERS" section for details.

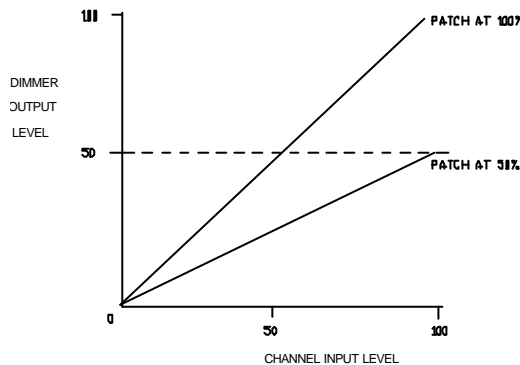
If the *Axiom* is "LOCKED", the current patch may be *previewed* but you cannot assign a different patch or bypass the current patch and editing or programming is not allowed.

PROPORTIONAL PATCHING

Every HTP dimmer patch in the *Axiom* is proportional allowing the OUTPUT level of every patch to be set as a percentage of the INPUT level.

For example, if Dimmer 5 is patched to Channel 5 at a patch level **50%**, when Channel 5 is at 100%, Dimmer 5 will be at 50%. If Channel 5 is set to 60%, then Dimmer 5 will be at 30%

By default, when a patch is made, it will be at 100% level. You may then vary this level if you wish.



ASSIGNING A PATCH

You may choose from four different patches.

To assign a Patch, press; <ASSIGN>, [F1 PATCH], <S/A> (Patch number) (red preset S/A keys).

BYPASSING THE PATCH

When the patch is bypassed, the dimmer outputs are directly connected to their matching channel numbers and all dimmer outputs act as HTP types. The patch is automatically bypassed when a TOTAL RESET is performed.

To bypass the Patch, press; <ASSIGN>, [F1 PATCH], [F1 BYPASS], [F6 OK].

PLANNING A PATCH

Plan your patch by starting with the *fixture* to be controlled, allocate the dimmer number(s) that are to control it, and then patch those dimmer outputs to the desired channels.

HTP, LTP AND FIXTURES

The type of fixture that you are controlling with a channel determines the settings that you program into the patch.

- If the *Axiom* is only being used to control **dimmers**, then many of the default setting in the patch may be used. Simply select the dimmer output *number* for the fixture and then patch its channel. The default settings of "HTP" and no fixture number are correct.
- If the *Axiom* is being used to control any moving fixtures, then the patch for each of these fixtures should be individually planned. The *Axiom* has a built in library of the most popular moving fixtures. The fixture library will automatically set the correct dimmer types (HTP or LTP), label the channels with the parameters that they are controlling and assign the fixture numbers. Refer to the "MOVING FIXTURES AND SCROLLERS" section for more details on programming a patch for these devices.

PROGRAMMING A PATCH

To Program, Preview or Edit a patch, you must first Assign that patch as the current patch. If the patch is currently **bypassed**, then selecting "Program Patch" or "Preview/Edit Patch" will automatically select the assign patch function .

To program a Patch press; <PROGRAM>, [F1 PATCH] and the PROGRAM PATCH MENU appears;

F1	F2	F3
MORE	CHANS	CANCEL
Patch #	'	'
Select	desired	task.
NAME	PATCH	SAVE

F4 F5 F6

PROGRAM PATCH MENU

The menu shows the patch number (#) together with the patch name (' ').

- [F1 MORE] allows you access the [1 TO 1], "[ERASE] and [COPY] functions.
- [F2 CHANS] provides specific data about individual channels including the [LABEL] function.
- [F4 NAME] allows you to program a name for the assigned patch.
- [F5 PATCH] accesses the actual patch menu where the patching is performed.

PATCHING DIMMERS TO CHANNELS

From the PROGRAM PATCH MENU above, press; [F5 PATCH]. The PATCH menu screen appears;

F1	F2	F3
TYPE	FIXTURE	LEVEL
HTP	= # #	@ # # # %
Dimmer : # # #	Chan : # #	
←	→	DONE

F4 F5 F6

PATCH MENU

Select the dimmer number using [F4←] or [F5→] or rotating the Edit wheel. Patch the dimmer to a channel by pressing the channel's <S/A> key. Each dimmer output may only be patched to one channel. If a dimmer is already patched to a channel and a different channel is selected, the new channel *replaces* the original channel. To patch another dimmer, press either; [F4 ←] or [F5 →] or rotate the Edit Wheel to select the dimmer then patch it to a channel with the channel's <S/A> key.

Hint; Use the EDIT WHEEL to make large changes to the selected dimmer number and then use the function keys to step from one dimmer number to the next.

For each dimmer you may also set the dimmer TYPE, FIXTURE number and LEVEL as described below.

- [F1 TYPE] allows you to program the "TYPE" of dimmer output as either "HTP" or "LTP".
- [F2 FIXTURE] access the "FIXTURE" library or manually assigns a "FIXTURE" number.
- [F3 LEVEL] sets a (proportional) "LEVEL" for each HTP patch. This function is only available when a HTP type dimmer is patched to a channel.

The current settings for TYPE, FIXTURE and LEVEL are shown below their function key labels.

The third line of the menu shows the selected dimmer (###), and the channel (##) to which it is patched. If the dimmer is not patched, then N/C (Not Connected) is shown.

All of these Program or Edit functions are described in detail below.

When finished patching press; [F6 DONE]

PATCH LEVEL

When a patch is made as described above, the [F3 LEVEL] menu choice only appears. HTP dimmers may be patched at any level. Refer to "PROPORTIONAL PATCHING" earlier in this section. LTP dimmers are always patched at a **fixed** 100%.

To set a patch level from the PATCH MENU above press; [F3 LEVEL]. The patch level menu appears;

F1	F2	F3
D E L E T E C A N C E L		
D i m m # # # C h a n n e l # #		
U s e E d i t W h e e l t o		
s e t L e v e l = # # # % D O N E		
F4	F5	F6

PATCH LEVEL MENU

Rotate the Edit Wheel to set the desired patch level. When the level is set, press; [F6 DONE].

HTP OR LTP DIMMERS

You may program the TYPE of each **Dimmer** as either HTP or LTP.

- Use HTP type to control dimmers or the intensity channel of moving fixtures.
- Use LTP type to control all movement parameters (pan, tilt, gobo, colour etc) of moving fixtures or to control the position of colour scrollers.

If you are controlling moving fixtures, a Fixture Library is available to automatically set the HTP and LTP channels for you. You may also manually set these parameters.

Refer to the "MOVING FIXTURES AND SCROLLERS" section for details.

When a dimmer is patched to a channel, the *channel* will *automatically* become the same type (HTP or LTP) as the dimmer.

A single channel may have more than one dimmer patched to it, but a single channel cannot be both a HTP or LTP type simultaneously. A channel becomes the same "type" as the first dimmer that is patched to it. All subsequent patches of that channel must be to the same "type" of dimmer. If you attempt to patch additional dimmers of a different "type", a warning message will alert you that the action is not possible. The warning screen also provides the [F5 SHOW] function which will display all of the dimmers currently connected to the selected channel. ALL dimmers currently patched to this channel may be disconnected by pressing; [F5 CLEAR].

ASSIGNING FIXTURE NUMBERS

Fixture numbers need only be assigned if the dimmer output is being used to control a moving fixture or colour scroller. If you are controlling moving fixtures, a Fixture Library is available to automatically set the fixture numbers for you. You may also manually set these parameters for fixtures not in the library and for colour scrollers. Refer to the "MOVING FIXTURES AND SCROLLERS" section for details.

DELETING A PATCHED DIMMER

A dimmer may be deleted from the patch. A deleted dimmer will appear as N/C (Not Connected) when viewed on the PATCH menu. To delete a patch;

- HTP Dimmer; from the PATCH MENU (above), select the dimmer to be deleted and press; [F3 LEVEL], [F2 DELETE], [F6 YES].
- LTP Dimmer; from the PATCH MENU (above), select the dimmer to be deleted and press; [F3 DELETE], [F6 YES].

NAMING A PATCH

To program the NAME of the patch, select the Program patch menu as indicated above, then press; [F4 NAME]. The NAME menu appears. For details on how to program the characters in the NAME, refer to "NAMES AND LABELS" in the "UTILITIES" section.

CHANNELS

The "CHANS" menu provides patch information about a selected channel. The menu allows you to edit the "LABEL" for each channel, and allows you to view all the dimmers that are patched to the selected channel together with the patch levels.

From the Program Patch menu above selecting; [F2 CHANS] reveals the following menu;

F1	F2	F3
U	S / A	t o s e l e c t
C	h a n n e l	# #
"	"	T y p e : H T P
L A B E L	D I M M S	D O N E
F4	F5	F6

CHANNELS MENU

Select a channel by pressing its <S/A> key. The channel number that you choose is indicated on the second line of the menu.

The third line shows the "LABEL" for the selected channel together with its type, (HTP or LTP) and the bottom line provides the [F4 LABEL] and [F5 DIMMS] functions described below.

You may continually change from channel to channel by pressing further <S/A> keys.

LABEL

Each channel in the *Axiom* may be given a "LABEL". The channel labels are the same for all four patches or if the patch is bypassed. The patch merely provides an avenue to program the channel labels. By default, the channel "LABEL" will be the channel *number*. You may edit the default label to create your own "LABEL" for each channel.

From the CHANNELS menu above, select the channel via its <S/A> key then press; [F4 LABEL]. The LABEL menu appears. For details on how to program the characters in the LABEL, refer to "NAMES AND LABELS" in the "UTILITIES" section.

DIMMERS CONNECTED TO CHANNEL

The DIMMS function provides a listing of all the dimmers that are patched to any channel together with their individual patch levels

From the CHANNELS menu above, select the channel via its <S/A> key, then press; [F5 DIMMS]. The DIMMERS CONNECTED menu appears;

F1	F2	F3
C	h a n n e l	# # M O R E
p	a t c h e d	t o d i m m e r s :
#	# # @ # # # %	# # # @ # # # %
#	# # @ # # # %	D O N E
F4	F5	F6

The top line shows the selected channel (##) and the third and fourth lines give the dimmer numbers and patch level (###@###%) of dimmers that are patched to that channel. As up to 240 dimmers may be patched to the one channel and only 3 dimmers may be shown on the one page, press; [F3 MORE] to see any more dimmers that are patched to the selected channel. To exit press; [F6 DONE].

MORE

From the PROGRAM PATCH MENU, above, selecting; [F1 MORE] reveals the following menu;

F1	F2	F3
1	T O	1
P	a t c h	# ' '
S	e l e c t	d e s i r e d t a s k
E	R A S E	C O P Y D O N E
F4	F5	F6

You may choose a 1 to 1 patch, ERASE the current patch or COPY the current patch to another patch.

ONE TO ONE PATCH

Selecting a 1 to 1 patch will automatically perform the following operations;

- Erase the current patch.
- Set all dimmers to HTP types.
- Remove any FIXTURE numbers from dimmer outputs.
- Patch all dimmer outputs to their corresponding channel numbers. All dimmer numbers above the highest channel number will not be patched.
- Retain the existing patch name.

To perform a 1 to 1 patch, select the "MORE" menu as described above and then press;

[F1 1 TO 1], [F6 YES], [F6 YES]

ERASING A PATCH

If you wish to program an entirely new patch, then it is best to erase the patch so any previous setting will not give unexpected results.

Note; If the Axiom has been reset, then all four patches will have been automatically erased and the patch will be bypassed.

Erasing a patch will automatically perform the following operations;

- Erase the current patch leaving all dimmer outputs not connected (N/C).
- Set all dimmers to HTP types.
- Remove any FIXTURE numbers from dimmer outputs.
- Retain the existing patch name.

To ERASE the current patch, select the "MORE" menu as described above then press; [F4 ERASE], [F6 YES].

COPYING A PATCH

You may make an exact duplicate of the *current* patch and store it in any of the other three patches. The copy that you make will **overwrite** the previous contents of the destination patch. Making a copy of the current patch is useful when you want to;

- create a new patch, and this new patch will be similar to an existing patch. It is therefore quickest to make a copy and then edit the copy.
- experiment with some changes to a patch. It is safest to try your changes on a copy of the patch and so protect the original.

To COPY the current patch to another patch, select the "MORE" menu as described above and then press; [F5 COPY] and the following menu appears;

F1	F2	F3
C o p y	f r o m	C A N C E L
P a t c h	# ' '	'
U s e	S / A	k e y s
p a t c h	t o	c o p y
	t o	.
F4	F5	F6

Press the <S/A> key of the required destination patch and the following menu appears;

F1	F2	F3
C o p y	:	N O
P a t c h	# ' '	'
t o	P a t c h	# ' '
		Y E S
F4	F5	F6

If the source and destination details are correct, press; [F6 YES], to make the copy.

If the destination is incorrect, press; [F3 NO] to return to the previous menu and select a different destination source.

PREVIEWING A PATCH

A patch may only be previewed if it is the assigned patch. Previewing a patch is exactly the same as Programming a patch. Refer to "PROGRAMMING A PATCH" above for details. If the Axiom is "locked", then the patch cannot be accessed via the program key, but you may preview the assigned patch. Press; <PREVIEW / EDIT>, [F1 PATCH]. The PROGRAM PATCH menu appears.

Hint; When previewing a patch, the "CHANS" menu is very useful to find all the dimmer outputs that are controlled by a particular channel.

EDITING A PATCH

Editing a patch is exactly the same as Programming a patch. A patch may only be edited if it is the assigned patch. Refer to "PROGRAMMING A PATCH" above for details.

PRINTING A PATCH

The contents of the patch may be printed. Refer to "PRINT" in the "UTILITIES" section for details.

Section 11: MOVING FIXTURES

OVERVIEW

Moving fixtures and scrollers have two types of control parameters;

- Intensity
- Movement

The *Axiom* provides two different types of control channels for these different parameters;

- HTP (Highest Takes Precedence) for intensity channels.
- LTP (Last Takes Precedence) for movement channels.

All of the channels for each individual fixture are then grouped together by a fixture number.

These features provide simple and predictable control of moving fixtures.

A Fixture Library is provided to allow *automatic* setup of these parameters for all the popular models of moving fixtures or they can be manually programmed.

HTP DEFINITION

HTP channels are used to control the intensity of lights, that is, to control **dimmers**. If the level for a HTP channel is emanating from several places within the *Axiom*, then the **highest** of all those levels will be the level of that channel at the output. HTP levels are displayed in the range from 0% to 100%.

LTP DEFINITION

LTP (Last Takes Precedence) channels are used to control **movement**, for example, pan, tilt, colour etc.

If the level for a LTP channel is emanating from several places within the *Axiom*, then the level for that channel at the output will be from the **last** place where an action took place.

LTP channel levels are not influenced by the settings of the Preset masters, FX masters, the Grand master, the DBO key or the Solo level fader.

LTP levels are displayed in the range 000 to 255 which allows you control your moving fixtures with the maximum accuracy of the DMX signal.

As each "look" has been created using moving fixtures, it is programmed as a scene. The scene contains the levels of ALL the channels controlling each fixture that is ON in the scene. These channel levels define not only the intensity, but also the focus, colour, gobo etc. The scene must be able to be faded up and down in intensity without all of the movement parameters varying. Controlling the movement parameters with LTP channels allows this to occur as they only change in level when a LAST action takes place.

A LAST action occurs when;

1. A Scene is faded UP from *zero*.
2. A step of a stack or chase is EXECUTED (effectively the same as 1).
3. A Channel fader has risen from zero and reached the current LAST level. It then has total control (both UP and DOWN).
4. A SOLO key will momentarily override the current LTP level;
A LTP channel <S/A> key will set the channel to its current **channel fader level**.
A Scenemaster or an FX master <S/A> key will set any LTP channels to their "**Programmed**" level in the scene being soloed.

LTP channels only output a new level when a LAST action as defined above is detected. In practice, this means that LTP channels only have "IN" fade times. To fade a LTP (either up or down) you must fade IN another scene containing the new level.

LTP fade times are always controlled from memory. Every scene and every step in every stack has an individually programmable fade time for its LTP channels.

FIXTURE NUMBERS

Fixture numbers are used by the *Axiom* to *group* together all the control *channels* of a *fixture*. When you Program a Scene, HTP channels are only programmed into the scene if their levels are above zero. However, for LTP channels, zero is a valid setting and must be able to be programmed. When you program a scene containing a HTP channel with a fixture number, all of the LTP channels with the same fixture number are included in the scene.

In practice this means that the movement settings for that fixture will only be programmed into a scene if the fixture is dimmed ON.

If the fixture is dimmed OFF, then none of the channels that are assigned to that fixture will be saved as part of the scene, **regardless of their levels.**

When you program the patch for a particular fixture, you assign all of the dimmer outputs (both the HTP and LTP's) that are used to control each fixture to a single *Fixture* number. You may manually program a fixture number to all the channels of each fixture or you may use the **library** of moving fixtures. The library automatically assigns a *Fixture* number, sets the HTP and LTP's and labels each of the channels for you. How to assign fixture numbers and use the fixture library is described in "PROGRAMMING A PATCH FOR MOVING FIXTURES" later in this section and in the "PATCH" section.

All LTP channels must be assigned to a *fixture* number. If not, they will be included in **every scene** that is programmed. In practice this means that if **any** scene is faded up, any LTP channel without a fixture number will change to the level that it was when the scene was programmed, even if its level is zero.

Note; Some moving fixtures employing discharge (arc) type lamp sources use a mechanical type dimmer. These mechanical dimmers should be treated just like an electronic dimmer and be patched as an HTP channel with a fixture number. Some lower priced moving fixtures using discharge lamps do not have any means of dimming the lamp. In this case, where no HTP channel is physically required, a dummy HTP channel should be assigned to the fixture number so that the LTP channels will only be programmed in a scene when the dummy HTP channel is on.

PROGRAMMING A PATCH FOR MOVING FIXTURES

As mentioned above, to correctly control moving fixtures and scrollers, HTP, LTP and fixture numbers must be correctly assigned. The assignment is performed in the patch. Consequently, if you are controlling moving fixtures or scrollers, you must use a patch.

The Axiom provides two methods of setting up the patch to control moving fixtures.

1. **Fixture library** patching where for each channel of the fixture, the library **automatically**;
 - knows the function of the channel (intensity, pan, tilt, etc) and labels it accordingly.
 - assigns the channel correctly as HTP or LTP.
 - assigns all of the fixtures channels to a fixture number.
2. Manual fixture patching where for each channel of the fixture you must;
 - know the function of the channel (intensity, pan, tilt, etc).
 - assign it correctly as HTP or LTP.
 - assign all of the fixtures channels to a fixture number.

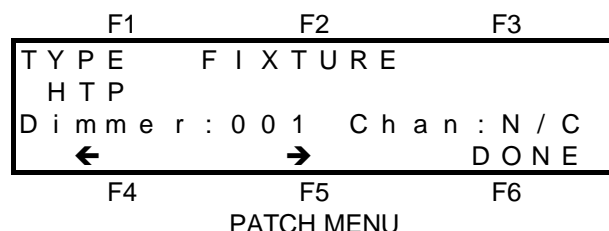
In both cases, you also need to patch the dimmer outputs to the channels that are to control them.

The differences between HTP and LTP channels and the way that they work with *fixture* numbers is described earlier in this section.

To program the patch for a moving fixture, press; <PROGRAM>, [F1 PATCH].

If the patch is currently BYPASSED, select one of the four available patches by pressing one of the patch <S/A> keys. If the selected patch has not been previously programmed, then none of the dimmer outputs will be patched to a channel.

To begin patching, from the program patch menu press; [F5 PATCH]. The patch menu appears;



FIXTURE LIBRARY PATCHING

The Axiom contains a library of popular moving fixtures, pre-programmed with all of their control parameters. The fixtures are listed by manufacturer and model. Fixture library patching greatly simplifies the patching of moving fixtures.

To use the Fixture Library the only information that you need to know is the name of the manufacturer and the model of the fixture.

To setup and patch a moving fixture;

1. Select the *starting* (lowest) dimmer number (DMX channel) to control your fixture.
2. Select your fixture from the library.

3. Patch each dimmer number to a channel (if it is not already patched).

For example, let us assume that we wish to patch a "Trackspot" © made by "High End Systems". Patch this Trackspot using dimmer 13 as the starting DMX channel and then patch each dimmer to its corresponding channel number in numerical order. From the patch menu described above; select "Dimmer 13" by using either the [F4 ←] and [F5 →] keys or rotating the EDIT wheel. The "Dimmer" numbers that are displayed on the patch screen correspond to DMX channel numbers.

Press; [F2 FIXTURE], [F1 LIBRARY] and a list of manufacturers names appears on the menu screen.

F1	F2	F3
HIEND	C'PAKY	MORE
Choose manufacturer		
of fixture to add.		
MARTIN	COEMAR	OK
F4	F5	F6

From the list of manufacturers shown on the menu press; [F1 HIEND]. A list of fixture models produced by High End appears on the menu screen.

F1	F2	F3
I'BEAM	T'SPOT	CANCEL
Choose HIGHEND		
fixture to add.		
CYBER	CYBRCX	
F4	F5	F6

From the list of models shown on the menu press; [F2 T'SPOT]. The patch menu returns;

F1	F2	F3
TYPE	FIXTURE	
LTP	T'SPOT	PAN
Dimmer : 013 Chan : N/C		
←	→	DONE
F4	F5	F6

All the dimmer numbers for a Trackspot © have been automatically setup and labelled for you. Dimmer 13 is labelled as T'SPOT **PAN** and set as LTP. A fixture number has also been automatically assigned. Now it is simply a matter of patching each dimmer output to the channel that is to control it.

- Patch dimmer output 13 to channel 13 by pressing; <S/A> (13).
- Select dimmer 14 by pressing; [F5 →].

Notice that this dimmer has been automatically labelled as T'SPOT **TILT** and set as LTP. The same fixture number has also been automatically assigned.

- Patch dimmer output 14 to channel 14 by pressing; <S/A> (14).
- Step through the dimmers by pressing; [F5 →], patch each dimmer to its required channel number and observe the function and type of each dimmer as setup by the fixture library.

In this example, when you select dimmer 18, you will notice that this is the dimmer (intensity) channel for the Trackspot © and that the library has set this as a HTP channel for you.

The actual *Fixture* number that is assigned by the library is of no significance. What is important is that the *Axiom* knows all of the dimmer outputs that are used to control each fixture. If you wish, you can view the *fixture* number that the library assigned by pressing; [F2 FIXTURE]. To return to the patch press; [F3 CANCEL].

If you are programming further fixtures, use the same techniques, but simply patch them to different desk channels. The library will use a different *Fixture* number for every fixture.

- To complete the patching and save the patch, press; [F6 DONE], [F6 SAVE].

HINT; If you have planned a patch where the dimmer number is always the same as the channel number, you can save time by firstly performing a 1 to 1 patch. This eliminates the need to individually patch each dimmer to its channel. To program each fixture, simply select the starting channel for the fixture then recall the fixture from the library. Refer to the "PATCH" section for details on a one to one patch.

MANUAL FIXTURE PATCHING

Manual patching requires you to program **all** of the parameters for each moving fixture. Typically you would use manual fixture patching if the fixture that you are using is not contained in the fixture library or when patching a colour scroller.

MANUALLY PATCHING MOVING FIXTURES

Moving Fixtures

For each channel of the fixture you must;

- know its function (pan, tilt, intensity etc).
- know its DMX (dimmer) number.
- assign it correctly as HTP or LTP.
- assign a common fixture number (1 through 12/24/36).
- patch it to an Axiom channel.

Let us assume that we wish to patch a simple moving fixture that has the following parameters and DMX address settings;

Parameter	DMX (Dimmer) number
Intensity	13
Pan (X)	14
Tilt (Y)	15
Shutter	16
Colour	17
Gobo	18

We will patch each of the fixture's DMX channels to its matching channel number on the Axiom. The "Dimmer" numbers that are displayed on the patch screen correspond to DMX channel numbers.

From the PATCH MENU described above;

- Select "Dimmer 13" by using either the [F4 ←] and [F5 →] keys or rotating the EDIT wheel.
- Set the "TYPE" as HTP. As this is the intensity channel of the fixture, the default of HTP is correct so you do not need to change it.
- Give the fixture a Fixture number. As this is the first fixture that we are programming, call it Fixture 1. Press; [F2 FIXTURE], <S/A> (1) (Fixture number 1), [F6 YES].
- Patch dimmer output 13 to channel 13 by pressing; <S/A> (13).

- Select dimmer 14 (Pan position) by pressing; [F5 →].
- Select the "TYPE" as LTP. Press; [F1 TYPE], [F4 LTP].
- Give it the same Fixture number as its HTP channel. Press; [F2 FIXTURE], <S/A> (1), [F6 YES].
- Patch dimmer output 14 to channel 14 by pressing; <S/A> (14).

- Select dimmer 15 (Tilt position) by pressing; [F5 →].
- Select the "TYPE" as LTP. Press; [F1 TYPE], [F4 LTP].
- Give it the same Fixture number as its HTP channel. Press; [F2 FIXTURE], <S/A> (1), [F6 YES].
- Patch dimmer output 15 to channel 15 by pressing; <S/A> (15).

Repeat the procedure for the remaining channels associated with the fixture using LTP for all movement channels.

If you are programming further fixtures, use the same techniques, but simply patch them to different channels and use a different *Fixture* number for every fixture.

- To complete the patching and save the patch, press; [F6 DONE], [F6 SAVE].

PATCHING SCROLLERS

For each colour scroller you must;

- know its dimmer DMX address.
 - assign it as HTP.
 - assign a fixture number.
 - patch it to an Axiom channel.
- know its scroller (movement) DMX address.
 - assign it as LTP.
 - assign the same fixture number.
 - patch it to an Axiom channel.

Let us assume that we wish to patch a colour scroller that has the following DMX address settings;

Parameter	DMX (Dimmer) number
Dimmer DMX address	1
Scroller DMX address	25

We will patch each of the DMX channels to its matching channel number on the *Axiom*. The "Dimmer" numbers that are displayed on the patch screen correspond to DMX channel numbers.

From the PATCH MENU described earlier;

- Select "Dimmer 1" by using either the [F4 ←] and [F5 →] keys or rotating the EDIT wheel.
 - Set the "TYPE" as HTP. As this is the intensity channel, the default of HTP is correct so you do not need to change it.
 - Give the fixture a Fixture number. As this is the second fixture that we are programming, call it Fixture 2. Press; [F2 FIXTURE], <S/A> (2) (Fixture number 2), [F6 YES].
 - Patch dimmer output 1 to channel 1 by pressing; <S/A> (1).
- Select Dimmer 25 by using either the [F4 ←] and [F5 →] keys or rotating the EDIT wheel.
 - Select the "TYPE" as LTP. Press; [F1 TYPE], [F4 LTP].
 - Give the scroller the same Fixture number as its HTP channel. Press; [F2 FIXTURE], <S/A> (2), [F6 YES].
 - Patch dimmer output 25 to channel 25 by pressing; <S/A> (25).

If you are programming further scrollers, use the same techniques, but simply patch them to different channels and use a different *Fixture* number for every scroller and dimmer pair.

- To complete the patching and save the patch, press; [F6 DONE], [F6 SAVE].

USED FIXTURE NUMBERS

If, when programming the patch, you try to assign a fixture number to a dimmer output that already has one assigned, the *Axiom* will warn you and show the dimmer's current fixture number.

You may choose to either RETAIN the current fixture number or REMOVE it.

If you do choose to remove it, and that fixture number is also assigned to other dimmers, you are offered the choice of removing just the selected DIMMER from the fixture number, or removing the ENTIRE fixture.

Typically, you would select DIMMER if you made an error when performing Manual Fixture Patching, and you would select ENTIRE to remove a fixture that is no longer required.

CREATING LOOKS

Once the Patch has been programmed for your moving fixtures or scrollers, you are ready to begin controlling them, creating looks and programming scenes.

Use the channel faders to control each parameter of the fixture to establish the required look. To control any of the LTP channels you need to *capture* the channel by moving its fader down to zero and then raising it until it matches its LAST level. The channel fader will then take control. Looks can also be created by combining "Palettes" that you have already created. See "PALETTES" later in this section for details.

PROGRAMMING SCENES

Scenes containing LTP channels are created in the normal way of establishing a look on the output then programming that look into a scene number. Refer to the "SCENE" section for details. When programming a scene, only fixtures that are turned ON (intensity (HTP) channel above zero) will have their movement (LTP) channels included in the scene. This prevents unwanted movements from occurring. It is possible to override this function and select exactly which channels are programmed in a scene. See "PALETTES" later in this section for details.

LTP fade times are always controlled from memory. Every scene and every step in every stack has an individually programmable fade time for its LTP channels. The default LTP fade time is 0 seconds but you may alter this via the utilities menu.

COPYING

The various scenes that you program with moving fixtures are often variations of a previous scene that you have programmed. A new scene may only involve a change of colour or maybe gobo. On playback, when you crossfade from one scene to the next, if the only difference in the scenes is for example, a change of gobo. The other channels in the scene must be at exactly the same levels as in the previous scene to prevent unwanted movements.

To speed the programming process and maintain unchanged parameters exactly as they were, you may copy an existing scene and then edit the copy to create the next look.

COPYING A SCENE

There are two ways of copying a scene.

- Use the "ScnCpy" (Scene Copy) function. This is available from the "PREVIEW/EDIT" "SCENE" menu via the "MORE" function. See the "SCENES" section for details.

- If the scene to be copied is the only output from the Axiom then you may simply program the current look as the new scene number.

EDITING THE COPY

Fade up the new scene (the copy) and then use either "PREVIEW/EDIT", "SCENE" or the (Quick) "EDIT" function for Scenemaster scenes, to edit the scene.

Editing a scene uses the Edit wheel to change the channel levels which has the following advantages;

- The Edit wheel has instant control. Unlike the channel faders, levels do not need to be matched to take control.
- A readout of the channel level is displayed which is useful when setting the same parameter on another fixture to the same setting. (Refer also to "Copy Channel").

You can quickly select channels by simply pressing the channel S/A key of the channel to be edited. Press; [F6 DONE] to save the scene.

PALETTES

Palettes are scenes that you can create which only contain specific channels. They are used as "building blocks" when you are;

- Creating "looks" to be programmed as new scenes.
- Programming the steps of a chase
- Creating one off effects via the SOLO keys.
- When a **normal** scene (or snapshot) is programmed, it will contain:
 - all HTP channels with a level above zero
 - all LTP channels (regardless of their level) that are grouped in a fixture that has a HTP above zero.
 - all LTP channels (regardless of their level) that are not grouped in fixtures.
- When a **palette** scene (or snapshot) is programmed, you determine which channels are included in the scene.

For example, a palette scene might contain only the colour channels for a group of fixtures. When that palette is replayed, it will change all of those fixtures to a specific colour without affecting any other parameters. Another palette scene may change all fixtures to a specific gobo or focus without affecting any other parameters.

PROGRAMMING PALETTES

Program a scene with all fixtures focused side by side with an open white gate (no colour and no gobo). Use this scene a "base" for all your palettes. Fade it up.

Fade up a *blank* (unused) scene then "Preview/Edit" this scene.

In the "Preview/Edit" menu, select [F2 CHANS], <S/A> (channel to be controlled).

When you edit a channel you will take control of it live on stage.

Use the EDIT wheel to set the level then press <S/A>'s of other fixtures' channels and set their levels. For example, set only the colour channels of all fixtures to red.

Press; [F6 DONE] to save the scene and make a note that it is a Palette. e.g. P2 S11 Red Palette

Fade the "base" scene down then up and all fixture return to open white.

Program further palettes of different colours, gobos, focuses etc using a blank scene for each new palette.

REPLAYING PALETTES

Palettes are most useful to rapidly create a number of variations to a look.

For example, if you create a look by focusing all fixtures on certain points on the stage, you can program this look as a scene. You can then rapidly program many variations of this scene by using palettes to change only colours or gobos etc. Palettes are also very powerful when used in conjunction with the SOLO function. A "soloed" palette will *momentarily* override the current look and so is handy for "ad lib" work.

A running moving fixture chase can still run its positional changes whilst you "solo" palettes of different colours or gobos.

REPLAYING SCENES

When you fade up a scene that includes LTP channels, the scene will be recognised as the LAST source for the channels. The LTP channels will fade to their new levels in the LTP fade time for the scene. This allows you to program timed "moves" independent of the intensity fade time of the fixture.

If you fade down a scene that includes LTP channels, the LTP channel levels will not change and therefore all the movement parameters of the fixture will remain steady as the lamp fades out.

If you crossfade to another scene, all LTP (movement) channels in the incoming scene will fade to their new levels as soon as the incoming scene rises above zero. Any LTP channels in the outgoing scene that do not have new levels in the incoming scene do not change.

In this way, any moving fixture or scroller will only change its positional settings if the incoming scene contains new channel levels for that fixture. If the fixture or scroller is not in the new scene, then it will not move. This applies equally to scene masters, stacks and chases.

REPLAYING CHASES

Playing a chase consisting of several scenes is a common form of moving light control. The *Axiom* provides some special features for chasing moving fixtures;

- When a chase is faded down to zero intensity, the chase will automatically PAUSE preventing unwanted movements of moving fixtures.
- Selecting "Bounce" mode for a moving fixture chase is an easy way of obtaining a symmetrical pattern of movement.
- Running a Single Shot chase is useful for a highlight or ending.

Section 12: UTILITIES

This section contains descriptions of the functions accessed from the UTILITIES menu plus other miscellaneous information not covered in other sections of this manual.

The UTILITIES menu is available on MENU 2 and provides access to the following functions;

- PRINT
- MIDI
- DISK
- RESET
- ABOUT
- PREFERENCES
- DIAGNOSTICS

Preferences allows access to the following options;

- DBO
- PRESET
- LOCK
- TERM (Video Terminal)
- TIMES

PRINT

The print function allows the memory contents of the *Axiom* to be directly printed to a serial printer or displayed on a Personal Computer. If displayed on a computer, the contents may be saved in a file and may be printed. Refer also to "TERMinal" later in this section.

CONNECTING A SERIAL PRINTER

The *Axiom's* RS232C connector should be connected to a serial printer with a standard RS232 cable (available from most computer stores). Referring to the printers documentation, setup the serial printer to receive data with the following parameters; 9600 Baud, 8 bits, 1 stop bit, No parity.

CONNECTING A COMPUTER

The *Axiom's* RS232C connector should be connected to the serial port (COM port) of the computer with a standard RS232 cable (available from most computer stores). You must run a communications program on the computer to receive the data from the *Axiom*. Suitable communications programs include "Microsoft Windows, Terminal"©, or "Telix"©, or you may use your favourite communications program.

Setup your communications program to receive data with the following parameters; 9600 Baud, 8 bits, 1 stop bit, No parity.

For example, if you are using "Microsoft Windows, Terminal"©.

From the Settings menu, choose Communications. The Communications dialog box appears.

Select the options as;

Connector, Select the COM port to which the *Axiom* is connected.

Baud Rate, 9600; *Data Bits*, 8; *Stop Bits*, 1; *Parity*, None; *Flow Control*, Hardware;

PRINTING

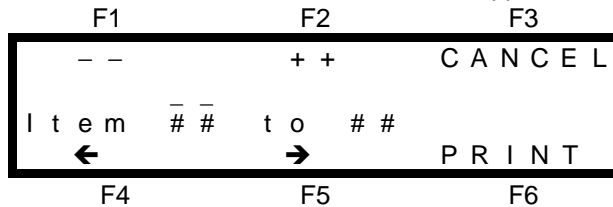
Use the PRINT function to send the memory data from the *Axiom* to the printer or computer. PRINT is accessed from the UTILS (utilities) menu via MENU 2.

From menu 2, press; [4 UTILS], [F2 PRINT]. The Print menu appears;

F1 F2 F3



Use the [1 MORE]function if you want to print the *entire* memory contents or to turn on the scene "Tracking" function described below. Use the [F2] through [F5] function keys if you want to print a specific item from memory. If you select Scenes, Chases, or Stacks, the RANGE menu appears;



The "Item" in the above screen will be either, Page and Scene, Chase or Stack. You may enter a *range* of Page and Scene, Chase or Stack numbers to print. Use the [F4←] or [F5→] keys to move the cursor (_ _), then use the [F1- -] or [F2++] keys or the Edit wheel to decrement or increment the numbers to set the range of the "Item" to be printed.

If you select "PATCH" as the item to print, you may also select the format of the patch print out as either listing **by channel number** or **by dimmer number**. After selecting the format you may set the range of patches to print (as described above), or print only the current patch.

If you are printing to a computer, use your communications program to "capture" or "receive" the data from the *Axiom* and save it in a file. For example, if you are using "Microsoft Windows, Terminal"©.

From the Transfers menu, choose Receive Text File. Name the file and select OK.

To send the data from the *Axiom* to the printer or computer, press; [F6 PRINT]. The *Axiom* screen tells you it is printing the selected items. Printing large amounts of data may take a considerable time. You may abort the printing process at any time by pressing; [F6 CANCEL]. When all the data has been transferred, the PRINT menu returns.

If you are printing to a computer, stop the capture or receive process. For example, if you are using "Microsoft Windows, Terminal"©, click on "STOP".

You can identify the HTP and LTP channels from their printed format.

- HTP channel are shown as a level between 0% and 100%.
- HTP channels that are not in a scene are shown as blank
- LTP channels are shown as a level between 000 and 255.
- LTP channels that are not in a scene are shown as ***

VIEWING AND PRINTING A COMPUTER FILE

LSC recommends using a word processor program to view and print the memory contents file. Word processors use various text formatting setups and fonts. You can *correctly* display the *Axiom* print out by selecting COURIER size 10 as the display font.

As you can see from this example, Courier is a mono spaced font, which means that all the characters have the same width. Using Courier ensures that all the text will be displayed in the correct place on the screen with all of the columns correctly aligned.

Refer to your word processor documentation for information on how to select Courier and how to print the files.

TRACK

Track is an option that you can select when you PRINT your Scenes, Stacks or Chases. Track *flags* any channels that have changed in level from the **previous** Scene or **previous** step in a Stack or Chase.

- Any channel that has a level that is higher is flagged by a + sign beside its level.
- Any channel that has a level that is lower is flagged by a – sign beside its level.

Track is very useful when you are analysing a printout and checking that the correct channels have changed from one scene (or step) to another.

For example, a *section* of a print of scenes shows that from scene 2 to scene 3, only channels 2, 10 and 17 have changed in level. Channel 2 has gone down from 72 to 0, channel 10 has gone up from 50 to 90 and channel 17 has come on at 54.

```
*****
Scenes
*****
```

```
Page 1 Scene 2
Name "Cue 13"
Time: IN = MAN          OUT = IN          LTP = 0.0s
Chan: 001 002 003 004 005 006 007 008 009 010 011 012
Levl:  4  72          45  FL  FL          +50

Chan: 013 014 015 016 017 018 019 020 021 022 023 024
Levl:  +61          96      +FL +FL      +90 +56      +98
```

```
Page 1 Scene 3
Name "Cue 14"
Time: IN = 0.5s        OUT = IN          LTP = 1.0s
Chan: 001 002 003 004 005 006 007 008 009 010 011 012
Levl:  4  -0          45  FL  FL          +90

Chan: 013 014 015 016 017 018 019 020 021 022 023 024
Levl:  61          96 +54  FL  FL          90  56      98
```

TRACK is accessed from the UTILS (utilities) menu via MENU 2.
 To turn track ON or OFF, from menu 2, press; [F4 UTILS], [F2 PRINT], [F1 MORE], [F2 TRACK], [F4 ON], or [F5 OFF], [F6 DONE]

MIDI

OVERVIEW

MIDI (**M**usical **I**nstrument **D**igital **I**nterface) is an international standard for data communication between musical instruments, computers and other equipment such as lighting desks.

The *Axiom* utilises MIDI allowing you to control the lighting channels from a MIDI keyboard or a computer with a MIDI output and suitable sequencing software. The *Axiom* responds to MIDI note on and note off messages by turning on and off the lighting channels that are associated with each particular note.

Three MIDI connectors are provided on the rear of the *Axiom*.

The MIDI IN connector receives data from other devices such as a keyboard or sequencer.

The MIDI THRU connector transmits a duplicate of the signal received at the MIDI in connector.

The MIDI OUT connector is not implemented in this software version.

MIDI SETUP

To utilise the MIDI functions, you must not only connect the *Axiom* to a source of MIDI signals, but you must also turn ON the MIDI function and set some other parameters which are accessed in the MIDI menu.

From the UTILS (utilities) menu via MENU 2, press;[F3 MIDI]. The MIDI menu appears;

F1	F2	F3
OFF / ON		
M	i	d
i	s	O
F	i	r
N	O	T
E	C	H
C	H	A
N	O	T
E	C	H
A	N	D
O	N	E
F4	F5	F6

MIDI MENU

From this menu, you can now turn the MIDI function on or off, set the MIDI channel or set the MIDI note.

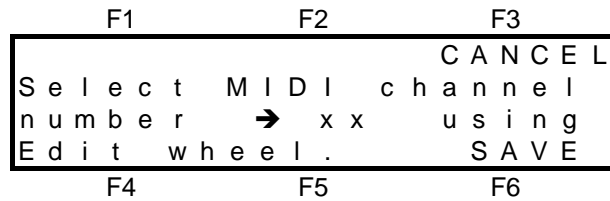
MIDI ON/OFF

The MIDI function should only be turned on when you want the *Axiom* to respond to the MIDI signals. The current MIDI state is displayed on the menu. To change to the opposite state press; [F1 ON/OFF] and the screen will restate the current mode and allow you to switch to the opposite mode by pressing either; [F4 ON] or [F5 OFF]. Confirm your selection by pressing; [F6 YES].

MIDI CHANNEL

MIDI signals are transmitted on separate channels on the one cable, just like many television signals are transmitted on separate channels. You must set the *Axiom* to the MIDI channel that you want it to receive, just

as you would tune your television set to the channel that you want to view. To select the MIDI channel on which the *Axiom* is to receive the MIDI signal press; [F5 CHAN]. The following menu appears;



Rotate the EDIT wheel to set the desired MIDI channel. When the channel is correct, press; [F6 SAVE].

MIDI NOTE

One type of message that MIDI sends is the note ON / OFF message. This message takes the form of which note on the (musical) keyboard has been pressed and how hard (velocity) it has been pressed. Each note on the keyboard has a number assigned to it. The range of MIDI note numbers is 0 to 127. For example, the 88 keys on a grand piano correspond to MIDI note numbers 21 to 108, The following table shows the musical notes and the corresponding note numbers.

Musical note and octave	MIDI note number	Musical note and octave	MIDI note number
C-2	0	C 4	72
C-1	12	C 5	84
C 0	24	C 6	96
C 1	36	C 7	108
C 2	48	C 8	120
C 3 (middle C)	60	G 8	127

When the *Axiom* receives a note ON message for a particular channel, it will turn that channel on at a level set by the velocity value. When a note OFF message or note ON at *zero velocity* is received, the associated channel will turn off.

The MIDI menu allows you to specify the note number in the MIDI signal (on the musical keyboard), that will control lighting channel 1 on the *Axiom*. The next higher note will control lighting channel 2 and so on up to the highest channel number on the *Axiom*. The first MIDI note is shown on the MIDI MENU above as yyy. To change the first MIDI note setting press; [F4 NOTE]. Rotate the EDIT wheel to set the desired MIDI note to control channel one then press; [F6 SAVE].

CONTROLLING THE AXIOM WITH MIDI

- You can use the keys on the MIDI instrument as "FLASH" keys to flash their respective lighting channels on the *Axiom*.
- Scenes may be created by recording the channels on a MIDI sequencer. The velocity value of each note sets its level.
- Complex and intricate chases with *varying* rates may easily be created by recording the sequence of notes together with the timing duration and velocity of each note on a MIDI sequencer.

MIDI SOUND TO LIGHT

MIDI sequences that are stored on a sequencer or computer are used to playback musical performances. It is typical for the various instruments in a performance to be recorded on individual MIDI channels. A piano may be on channel 1, a guitar on channel 2, bass on channel 5 etc, and often, percussion instruments have their own channel.

If the MIDI signal feeding the synthesiser that is creating the sounds is also connected to the MIDI IN of the *Axiom*, then by setting the *Axiom* to respond to different MIDI *channels*, you can obtain true and accurate sound to light effects. For example, if the bass instrument that you are hearing is on channel 5 and the *Axiom* is also set to channel 5, then lighting channels will flash in exact synchronism with the bass notes and not be affected by any other sounds.

DISK

The disk format required by the *Axiom* is 3.5 inch double sided, high density, (1.44 MB). Disks may be *formatted* and *copied* on any IBM compatible computer with a 1.44 MB, 3.5 inch disk drive. To access the disk function, from menu 2, press; [F4 UTILS], [F4 DISK]. The Disk menu appears;

F1	F2	F3
LOAD	SAVE	VERIFY
Choose Operation		
required for disk .		
PREFS	FORMAT	DONE
F4	F5	F6

You may choose to FORMAT or VERIFY a disk, SAVE or LOAD a show or set automatic verification when saving or loading with the PREFERences function.

FORMATTING A DISK

Before you can use a new disk, you need to format it. Formatting prepares the tracks on the disk onto which all the *Axiom* data will be saved. A disk only needs to be formatted once.

Formatting will erase all existing data on the disk.

To format a disk, place the disk in the disk drive and from the DISK menu above press; [F4 FORMAT].

The *Axiom* warns you that formatting will erase all data from the disk. Select [F6 YES] and then confirm with [F4 YES] . As each track is formatted, the screen counts the track numbers from 00 to 79 .

SAVING A SHOW TO DISK

When you save a show to disk, you copy the entire contents of the *Axiom's* memory to the disk. This includes all; Scenes, Stacks, Chases, STL's, Patches, Preferences. To save a show to disk select the DISK menu above and press; [F2 SAVE]. The SHOW NUMBER menu appears;

F1	F2	F3
		CANCEL
Set disk file name .		
SHOW _ _ x x . A X M		
		SAVE
F4	F5	F6

The show that you save will be given the name "SHOW_ _ xx" where xx may be any number between 01 and 99. If the show you are about to save was previously loaded from disk, then its previous show number will be shown by default. Rotate the Edit wheel to set the show number that you desire, then place a formatted disk into the disk drive and press; [F6 SAVE].

If a show number already exists on the disk, the *Axiom* will warn you. You may either continue, which will cause the show on the disk to be replaced with the new data, or you may select a new show number. Saving a show to disk takes a few moments and a bargraph display and percentage readout show you the progress of the saving action.

By default, all files are automatically verified after being saved. To save time, you may manually skip the verification process by pressing; [F6 SKIP]. After the verification or after pressing [F6 SKIP], acknowledge the screen message by pressing; [F6 YES].

To **always** save a file in half the time, the automatic verify may be disabled. Refer to "DISK PREFERENCES" later in this section for details.

VERIFYING A DISK FILE

Prior to loading a show from disk or after saving a show to disk you may manually verify the disk file. Verifying a disk file causes the *Axiom* to check the integrity of the data on the disk.

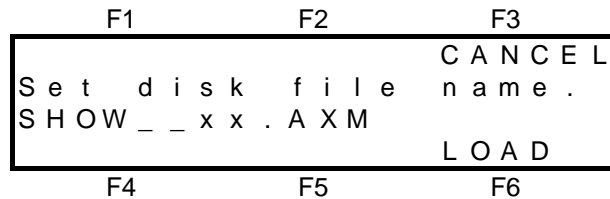
To verify a disk file, insert the disk in the disk drive and from the DISK menu press; [F3 VERIFY]. Rotate the Edit wheel to set the show number and press; [F6 VERIFY]. Verifying a show disk file takes a few moments and a bargraph display and percentage readout show you the progress. The *Axiom* will then give a report on the integrity of the data. If the data has been corrupted, the file may not load and operate correctly. If the file is OK then the *Axiom* will report "No problems were found with the file". Press; [F6 OK] to complete the operation.

LOADING A SHOW FROM DISK

When you load a show from disk, you replace the entire contents of the *Axiom's* memory with the show data from the disk. This includes all; Scenes, Stacks, Chases, STL's, Patches, Preferences. If you wish to keep the

current contents of the *Axiom* memory, you should save it to disk prior to loading the new show. If the *Axiom* is "LOCKED", you cannot load a show from disk.

To load a show from disk select the DISK menu above and press; [F1 LOAD]. The SHOW NUMBER menu appears;



Rotate the Edit wheel to set the show number (xx) that you wish to load then press; [F6 LOAD]. The *Axiom* warns you that all memories will be lost. To abort the Load and retain the current memories press; [F3 NO] or to continue press; [F6 YES]. The *Axiom* will double check that this is the required action because once a load from disk is initiated, the current contents of the *Axiom* memory **cannot be recovered**. Press; [F4 YES] to start the load. A bargraph display and percentage readout show you the progress of the loading action. By default, all files are automatically verified prior to being loaded. To load a file in half the time, the automatic verify may be disabled. Refer to "DISK PREFERENCES" below, for details.

DISK PREFERENCES

Disk files may be *automatically* verified when they are saved or loaded. The *Axiom* will read the file and then give a report on the integrity of the data. If the File is found to be corrupted, the load is aborted and the original contents of the *Axiom* remain intact. As this test doubles the time it takes to save or load a file, you may choose to disable it for either saving or loading or both. If the automatic tests are disabled, you will lose any memories in the *Axiom* if the file that you load is corrupted. If the automatic verify is disabled, you may still manually verify a file prior to loading via the DISK VERIFY menu.

To disable the verify feature, from the DISK menu press; [F4 PREFS]. Select either; [F1 LOAD] or [F2 SAVE]. Set you preference for either load or save with either [F5 DISABLE] or [F3 ENABLE]. Press; [F6 DONE] when completed.

LOADING AN OLD AXIOM FORMAT DISK

The current *Axiom* disk format allows many show to be saved on a disk. The shows have the name; "SHOW _ _ ##.AXM", where ## is a number that you enter in the range 01 to 99. The original *Axiom* disk format only allowed one show to be saved on a disk. The show always had the name; "AXIOM.AXM". To load an old *Axiom* disk format, follow the instructions under "LOADING A SHOW FROM DISK" (refer above). Rotating the Edit wheel anti clockwise (below the 01 setting) reveals the old file name, "AXIOM.AXM". With the old file name selected, load the file in the normal way. Once an old format show has been loaded, it can only be saved in the new format.

PREFERENCES

Preferences allows access to the following options;

- DBO
- PRESET
- LOCK
- TERM (Video Terminal)
- TIMES

DBO

Pressing the DBO key will *instantly* kill the output of the desk and the red indicator in the DBO key will *flash*. To restore normal output, press the DBO key a second time. LTP channels are not affected by the DBO key.

If you do not intend to use the DBO key, it may be disabled, avoiding the embarrassment of accidentally pressing it.

DBO DISABLE

The DBO key is disabled from the UTILS (utilities) menu via MENU 2. From menu 2, press; [F1 UTILS], [F5 PREFS], [F1 DBO]. The current mode is shown at the top of the screen.

To DISABLE the DBO key press; [F5 DISABLE]. To ENABLE the DBO key press; [F4 ENABLE]. When the DBO key is in the mode that you desire press; [F6 DONE].

PRESET

The operation of the Yellow Preset master may be inverted so that its output is at maximum when the fader is at the bottom of its travel. This allows crossfades between the Red and Yellow preset masters to be performed with one hand with the fader knobs side by side (a crossfade pair).

The Yellow preset master may be inverted from the UTILS (utilities) menu via MENU 2.

From menu 2, press; [F1 UTILS], [F5 PREFS], [F2 PRESET]. The Yellow Preset menu appears;

F1	F2	F3
Y e l l o w	P r e s e t	M a s t e r
i s	C l a s s i c	
C L A S S I C	I N V E R T	D O N E
F4	F5	F6

The current mode is shown on the screen. "CLASSIC" is the normal mode where the Yellow preset output is maximum with the fader at the top of its travel. "INVERT" reverses this setting. Use either [F4] or [F5] to select the mode that you require then press; [F6 DONE].

LOCK

The Axiom may be "Locked" to prevent unauthorised Programming, Editing, assigning of Patches or loading of shows from disk. Lock is useful when a show has been fully programmed and *replay only* access is required.

From menu 2, press; [F1 UTILS], [F5 PREFS], [F3 LOCK]. The LOCK menu appears.

The current state of the Axiom is displayed as either "LOCKED" or "UNLOCKED" and the function keys will allow you to select the opposite state.

To LOCK the Axiom, press; [F4 LOCK]. The following menu appears;

F1	F2	F3
C L E A R		C A N C E L
U s e	S / A	k e y s
1 0	t o	e n t e r
	- - -	p a s s w o r d
		D O N E
F4	F5	F6

<S/A> keys 1 through 10 flash to show that they are valid entries. You may enter any sequence of **up to four digits** to form your password (use <S/A> key 10 to represent zero). Enter your number by pressing the required S/A keys. If you make an error you may clear all of your digits and start again by pressing; [F1 CLEAR]. When you have entered your chosen numbers press; [F6 DONE]. The Axiom will ask you to confirm your new password by entering it a second time. Repeat your password and press; [F6 DONE].

Note; Once you have entered a password, you do not need to confirm it when you either lock or unlock the Axiom. Confirmation is only required when the password is changed.

Hint; If you want to lock out specific channels and prevent them from having any output, then you can program a patch with the channel(s) to be locked out either not patched to a dimmer output or patched at a level of 0. If you then lock the Axiom, the patch may not be altered or bypassed.

UNLOCK

Unlock is accessed in the same manner as LOCK described above. To UNLOCK press; [F5 UNLOCK]. Enter your password then press; [F6 DONE]. The Axiom will be unlocked as confirmed by the screen.

FORGOTTEN PASSWORD

If you have forgotten your password, it is still possible to unlock the Axiom. Switch the Axiom off, then, whilst holding down the DBO key, switch the power back on then release the DBO key. The screen will offer you two menu choices. Press either; [F4 UNLOCK] or [F6 LEAVE LOCKED].

TERM

Term, is an abbreviation for Terminal. You may connect a Video Terminal (or a personal computer running a terminal *emulation* program) to the Axiom.

When Terminal Preview is ON, the screen automatically displays a snapshot of;

- A Scene that you program or preview

- A step of a Stack or Chase that you program if it is a RECORD (Snapshot).
- A step of a Stack or Chase that you preview
- The current OUTPUT of the Axiom if you preview it.

The format of the terminal display is the same as the print format described at the start of this section. Refer also to the "PRINT" function earlier in this section for other uses of a personal computer connected to the Axiom.

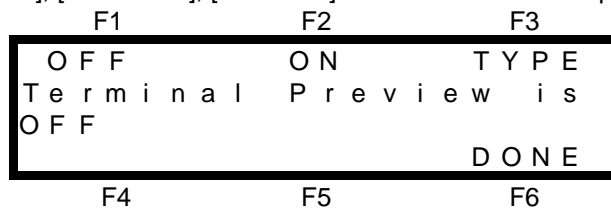
CONNECTING A TERMINAL OR COMPUTER

The Axiom's RS232C connector should be connected to the communications input of the Video Terminal or to the serial port (COM port) of a computer. Use a standard RS232 cable available from most computer supply stores. Both the Axiom and the video terminal (or computer) must be setup for matching terminal type and data format.

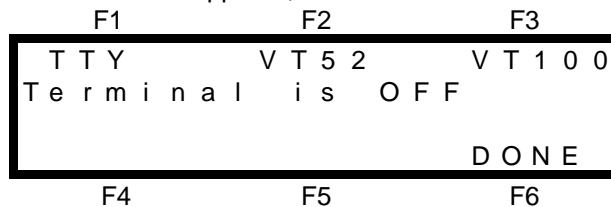
TERMINAL TYPE

Terminal type is accessed from the UTILS (utilities) menu via MENU 2.

From menu 2, press; [F4 UTILS], [F5 PREFS], [F4 TERM]. The Terminal menu appears;



Press; [F3 TYPE]. The Terminal TYPE menu appears;



The Axiom may be setup to work with several types of terminal. You may choose from;

- TTY
- VT 52
- VT 100

Press the function key that corresponds to the type of terminal that is connected. If you are using a Video Terminal, refer to the documentation that came with your terminal and choose the correct type. If you are using a computer, you need to run a communications program to "emulate" a terminal. Suitable communications programs include "Microsoft Windows, Terminal"© or "Telix"©, or you may use your favourite communications program. If your terminal or communications program offers you a choice of terminal type, LSC recommends that you choose "VT 100". Set both the terminal (communications program) and the Axiom to the same type. To accept you terminal type setting press; [F6 DONE].

DATA FORMAT

The Axiom has a fixed data format so you must setup your Video Terminal or Computer communications program to match the Axiom. The data has the following parameters; 9600 Baud, 8 bits, 1 stop bit, No parity. For example, if you are using a "Microsoft Windows, Terminal"© on a PC to emulate a terminal. From the Settings menu, choose Communications. The Communications dialog box appears. Select the options as; Connector, Select the COM port to which the Axiom is connected. Baud Rate, 9600; Data Bits, 8; Stop Bits, 1; Parity, None; Flow Control, Hardware. Then from the Settings menu, choose Terminal Emulation. Select; DEC VT 100 (ANSI).

PREVIEWING ON A TERMINAL

After initially selecting the correct terminal type (refer above), the Terminal previewing function may be turned ON or OFF. To turn Terminal preview ON, from menu 2 press; [F4 UTILS], [F5 PREFS], [F4 TERM], [F2 ON]. The screen will indicate that "Terminal Preview is to ----", where "----" will be either TTY, T52 or VT 100 (as you set in Terminal TYPE). If the Terminal previewing function is currently ON, you may turn it OFF by pressing; [F1 OFF]. To accept either setting press; [F6 DONE].

When Terminal Preview is ON,

- When you *PREVIEW* a Scene, a step of a Stack or a step of a Chase, the Terminal screen will display the entire contents of the previewed object.
- When you *PROGRAM* a Scene or a *SNAPSHOT* step of a Stack or Chase, the Terminal screen will display the programmed object.

- When you "double click" the PREVIEW/EDIT key, the terminal screen will display a snapshot of the current OUTPUT of the *Axiom*.

If you are not using a terminal, turn Terminal OFF for maximum *Axiom* operating speed.

TIMES

Refer to "DEFAULT TIMES" in the "GUIDED TOUR" section for details.

MORE

The MORE function in the UTILS menu accesses the ABOUT, RESET and DIAGNOSTICS and HELP (language) functions.

ABOUT

The ABOUT screens give details of the software version and memory capacity of your *Axiom*. There are two ABOUT screens available. The first screen appears when the ABOUT function key is selected from the UTILities menu and also momentarily when you switch on the *Axiom*. It gives details of the version number and date of the software in your *Axiom*. When the ABOUT screen is accessed from the UTILS menu, the F6 function key becomes active, (it lights), and pressing [F6] will display the second ABOUT screen.

This screen displays the number of channels available in both the Preset and WIDE Preset modes respectively. The *Axiom* has dedicated memory available for programming all Scenes. The *Axiom* also has dedicated memory available for programming all Stacks **and** Chases. The memory capacities for both are also displayed in the form of maximum capacity and currently free memory. To exit from the second ABOUT screen press the unlabelled but lit; [F6]. The *Axiom* will return to main menu 2.

ROM

The *Axiom* is a computer based lighting control console. The ROM (Read Only Memory) inside your *Axiom* contains the software that operates the system. In the unlikely event that the ROM may become faulty, the *Axiom* will detect an error and the screen will display a "Bad ROM checksum. ###" message immediately following the ABOUT screen at switch on. Note the number displayed on the screen and contact your LSC agent. The *Axiom* will continue to function if you press; [F6] but operations may become unpredictable.

RESET

The *Axiom* provides two different types of reset function. SYSTEM reset and TOTAL reset.

SYSTEM RESET

In the unlikely event that the *Axiom* fails to respond, the operating system may be reset. Performing a system reset will **not** affect any of the programmed memory of the *Axiom*.

There are two way of performing a SYSTEM RESET;

- Switch off the power to the *Axiom* (on the rear panel) and wait for a few seconds. Press the <HELP> key and whilst holding it down, switch the power back on. When the menu screen appears, release the <HELP> key.
- SYSTEM Reset is accessed from the UTILS (Utilities) menu. From menu 2, press; [F1 UTILS], [F1 MORE], [F2 RESET], [F2 SYSTEM], [F6 YES].

TOTAL RESET

Total Reset will **ERASE** all the programmed memory from the *Axiom and* reset the operating system. All Scenes, Stacks, Chases STL's, MIDI set-ups, Patches etc are erased. Reset also bypasses the patch. It is recommended that you perform a TOTAL RESET prior to beginning a new lighting session. If the current programs in the *Axiom* are needed in the future, you should save them onto disk before resetting.

There are two way of performing a TOTAL RESET;

- Switch off the power to the *Axiom* (on the rear panel) and wait for a few seconds. Press and hold both the <HELP> and <PROGRAM> keys and whilst holding them down, switch the power back on. The screen will warn you that all memory will be cleared. To proceed with the reset, press; [F6 YES]. The screen asks you to confirm by pressing; [F4 YES]. The *Axiom* takes a moment to perform the TOTAL reset and then returns to MENU 1 in Preset mode.
- TOTAL RESET may be accessed from the UTILS (Utilities) menu. From menu 2, press; [F1 UTILS], [F2 TOTAL]. The screen will warn you that all memory will be cleared. To proceed with the reset, press; [F6

YES]. The screen asks you to confirm by pressing; [F4 YES]. The *Axiom* takes a moment to perform the TOTAL reset and then returns to MENU 1 in Preset mode.

DIAGNOSTICS

The *Axiom* provides comprehensive diagnostics to check the operation of all keys, LED indicators, faders, the edit wheel, memory, database and the disk. It also allows you to bypass and faulty faders by either jamming them fully ON or fully OFF. To access the diagnostics, from menu 2, press; [F4 UTILS], [F1 MORE], [F3 DIAGS]. The diagnostic menu offers the following choices;

F1	F2	F3
KEYS	FADERS	MEMORY
Select object to		
test		
DBASE	DISK	DONE
F4	F5	F6

KEYS

To test the keys press; [F1 KEYS]. The following menu appears;

F1	F2	F3
F 1		
key up		
R & Y	Y & R	S A test leds
Hold F4	& F6	to exit
F4	F5	F6

KEY TEST

Press and release any key that you wish to test and the display will confirm the key name and whether it is in the up state or the down state. The red LED indicator in each key lights when the key is pressed.

LED TEST

The PRESET mode and KILL mode red backlight indicators are currently lit. To test the condition of the other red backlights and all the red LED indicators press and hold <SOLO> (Red Preset master) and whilst holding it down, tap <SOLO> (Yellow preset master). All the other indicators will come on and the Preset and Kill mode indicators will extinguish. To exit this indicator test, press and hold <SOLO> (Yellow Preset master) and whilst holding it down, tap <SOLO> (Red preset master).

EDIT WHEEL TEST

Rotate the edit wheels in either direction. The display will indicate the direction of rotation and count the output pulses as the wheel rotates. To exit press both the [F4] and [F6] keys at the same time.

FADER TEST AND FADER BYPASSING

To test the faders press; [F2 FADERS]. The following menu appears;

F1	F2	F3
Source:	Channel	# #
Hi 000	Lo: 000	Now: 000
Control:		
CONTROL		END
F4	F5	F6

This menu allows you to test each fader and to bypass faulty faders by either jamming them fully ON or fully OFF. To select a fader, press its <S/A> key. To test the fader, move it through its range. The values on the screen should change smoothly. When a fader is selected for testing, the [F4 CONTROL] key becomes active.

- Pressing [F4 CONTROL] will jam the selected faders output to full (100%).
- Pressing [F4 CONTROL] a second time will jam the selected faders output to off (0%).
- Pressing [F4 CONTROL] a third time will restore normal fader control.

Use this CONTROL function to bypass a faulty fader. For example, if the Grand Master was damaged, you could jam it to 100% and so restore the output of the *Axiom*. This control function works on the faders themselves, and not the channels associated with them. That is, if you jam channel 1 fader to 0%, you cannot fade up channel 1 on the Yellow preset, but channel 1 can still appear on the output from the Red preset or from any scenes containing channel 1. To exit from this mode press; [F6 END].

MEMORY

In the unlikely event that you are having problems with your *Axiom*, LSC or their agents may request a dump of the database contents to floppy disk (if fitted) to assist in rectifying the problem.

To dump the memory, insert a formatted disk in the disk drive and press; [F3 MEMORY], [F1 DUMP]. Dumping the database to disk takes a few moments and a bargraph display and percentage readout show you the progress of the dumping action.

DATABASE

The contents of the *Axiom* database may be analysed. The *Axiom* performs an integrity check on the database pointers and checksums. **The testing of the database is best left to a qualified service technician.**

DISK

This function runs tests on the disk system. It tests all functions of the disk and its controller electronics by randomly writing to and reading from the disk. Any information on the disk will be lost if this test is performed and the disk will need to be formatted again.

To test the disk, from the DIAGNOSTICS MENU above press; [F5 DISK]. The screen warns you that the current data on the disk will be destroyed. If you wish to keep this data, remove the disk and replace it with another. To start the test press; [F6 YES]. The test will *continuously* test the disk until you cancel the test by pressing and holding; [F6 CANCEL].

HELP

The HELP function key allows the help screens that are displayed when the <HELP> key is pressed to be displayed in different languages. To change the language, from the DIAGNOSTICS MENU above press; [F4 HELP]. The screen shows the available languages. Press the function key corresponding to the language that you require then press; [F6 OK].

NAMES AND LABELS

OVERVIEW

Many of the objects in the *Axiom* may be given a descriptive name or label. The *Axiom* uses 'NAMES' to identify certain objects and "LABELS" to identify *parts* of objects. On the menu screens, and in this manual, 'Names' are always shown in single quotes (' ') and "Labels" are always shown in double quotes (" "). The following table summarises which objects have 'Names' and which parts of those objects, (if any) have "Labels". All Names and Labels may contain up to six characters.

Object 'NAME'	Part "LABEL"
'Patch'	"Channel"
'Stack'	"Step"
'Scene'	N/A
'Chase'	N/A

PROGRAMMING NAMES AND LABELS

All Names and Labels use a common method of programming. Details on how to access the Name or Label function for each object are contained in the relevant section on each of those objects throughout this manual. When the Name or Label function is selected, the following menu appears;

F1	F2	F3
	C L E A R	C A N C E L
O	#	#
*	-	E d i t
*	N	a m e
*	←	D O N E
*	→	
*	F5	F6
←		
F4		

The object for which you are programming a Name or Label is shown on the second line of the menu. The Name or Label of the object is entered into the area indicated by ***** above. A cursor is in the first character position. You may select characters using the Edit wheel or the Red preset S/A keys. When using the EDIT wheel, press; [F5 →] or [F4 ←] to move the cursor then select the next character with the wheel. You may clear all six characters and reset the cursor to the first character by pressing; [F2 CLEAR]. When the 'NAME' or "LABEL" of the object is correct press; [F6 DONE].

APPENDIX A “DMX 512”

DMX512/1990

DMX512/1990 is the industry standard for the transmission of digital control signals between lighting equipment. It utilises just a single pair of wires on which is transmitted the level information for the control of up to 512 DMX channels. The information for each channel is sent sequentially. The level of channel 1 is transmitted, then the level of channel 2, then 3, etc. up to a maximum of 512 channels. This stream of data containing the levels for all 512 DMX channels is repeated a minimum (generally) of 44 times per second. This provides sufficient updates of channel information for smooth fade transitions.

When good quality data cables are used, DMX512 cable runs may be up to 1,000 metres in length. Most DMX receiving equipment (dimmers, scrollers, moving lights, etc) are provided with a DMX512 input and DMX512 output. This allows the DMX512 feed to be looped through various pieces of equipment. DMX512 splitters may also be employed to provide multiple DMX512 feeds. If a piece of DMX equipment *regenerates* the DMX signal, then the calculation of the 1,000 metre cable length limit begins again from the output of the regenerating device. As the DMX512 signal contains the level information for all channels, each piece of equipment needs to be able to read the level(s) of the channel(s) that apply only to that piece of equipment. To enable this, each piece of DMX512 receiving equipment is fitted with an address switch. This switch is set to the channel number to which the equipment is to respond. If the equipment is a rack of 12 dimmers, then the address switch is set to the channel number to which the first dimmer in the rack is to respond. The other 11 dimmers will follow on from the channel number on the address switch in numerical order.

ADVANTAGES OF DMX

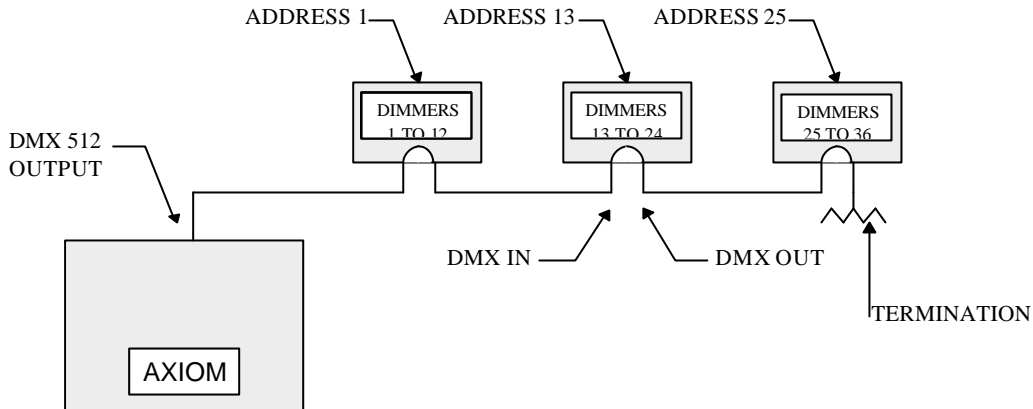
- Up to 512 channels of control on a single pair of wires.
- Up to 1,000 metres per cable run.
- Feeds are easily distributed via DMX512 splitters and/or DMX loop through.
- Multiple units may be set to the same address. For example,
 - By setting several dimmers to the same address, a number of dimmers in *different locations* may be controlled by a single desk channel, or,
 - By setting several colour scrollers to the same address they will all change colour in unison under the control of a single channel.
- Dimmers may be *distributed* in various locations around a venue, (usually adjacent to each group of fixtures to be controlled), and all that is required at each dimmer location is a feed of power and DMX512.
- Patching of desk channels to dimmers is easily achieved and **altered** and it also allows a small number of desk channels to control a large number of dimmers. The patching may be performed either in the lighting desk (if it has a softpatch facility as in the *Axiom*) or in a DMX patching device such as the LSC “SOFTLINK”.

CONTROLLING ANALOGUE DIMMERS WITH THE AXIOM

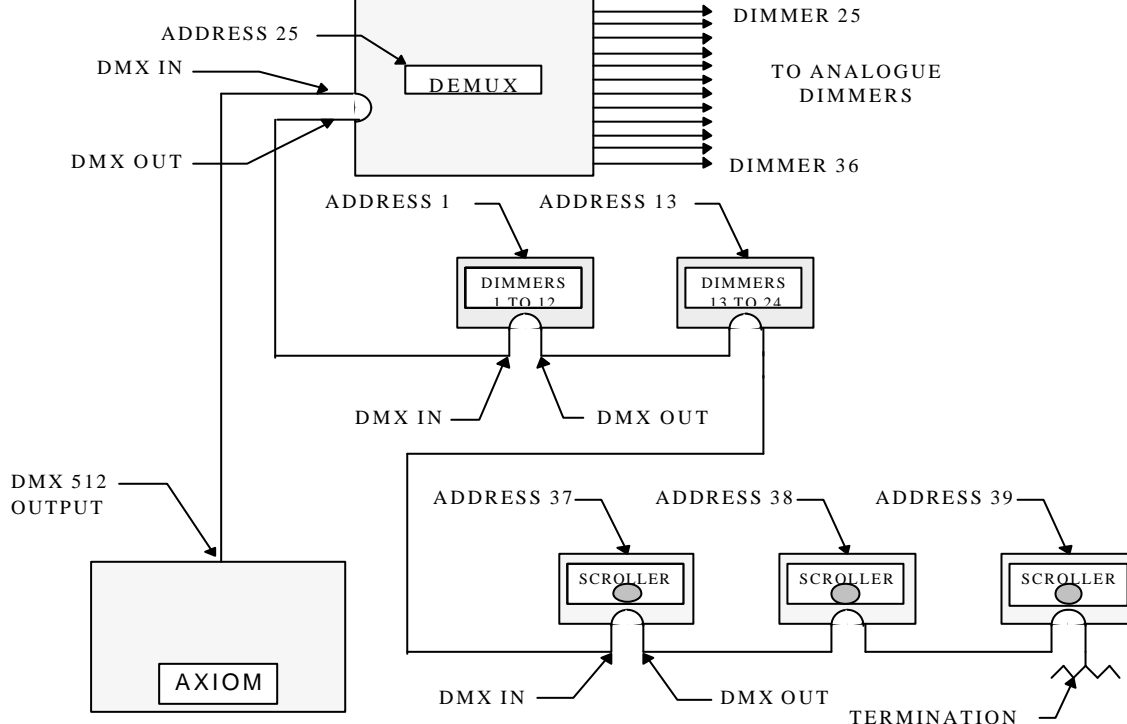
The *Axiom* has DMX512 as its standard output. However, if you are using older analogue dimmers, you may still control them by using a demultiplexer. A demultiplexer is a device that accepts a DMX512 input and produces analogue outputs to drive analogue equipment (dimmers). By using a demultiplexer with each group of dimmers you can utilise the advantages of DMX512 (see above) and still maintain use of your analogue dimmers. DEMUX boxes are usually located adjacent to the analogue equipment and hence the lengths of multi core cable are kept to the minimum. Contact your LSC agent for details on the range of LSC Demux products.

TYPICAL DMX512 APPLICATIONS.

The following diagrams illustrate some typical set-ups utilising DMX512.



In this setup, the DMX output signal from the *Axiom* is fed to the DMX input of the first dimmer rack. As the first dimmer in this rack is to be controlled by DMX channel 1, the address switch is set to channel 1. The DMX output connector of the first rack is connected to the DMX input of the second dimmer rack whose address switch is set to 13 because the first dimmer in this rack is to be controlled by channel 13. Further dimmer racks are connected in this daisy chain manner and their addresses set accordingly. Address switches can be set to any desired address. They do not have to follow in numerical order. If a dimmer further along the line is to be also controlled by say channel 13, then simply set its address switch to channel 13. The end of the DMX line is terminated (120 Ω) to prevent the signal reflecting back up the line and causing possible errors.



In this setup, the DMX loops through different types of equipment and each has its address set to read its own channel levels. The DMX cable first goes to a DEMUX box that converts the DMX signal into analogue signals to control analogue dimmers. As the DEMUX box is set to DMX address 25, the 12 analogue dimmers would be controlled by channels 25 through 36. The DMX output of the DEMUX then feeds 3 racks of digital (DMX) dimmers and finally loops through 3 colour scrollers. The end of the line must be terminated.

APPENDIX B “TERMINOLOGY”

FIXTURES

The output of the *Axiom* is usually used to control dimmers and the “lights” that you connect to the dimmers are known as Fixtures. Fixtures are also known as “Lanterns”, “Luminaires”, “Instruments” or “lights”. Other devices that you can control with the DMX 512 output include “Moving Lights”, “Colour Scrollers” and “Smoke Machines”.

LOOK

A lighting “LOOK” is the collection of channels at their various levels (intensities) that are contributing to the output of the *Axiom* at any one time. A “look” may be made up of a collection of channels or a single scene (see below) or a combination of several scenes. It may even be a single channel.

CHANNEL

A Channel is the basic element of a Lighting Control System. The number of dimmers and fixtures connected to this channel is variable depending on your installation and/or application. The most basic application will have just one dimmer and fixture (light) connected to a channel, so that as you vary the level of that channel, you vary the level of that fixture.

PRESET

When many channels are assembled in a group of adjacent faders they form a “Preset” and each channel in the preset has an individual fader to control its level. It is common to have two presets available to the operator. The first lighting “look” is created on one preset by fading up the required channels. The next lighting “look” is prepared (or “preset”) on the other preset without appearing on stage (as its preset master is kept faded down). At the appropriate time, the first preset is faded down whilst the second preset is faded up. The next lighting “look” is now prepared on the first preset. These alternate crossfades from preset to preset form the standard operation of a manual preset lighting board.

PRESET MASTER

The *Axiom* provides a Red and a Yellow Preset master to control the overall level of the red and yellow presets respectively.

PROGRAM

To “Program” is to record or store information into the memory of the *Axiom*. The *Axiom* allows you to program Scenes, Stacks, Chases, STL (Sound To Light) and Patches.

SCENE

A Scene is a *programmed* group of channels (at their respective levels) plus “IN”, “OUT” and “LTP” fade times and a descriptive name.

PAGE

To help you organise the Scenes that you program, the scenes are stored in 12 separate Pages of scene memory.

STACK

A **Stack** is a list of steps consisting of scenes or channels or snapshots (of the *Axiom* output), that are programmed in the order that they are to be replayed. A Stack is similar to a “Sequence” or “Cue Sheet” found on other consoles.

CHASE

A chase is a list of steps that are replayed in order, stepping continuously from one step to the next and automatically repeating the list when it has reached the end.

PREVIEW/EDIT

The Preview/Edit function allows any of the information that has been “Programmed” into the *Axiom* to be checked with “Preview” and altered with “Edit”

SCENEMASTER

In “Scene Mode”, the red bank of faders become scene masters. A Scenemaster provides a means of controlling the level of a scene.

FX MASTER

An FX master provides a means of controlling a stack or a chase.

DIPLESS CROSSFADE

When a crossfade is performed from one Preset master to another Preset master, the transition is in the form of a DIPLESS CROSSFADE. When a crossfade is performed, the output level of any channel that is on in *both* the OUT fading master and the IN fading master will fade directly from its outgoing level to its incoming level and will **not dip** below a level equal to the current sum of the two masters.

HTP

HTP channels are the most commonly used channel type (the default type), and are typically used to control the intensity of lights, that is, to control dimmers. HTP stands for Highest Takes Precedence. As the name implies, if the level for a particular HTP channel is emanating from several places within the *Axiom*, then the highest of all those levels will be the level at the output.

LTP

LTP channels are ONLY used to control "moving" devices such as colour scrollers or the *movement channels* of moving lighting fixtures ("intelligent" lights), for example, pan (X), tilt (Y), gobo, shutter, colour etc. LTP stands for **LAST** Takes Precedence. As the name implies, if the level for a particular LTP channel is emanating from several places within the *Axiom*, then the level at the output will be that from the **LAST** place where an action took place. LTP channels use their own LTP programmed times and the Preset masters, FX masters and the Grand master have no influence over LTP channel levels. LTP channels are fully described in the "MOVING FIXTURES" and "PATCH" sections.

Warning; Do not set channels as LTP types unless you understand their operation. Connecting dimmers to LTP channels may give unexpected results

STL (SOUND TO LIGHT)

The *Axiom* is fitted with two RCA type jacks to accept a stereo audio signal. The audio is split into *three* frequency bands (bass, mid, high) and you may assign a scene to each frequency band. The audio signal from each band is used to modulate (vary) the level of its assigned scene. Therefore, with a typical music track fed into the *Axiom*, the assigned scenes will flash in time with the music.

PATCH

The patch is an area within the *Axiom* where you may connect (patch) dimmer output numbers to channel numbers and assign HTP or LTP types and *Fixture* numbers. The *Axiom* allows its 24 (48, 72) channels to be patched to any of 240 DMX dimmer outputs. The patch may be bypassed for simple operations. Refer to the "PATCH" section for details.

APPENDIX C "ANALOGUE OUTPUT CONNECTORS"

The optional analogue outputs provide an analogue control voltage (0 to +10 or -10 volts) on a one wire per channel basis to control older analogue dimmers.

Analogue outputs are provided in modules.

The maximum number of analogue modules that may be fitted depends upon the model of the *Axiom*.

Model	Maximum number of modules
<i>Axiom</i> 12/24	1
<i>Axiom</i> 24/48	2
<i>Axiom</i> 36/72	3

Four different types of connector are available. They are DB15, DB25, DIN and Socapex.

The number of channels that each module can provide depends upon the type of connectors that are fitted.

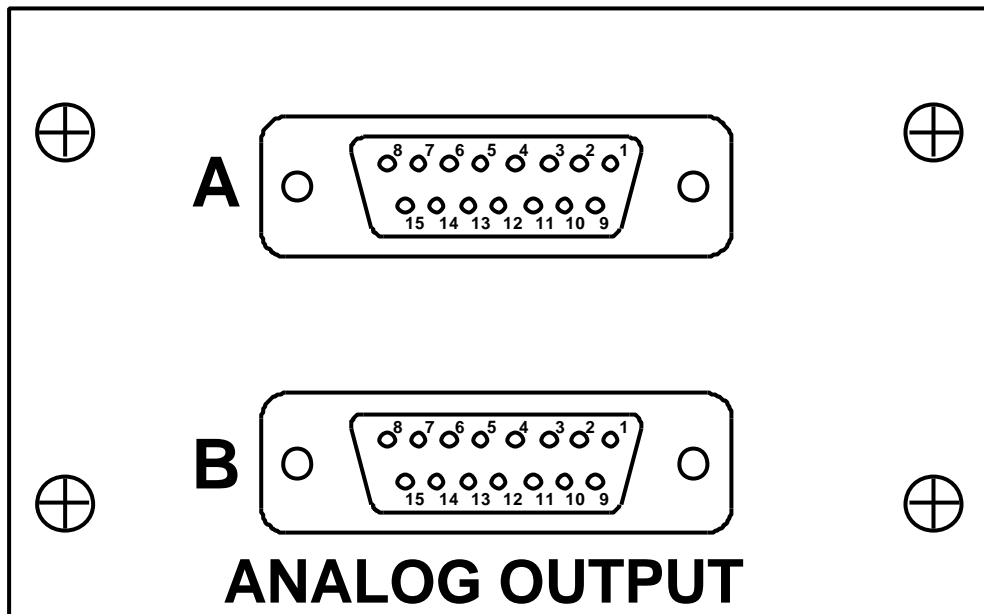
Connector type/No of pins.	Connectors per module.	Number of channels per module.
DB15	2	24
DB25	1	24

DIN 8	4	24
SOCAPEX 37	1	30

ANALOGUE PIN CONNECTIONS

DB 15 PINOUTS

The following diagram shows one DB15 module with its two connectors as viewed from the rear of the *Axiom*.



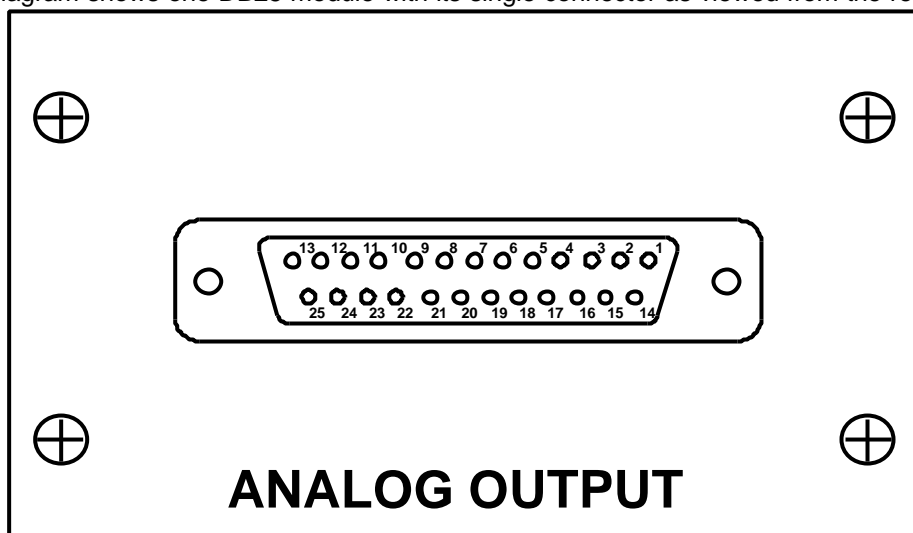
Connector A		Connector B	
Pin	Function	Pin	Function
1	Channel 1	1	Channel 13
2	Channel 2	2	Channel 14
3	Channel 3	3	Channel 15
4	Channel 4	4	Channel 16
5	Channel 5	5	Channel 17
6	Channel 6	6	Channel 18
7	Channel 7	7	Channel 19
8	Channel 8	8	Channel 20
9	Channel 9	9	Channel 21
10	Channel 10	10	Channel 22
11	Channel 11	11	Channel 23
12	Channel 12	12	Channel 24
13	Not Connected	13	Not Connected
14	Not Connected	14	Not Connected
15	Common 0V	15	Common 0V

If a second DB15 connector module is fitted to the right of the first module, when viewed from the rear, its two connectors provide outputs for channels 25 to 48.

If a third DB15 connector module is fitted to the right of the second module, when viewed from the rear, its two connectors provide outputs for channels 49 to 72.

DB 25 PINOUTS

The following diagram shows one DB25 module with its single connector as viewed from the rear of the Axiom.



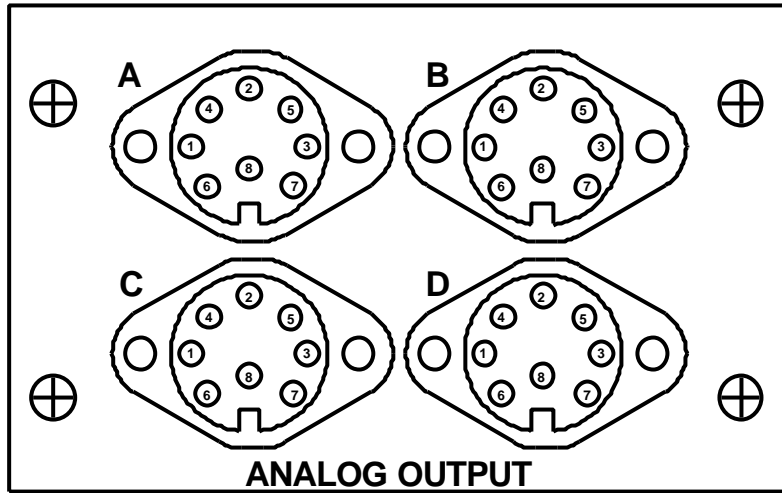
Pin	Function
1	Channel 1
2	Channel 2
3	Channel 3
4	Channel 4
5	Channel 5
6	Channel 6
7	Channel 7
8	Channel 8
9	Channel 9
10	Channel 10
11	Channel 11
12	Channel 12
13	Channel 13
14	Channel 14
15	Channel 15
16	Channel 16
17	Channel 17
18	Channel 18
19	Channel 29
20	Channel 20
21	Channel 21
22	Channel 22
23	Channel 23
24	Channel 24
25	Common 0V

If a second DB25 connector module is fitted to the right of the first module, when viewed from the rear, it provides outputs for channels 25 to 48.

If a third DB25 connector module is fitted to the right of the second module, when viewed from the rear, it provides outputs for channels 49 to 72.

DIN 8 pin PINOUTS

The following diagram shows one DIN 8 module with its four connectors as viewed from the rear of the Axiom.



Connector A		Connector B	
Pin	Function	Pin	Function
1	Channel 1	1	Channel 7
2	Channel 2	2	Channel 8
3	Channel 3	3	Channel 9
4	Channel 4	4	Channel 10
5	Channel 5	5	Channel 11
6	Channel 6	6	Channel 12
7	Not Connected	7	Not Connected
8	Common 0V	8	Common 0V

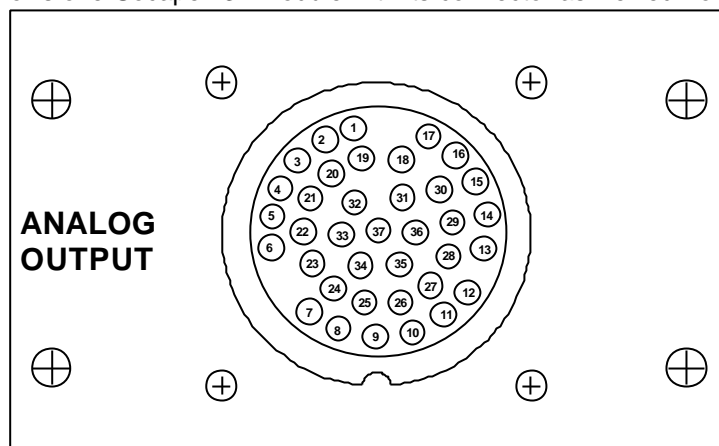
Connector C		Connector D	
Pin	Function	Pin	Function
1	Channel 13	1	Channel 19
2	Channel 14	2	Channel 20
3	Channel 15	3	Channel 21
4	Channel 16	4	Channel 22
5	Channel 17	5	Channel 23
6	Channel 18	6	Channel 24
7	Not Connected	7	Not Connected
8	Common 0V	8	Common 0V

If a second DIN connector module is fitted to the right of the first module when viewed from the rear, it provides outputs for channels 25 to 48.

If a third DIN connector module is fitted to the right of the second module when viewed from the rear, it provides outputs for channels 49 to 72.

SOCAPEX 37 PINOUTS

The following diagram shows one Socapex 37 module with its connector as viewed from the rear of the Axiom.



SOCAPEX 37 Pin Female SLEF337P

Module 1

Pin	Function
1 - 30	Channels 1 - 30
31	not connected
32	not connected
33	not connected
34	not connected
35 - 37	Ground or 0 Volts

If a second Socapex connector module is fitted to the right of the first module, when viewed from the rear, it provides outputs for channels 31 to 60 as shown in the table below.

Module 2

Pin	Function
1 - 30	Channels 31 - 60
31	not connected
32	not connected
33	not connected
34	not connected
35 - 37	Ground or 0 Volts

If a third Socapex connector module is fitted to the right of the second module, when viewed from the rear, then it provides outputs for channels 61 to 90 as shown in the table below.

Module 3

Pin	Function
1 - 30	Channels 61 - 90
31	not connected
32	not connected
33	not connected
34	not connected
35 - 37	Ground or 0 Volts

Note; Channels 73 to 90 can only be accessed if they are patched to desk channels in the Axiom patch section.

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