

*Extend Your
Imagination*



AXIOM 48

AND

AXIOM 60

LIGHTING CONTROL DESKS

USER MANUAL

Version 0.91

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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. Comprehensive details of ALL functions can be found later in this USER MANUAL.

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 bank or page will continue to flash.

PROGRAM A SCENE (RAPID METHOD)

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

PROGRAM A SCENE (RAPID METHOD IN A DIFFERENT BANK OR PAGE)

To program the current output as a scene into a different bank or page with the default fade times, press; <PROGRAM>, [F6 SCENE], **either**,
Hold <^> or <v>, tap <S/A> (bank number), double click <S/A> (any Softmaster) **or**,
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 <^> or <v>, or <PAGE>, tap <S/A> (bank or page number), (the BANK or PAGE selection is optional) press <S/A> (Softmaster or 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 BANKS ON THE SOFTMASTERS

To cycle UP or DOWN through the Banks of Softmasters press either <^> or <v> respectively.
To directly select a bank, hold either <^> or <v>, tap <S/A> (bank 1 to 48, (60)) (Red preset S/A keys)

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 <^> or <v>, or <PAGE>, tap <S/A> (bank or page number), (the BANK or 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 <^> or <v>, or <PAGE>, tap <S/A> (bank or page number), (the BANK or 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 <^> or <v>, or <PAGE>, tap <S/A> (bank or page number), (the BANK or PAGE selection is optional), press <S/A> (scene number), [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 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 <^> or <v>, or <PAGE>, tap <S/A> (bank or page number), (the BANK or 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 <^> or <v>, or <PAGE>, tap <S/A> (bank or page number), (the BANK or 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 <^> or <v>, or <PAGE>, tap <S/A> (bank or page number), (the BANK or PAGE selection is optional), press <S/A> (source bank or page number), <S/A> (source scene number), [F1 MORE], [F4 ScnCpy], hold <BANK or PAGE>, tap <S/A> (destination bank or page number), press <S/A> (destination scene number), [F6 OK], <PREVIEW/EDIT>.

COPY A CHANNEL LEVEL

To copy the level of a channel to another channel in the same scene, press <PREVIEW/EDIT>, [F6 SCENE], hold <^> or <v>, or <PAGE>, tap <S/A> (bank or page number), (the BANK or PAGE selection is optional), press <S/A> (source scene number), [F1 MORE], [F4 ChnCpy], <S/A> (source channel number), <S/A> (destination channel number), [F6 OK], [F6 DONE], [F6 DONE], [F6 YES].

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], [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 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 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 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 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.

NAMING A CHASE

To program a name for the chase (optional), after programming the steps, press [F4 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. Press [F6 DONE] to accept the name.

PROGRAMMING THE CHASE RATE

To program the rate of the chase, after programming the steps, press [F4 MORE], [F2 RATE]. Rotate the EDIT wheel to set the rate. Press [F6 DONE] to accept the rate.

PROGRAMMING THE CHASE FLAGS

To program the flags (direction, state and mode), after programming the steps press, [F4 MORE], [F1 FLAGS]. Press [F1 DIR] to select forward or reverse, [F2 STATE] to select stopped or running and [F3 MODE] to select normal, single shot or bounce. Press [F6 DONE] to accept the flags.

SAVING THE CHASE

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

PROGRAM A LINK TO ANOTHER CHASE.

A link to another CHASE 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 LINK], <S/A> (Chase number to link to), [F6 YES], [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.

CLEARING AN FX MASTER

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

LIVE EDIT CHASE RATE AND FADE

To live edit 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.

EDIT THE RATE OF A CHASE IN MEMORY

To edit the rate of a chase not currently assigned to an FX master, press <PREVIEW/EDIT>, [F4 CHASE], <S/A> (chase number), [F1 MORE], [F2 RATE]. Set the rate with the EDIT wheel. To save the changes press, [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

EDIT THE FADE OF A CHASE IN MEMORY

To edit the fade of a chase not currently assigned to an FX master, press <PREVIEW/EDIT>, [F4 CHASE], <S/A> (chase number), [F1 MORE], [F3 FADE]. Set the percentage fade with the EDIT wheel. To save the changes press, [F6 DONE], [F6 DONE], [F6 DONE], [F6 YES].

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] **or**
- [F5 LINK] <S/A> (chase number).

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

DELETE A STEP IN A 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 THE FLAGS OF A CHASE

To edit the flags (direction, state and mode) which determine how the chase will appear when it is assigned to an FX master press **either**,

- <PREVIEW/EDIT>, [F4 CHASE], <S/A> (chase number), [F2 EDIT] **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F4 EDIT], [F6 DONE].

Then press [F1 MORE], [F1 FLAGS]. Press [F1 DIR] to select forward or reverse, [F2 STATE] to select stopped or running and [F3 MODE] to select normal, single shot or bounce.

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

EDIT THE NAME OF A CHASE

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

- <PREVIEW/EDIT>, [F5 CHASE], <S/A> (chase number) **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F4 EDIT], [F6 DONE].

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 CHASE

To erase a chase press **either**,

- <PREVIEW/EDIT>, [F4 CHASE], <S/A> (chase number) **or**
- <PREVIEW/EDIT>, <S/A> (FX master), [F4 EDIT], [F6 DONE].

Press [F1 MORE], [F5 ERASE], [F6 YES], <PREVIEW/EDIT>.

SOLO

ADD MODE

Press; <ADD/KILL> so that the ADD indicator lights. When a S/A key is pressed, its contents will come on and all other output is unaffected.

KILL MODE

Press; <ADD/KILL> so that the KILL indicator lights. When a S/A key is pressed, its contents will come on and all other output is blacked out.

Note; LTP channels cannot be killed.

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 currently 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 setups, 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 you 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, Softmaster, Scene master, or Preset master, quickly tap (and release) the VIEW/RIDE key. Press **<S/A>** (fader to be viewed). The screen shows a countdown of fade time, the level at the output, the fader contents, name and time settings. 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>**.

Section 3: INTRODUCTION

The *Axiom 48/96* is a simple to use yet powerful lighting control desk that is suited to a wide range of applications. It has been specifically designed to provide control of mid sized light shows, yet provide the operator with advanced features normally reserved for larger capacity consoles. It combines the ability to control dimming channels and automated fixtures (moving lights) from the one control surface.

PICTURE OF THE BOTH MODELS

Axiom 48/96

MODELS

This manual covers two models of the enhanced *Axiom*. Both models have similar features and **vary only in the number of channels, scenemasters and softmasters that they support.**

The two models are:

Axiom 48/96
Axiom 60/120

At any point in this manual where the model affects the operational description, the text will describe the 48 model followed by the 60 model in brackets. For example,

"The Yellow preset has faders for channels 1 to 48 (60)".

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 "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.
- In "WIDE preset" mode, there is an individual channel fader and solo key for every channel. This number of channels is the higher number indicated in the model number above.

For example, the *Axiom 48/96* in preset and scene modes provides faders and solo keys for channels 1 to 48 and in wide preset mode it provides faders and solo keys for channels 1 to 96.

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

FEATURES

The *Axiom 48* and *60* incorporate the following features;

- Manual faders and Solo keys for all channels.
- Channel faders are arranged in two Presets, the Yellow Preset and the Red Preset.
- Three "Modes" of operation allowing the Red preset faders to control either channels 1 to 48 (60) (Preset Mode), channels 49 to 96 (120) (WIDE Preset Mode), or to become Scenemasters (Scene Mode) with 4 "pages" of scene memory available.
- 16 (24) dedicated Softmasters with associated Solo keys for the replay of Scenes or Chases with 48 (60) "banks" of memory available.
- 3 Preset masters, (Red, Yellow and Softmasters), with associated Solo keys.
- Two Effects Masters, FX 1 and FX 2, with associated Solo, Stop/Start, Forward and reverse keys, for the playback of Stacks or Chases.
- Extensive programming, editing, trimming and previewing facilities.
- Four pages of fully proportional softpatch.

- Inbuilt "Fixture Libraries" allow any of the popular Moving Fixtures from the major manufacturers to be patched and controlled in an instant. Uncommon Moving Fixtures that are not included in the library may be manually patched and controlled.
- Software and fixture libraries are upgradable from disk.
- "Help" screens are available for all functions.
- Complies with relevant CE regulations.

SPECIFICATIONS

<i>Functions</i>	<i>Axiom 48</i>	<i>Axiom 60</i>
Channel faders - Preset Mode	48	60
Channel faders - Wide Mode	96	120
Scenemasters - Scene Mode	48	60
Scenemaster Memories	48 X 4 pages = 192 scenes	60 X 4 pages = 240 scenes
Softmasters	16	24
Softmaster Memories	16 X 48 banks = 768 scenes	24 X 60 banks = 1440 scenes
Stacks -99 steps per stack	48	60
Chases -99 steps per chase	up to 816	up to 1500
Total Memories (Scenes + Snapshots)	4096	4096
Softpatch	512 dimmers- fully proportional	512 dimmers- fully proportional
Softpatch pages	4	4
Moving Fixture Library	YES (updates on disk)	YES (updates on disk)
Operating voltage, user selectable	85–130 volts or 170–260 volts, 50/60 Hz	85–130 volts or 170–260 volts, 50/60 Hz

EXTERNAL PORTS

The following external ports are provided;

- Two identical isolated DMX512/1990 outputs.
- VGA output for displaying console status. Monitor not included.
- PC keyboard socket for connecting a QWERTY style keyboard for *rapid* labelling of scenes, chases, patches etc.
- MIDI In, Out and Thru.
- Audio inputs (multi standard, XLR/TRS/TS connectors) for synchronising chases to music.
- RS232C (computer interface).
- Parallel printer port.

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 L.S.C. 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. Transport the *Axiom* with all faders in the fully down position. This gives the faders maximum protection from damage.
- 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.
- The *Axiom* contains a replaceable nickel cadmium battery.

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.

LABELLING YOUR AXIOM

Areas are provided below the faders for you to write identifying labels. To prevent permanent marking of your Axiom, LSC recommends that you write place strips of "write on" tape in these areas.

ACCESSORIES

The following accessories are available:

- Vinyl desk cover.
- Flight case.

There are no options for the *Axiom 48/96* as all features are inclusive.

KEYSTROKE TERMINOLOGY

Certain keystroke terminology are used in this manual to describe the 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 above the Preset Masters.

SOLO/ASSIGN KEYS

SOLO/ASSIGN keys are often abbreviated to S/A or SOLO. The term S/A is used on the prompts of the *menus* screens. 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; <S/A> (Name) or <SOLO> (Name).

For example; Press <S/A> (Softmaster).

FUNCTION KEYS

The six function keys located above and below the main LCD screen have varying functions depending upon the current state of the *Axiom*. Function keys are described by enclosing them in [] these brackets containing the function key number and the "current" function.

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.

F1	F2	F3
PAUSE		UNDO
Choose	type of	link
desired	after	Step #
STACK		DONE
F4	F5	F6

In the example above, function keys 1, 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.

CONNECTING AND TURNING ON

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 voltage setting is correct 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) CONNECTORS

Two 5 pin female AXR connectors provide an optically isolated DMX512/1990 digital signal for connection to your devices to be controlled, (dimmers, scrollers, moving fixtures etc). Both connectors carry identical signals. DMX512 is the industry standard *digital control* system for the transmission of control data between lighting equipment. If your equipment to be controlled 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 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.

VIDEO MONITOR

This socket provides a standard VGA output for connection of a VGA or better computer monitor. A switched IEC mains output socket is provided to power the monitor.

SWITCHING ON

The "POWER ON" switch is located beside the mains input connector on the rear panel. When the *Axiom* is switched ON, the inbuilt neon in the switch will glow and the *Axiom* will commence its startup 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, L.S.C. recommends that you RESET the *Axiom*.

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 the slide out fuse tray.

DESK LAMP CONNECTORS

The goose neck desk lamps are connected to these sockets. The sockets provides both power and mounting for the lamps. The intensity may be adjusted with the DESK LAMP control on the front panel. The desk lamp connectors are separately fused with a 1 amp fuse.

OTHER CONNECTORS

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

KEYBOARD

This connector allows a standard QWERTY computer keyboard to be connected.

AUDIO

An audio signal may be used to synchronise the stepping of a chase to the base beat of music. Stereo left and right connectors are provided to receive "LINE LEVEL" audio. The connectors are multi standard and will accept male XLR, Tip Ring and Sleeve (balanced) or Tip and Ring (unbalanced) connectors.

MIDI

MIDI (Musical Instrument Digital Interface) is an international standard for data communication between musical instruments, computers and other equipment such as lighting desks. It allows the *Axiom* to be controlled by other devices. Refer to the "MIDI" in the "UTILITIES" section for details.

RS 232C

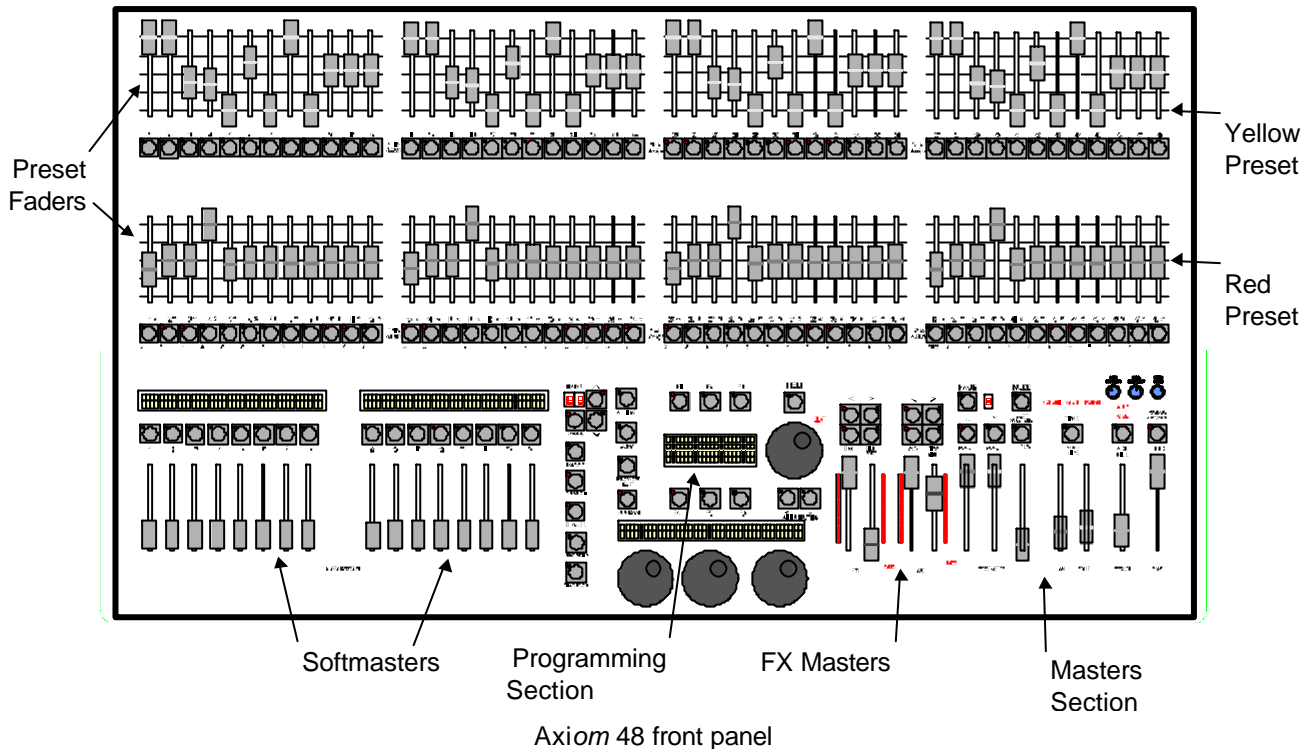
The RS 232C connector is a serial port that may be connected to a serial printer or a computer allowing you to download the *Axiom* memory contents. Refer to the "UTILITIES" section for details.

PRINTER

This connector allows an industry standard parallel printer to be connected. Refer to the "PRINT" in the "UTILITIES" section for details.

Section 4: GUIDED TOUR

LAYOUT



PRESET FADERS

The Yellow preset faders control the levels of channels 1 to 48 (60).

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 48 (60). (A duplicate of the Yellow preset).
- WIDE Preset mode. They control the levels of channels 49 (61) to 96 (120).
- SCENE mode. They become Scene masters. There are 4 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, bank, 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.

Note; Softmaster scene numbers and Softmaster chase numbers are selected with the Softmaster S/A keys.

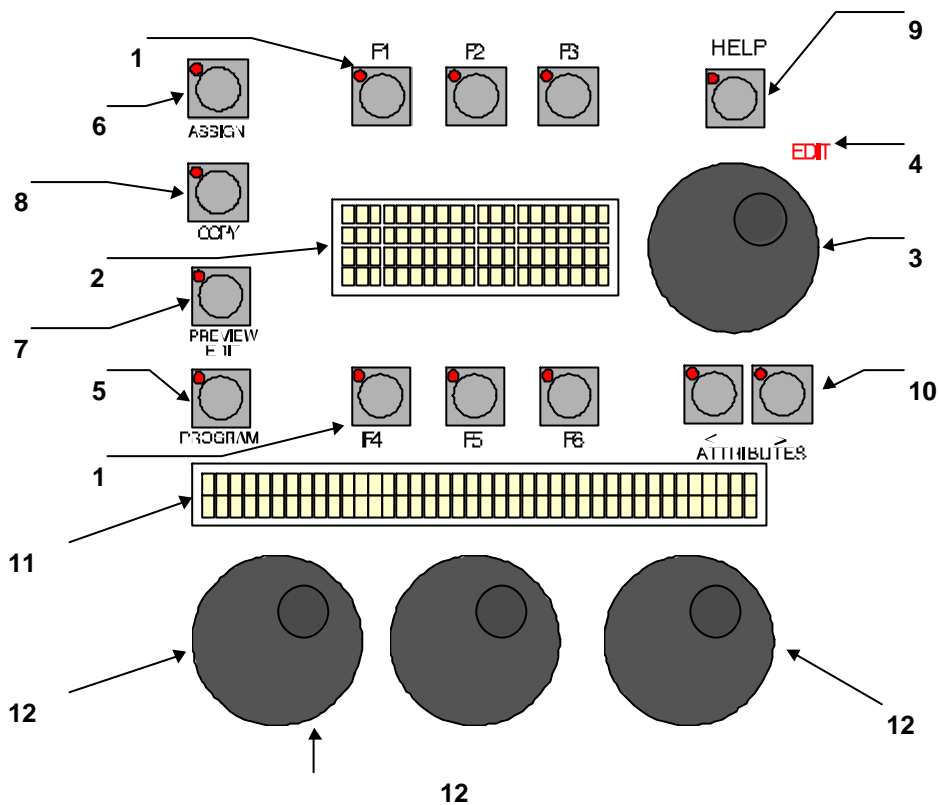
- The red S/A keys also provide one of several means of CHARACTER ENTRY. When a "name" or "label" of a scene, step, stack, chase, etc needs to be entered, the appropriate red <S/A> "character" keys are pressed according to the legend printed below them.

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



1. Function keys.
When a function key is operative its LED is lit and its function is displayed on the LCD screen in UPPER CASE TEXT adjacent to that key.
2. LCD Screen
A 20 character by 4 line back lit LCD (Liquid Crystal Display).
3. EDIT Wheel.
Continuously rotatable and used to alter various paramaters as prompted by the LCD screen.
4. EDIT Wheel indicator LED.
Lights when the Edit Wheel is active.
5. PROGRAM key.
When pressed, it places the *Axiom* in Program mode. You may then choose to program a Scene, Stack, Chase or Patch.
6. ASSIGN key.
When pressed, it places the *Axiom* in Assign mode. You may then choose to assign a Stack or Chase to an FX master or assign a Patch.
7. 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, the currently assigned patch or the contents of either FX master.
8. COPY Key.
Not active in this software version.
9. HELP Key.
When pressed, 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. To scroll through the text press <F5> (page up) or <F6> (page down) or use the EDIT WHEEL. To exit, press <HELP> a second time.
10. ATRIBUTES Keys.
Not active in this software version.
11. LCD display.
Not active in this software version.

12. EDIT Wheels.

Not active in this software version.

The Axiom uses an interactive "tiered" menu system utilising several dedicated keys and six function keys. Operator prompts on the LCD screen guide you through all Programming, Editing and Previewing operations. When you are required to input a selection, all valid input keys will flash and all other keys will be inoperative. When PROGRAMMING or PREVIEW/EDITING, all valid S/A keys flash twice, then numbers containing Scenes, Stacks or Chases flash and unused numbers are not lit.

MAIN MENUS

Under normal operating conditions, there are four main menus that you may select. Each menu displays different information or offers different function choices. On any of these four menus, pressing [F6] will step to the next menu and [F5] will step backwards. [F4] switches directly to menu 1.

From any of the four main menus, other menus may be selected by pressing *active* function keys, or any of the dedicated keys (PROGRAM, PREVIEW/EDIT etc). 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 and return to the previous menu with all settings updated.
- Selecting "CANCEL" will ignore any changes that you have made and return to the previous menu without updating any settings.
- Pressing the Program, Preview/Edit, Assign, Copy or Help 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		
F X 1 : S t k # # S t p # # [
F X 2 : C h s # # S t p # # →→		
I 0 . 0 s O 0 . 0 s M E N U 1		
F4	F5	F6

[F1 EDIT] selects "Quick EDIT" allowing you to quickly edit the last scene to be faded up as indicated →.

[F3 TRIM] selects the Output TRIM function.

The contents, step number and state of FX1 and FX2 are displayed.

If a stack is assigned, < indicates that the stack is idle and ^ indicates that a crossfade is in progress.

If a chase is assigned, then its current state is shown using the following symbols;

→→ Running forward, ←← Running reverse, □ Stopped, →← Bounce and → ç Single Shot.

The In (I) and OUT (O) Time fader setting are shown on the bottom line of all main menus.

The bottom line also indicates that this is MENU 1.

MENU 2

F1	F2	F3
U T I L S		
F X 1 : S t k # # S t p # # <		
F X 2 : C h s # # S t p # # →→		
I 0 . 0 s O 0 . 0 s M E N U 2		
F4	F5	F6

F1 accesses the UTILities menu and the bottom line shows that this is MENU 2. The rest of this menu is identical to MENU 1.

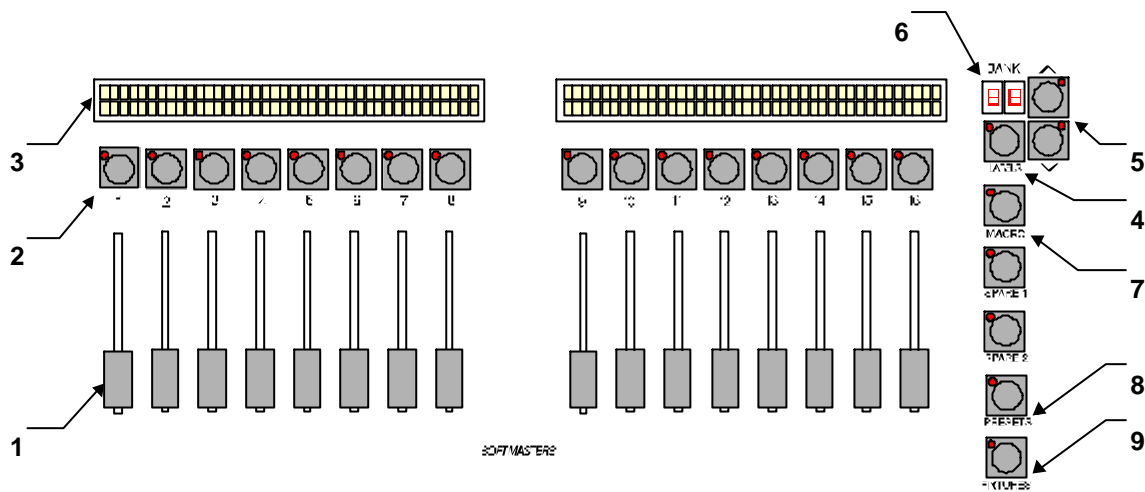
MENUS 3 AND 4

These two menus give extensive information about the condition of the two FX masters respectively. FX1 is shown on MENU 3 and FX2 is shown on MENU 4.

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 depending upon what is assigned.

Descriptions of a menu with a Stack assigned are given in the "STACKS" section and descriptions of a menu with a chase assigned are given in the "CHASES" section.

SOFTMASTERS



1. SOFTMASTERS.

The Axiom has 16 (24) Softmasters that can control the level of a programmed Scene or Chase. There are 48 (60) BANKS of memory for the Softmasters and the function of each Softmaster depends upon the contents of the currently selected BANK. You determine what each BANK contains when you program (or copy) scenes or chases into them.

2. S/A KEYS.

Each Softmaster has a S/A key with an integral red indicator LED. They may be used to:

- SOLO the contents of their Softmaster. (See also SOLO level and ADD/KILL key below).
- Provide a NUMERIC ENTRY function. When the “number” of a Softmaster scene or chase needs to be entered, the appropriate <S/A> key “number” is pressed.

The brightness of each LED is proportional to the level of its Softmaster at the the *output* of the Axiom. It will flash *slowly* whilst a timed fade is in progress.

3. LCD.

The LCD displays above the softmasters show the current contents or status of each Submaster via two different screens as selected by the LABELS key (4, below). The two screens display the following information:

The contents of each Softmaster in the form of a Bk (Bank) and Sc (Scene) or Ch (Chase) number. For example;

B k 1 4	B k 1 4	B k 1 4	B k 1 4
S c 1	S c 2	C h 3	S c 4

The “name” for each scene or chase if you have programmed one.

For example;

A c t 1 S 1	R e d C a n
A c t 1 S 2	B l u C y c

When a new scene or chase is pending on a Softmaster due to a bank freeze, the display for that master will automatically alternate between the two screens, acting as a warning of the pending change. See “MODE/BANK/PAGE FREEZE” later in this section for more details.

4. LABELS KEY.

Toggles the Softmaster LCD labels (3, above) between the two different screens of information.

5. BANK SELECT KEYS.

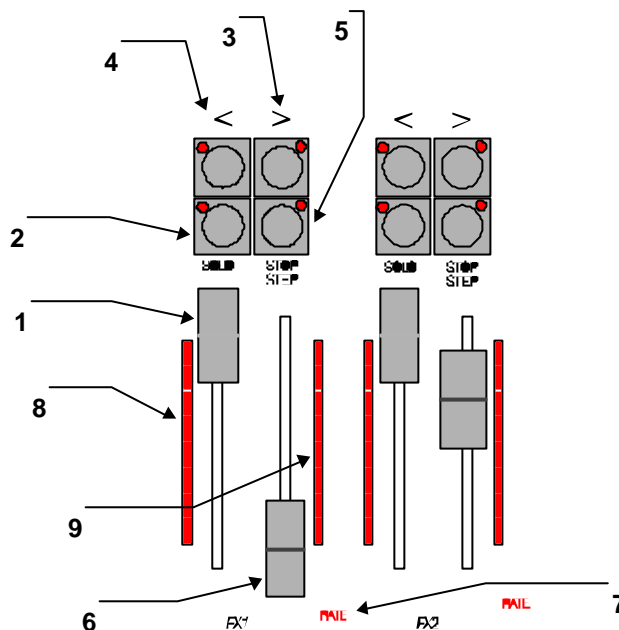
The ^ and v keys allow you to scroll up or down through the 48 (60) banks or you may immediately select any bank by pressing and holding either ^ or v and tapping <S/A> (BANK number) (any of the Red S/A keys). Freeze rules apply. See “MEMORY STRUCTURE” for details.

6. BANK DISPLAY.

The LED readout shows the current bank number.

- 7. MACRO Key.
Not active in this software version.
- 8. PRESETS Key.
Not active in this software version.
- 9. FIXTURES Key.
Not active in this software version.

FX MASTERS

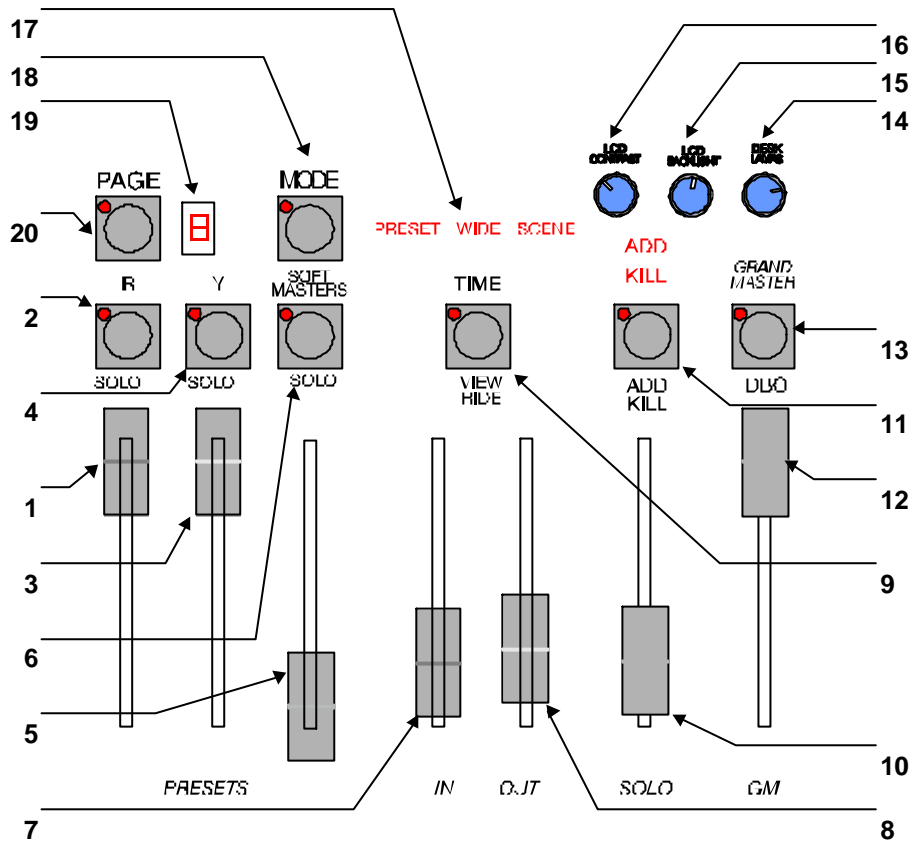


FX 1 and FX2 effects masters.

The operation of the FX keys varies slightly depending upon whether a Stack or a Chase is assigned to the FX master. The following is a general description of the basic functions of FX 1 only. FX 2 provides identical functions. The *precise* function of the FX keys are described in the “STACK” and “CHASE” sections.

- 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 LED indicator shows the level of the FX1 master at the output of the *Axiom*. The LED 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.
- 8. FX1 Bargraph indicator.
Lights to show the level of the FX master.
- 9. FX1 Bargraph OUT fade indicator.
Lights to show the setting of the FX rate fader.

MASTERS SECTION



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 Preset Solo key.
Solo's (flashes) the Red preset to the level set by the Add/Kill master. The brightness of its 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 operation of the Yellow preset master may be inverted (full level at lower position) via the "UTILITIES" menu.
4. Yellow Preset Solo key.
Solo's (flashes) the Yellow preset to the level set by the Add/Kill master. The brightness of its 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. Soft Masters Preset Master.
Controls the overall level of the Soft Masters.
6. Soft Masters Preset Solo/Assign key.
Solo's (flashes) the contents of the Soft Master's Preset master to the level set by the SOLO master. The brightness of its indicator LED shows the level of the Soft Master's Preset master at the output of the *Axiom*. It also will flash *slowly* whilst a timed fade is in progress.
7. IN Time Fader.
Controls the IN fade time of the Preset masters and may be assigned to control the IN fade time of any Scene.
8. OUT Time Fader.

Controls the OUT fade time of the Preset masters and may be assigned to control the OUT fade time of any Scene.

9. Time View/Ride key.

Allows the "Programmed" fade time of any master to be viewed (quickly tap and release <VIEW/RIDE>, press <S/A> (master to view)) and also allows you to take over a timed fade in progress and RIDE it manually (press and HOLD <VIEW/RIDE> until the RIDE menu appears, press <S/A> (master to ride) then rotate the EDIT wheel).

10. Solo Level Fader

Sets the level to which any HTP channels, Scenes, Softmasters, Presets, or FX masters will be flashed when their respective SOLO/ASSIGN key is pressed.

11. ADD/KILL mode key

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.

12. Grand Master.

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

13. DBO (Dead Black Out) key

blacks out all HTP channels. The DBO key flashes when the output is blacked out. Press again to restore normal output. The DBO key may be disabled via the "UTILITIES" menu.

14. Desk Lamps

controls the intensity of the gooseneck desk lamps that may be plugged into the rear panel.

15. LCD Backlight

controls the intensity of the LCD backlights on all LCD displays.

16. LCD Contrast

controls the contrast of all LCD displays.

17. Mode display

displays the current mode of the Red preset (described below).

18. Mode key.

selects the current mode (Preset, Wide or Scene) of the Red preset.

19. Page display

displays the current page of scene memory for the Red preset.

20. Page key.

selects the current page of scene memory for the Red preset. To cycle through the pages repeatedly press <PAGE>. To directly select a page, hold <PAGE>, tap <S/A> (page 1 to 4) (Red preset S/A keys)

MODES OF OPERATION

OVERVIEW

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 48 (60), (a duplicate of the Yellow preset).
- WIDE Preset mode. The Red preset controls the levels of channels 49 (61) to 96 (120).
- SCENE mode. The Red preset faders become SUBMASTERS and control the levels of scenes that may be programmed or copied into the submasters. Four 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 red "LED" MODE indicators beside the MODE key.

16 (24) Softmasters for scenes or chases and 2 FX masters for stacks or chases are always available regardless of which mode is selected.

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 48 (60). The output of each preset is controlled by its own Preset master.

The fade times of the preset masters are set by the IN and OUT time faders.

ADVANTAGE

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.

DISADVANTAGE

Only the low channels can be controlled and any look that needs to be used at a later time must be manually reproduced with the channel faders. Programming a look as a scene overcomes this problem.

WIDE PRESET MODE

Wide preset mode utilises both the red *and* yellow fader banks as a *single* manual preset of 96 (120) channels. The yellow faders control the low channels and the red faders control the high channels. There is an individual fader for **every channel**. The yellow preset master controls the total output of this single preset.

ADVANTAGE

You have access to **all** of the **channels** that are available on the *Axiom*. This is most useful when you are PROGRAMMING scenes as you can utilise ALL channels to create your scenes.

DISADVANTAGE

You do not have a second preset on which to create the next look on the fly.

SCENE MODE

In Scene mode the faders of the red fader bank become Submasters containing **scenes**.

ADVANTAGE

In addition to the 16 (24) Softmasters, the Red Preset provides another 48 (60) Scenemasters allowing instant hands on access of up to 64 (84) scenes without the need to change banks or pages.

DISADVANTAGE

Only the low channels can be controlled by faders for any new look that needs to be created.

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.

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 Softmaster, any Submasters, 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 Softmaster, 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.

MEMORY STRUCTURE

Memory is divided into several areas.

- Scene memory.
 - Scene memory is divided into two areas,
 - Scenemaster memory defined by PAGE and Red preset number.
 - Softmaster memory defined by BANK and Softmaster number.
- Chase memory.
 - Chase memory is divided in two areas,
 - FX master memory defined by Red preset S/A number.
 - Softmaster memory defined by Bank and Softmaster number.
- Stack memory defined by Red preset number.

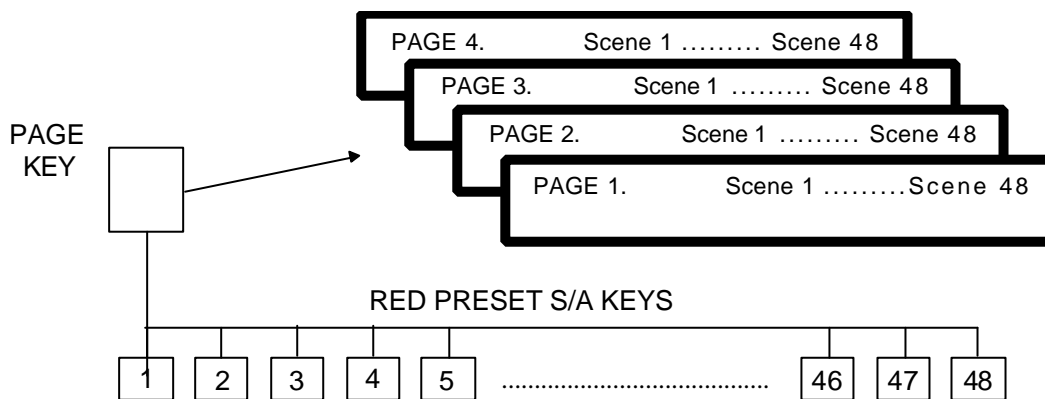
Scenemaster Scenes, FX master Chases and Stacks are totally separate.

Softmaster Scenes and Chases share common memory. If a Bank/Softmaster number has been used for a Scene, then it cannot be used for a Chase. A Chase recorded in the same number would overwrite the Scene. Likewise, if the number has been used for a Chase, it cannot be used for a Scene.

SCENEMASTER MEMORY

There are 4 PAGES of memory with 48 (60) 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** (or copy) into them. The memory capacity of each model is;

- Axiom 48; 4 (pages) x 48 (S/A numbers) = 192 scenes.
- Axiom 60; 4 (pages) x 60 (S/A numbers) = 240 scenes.



Axiom 48 Scenemaster Memory

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

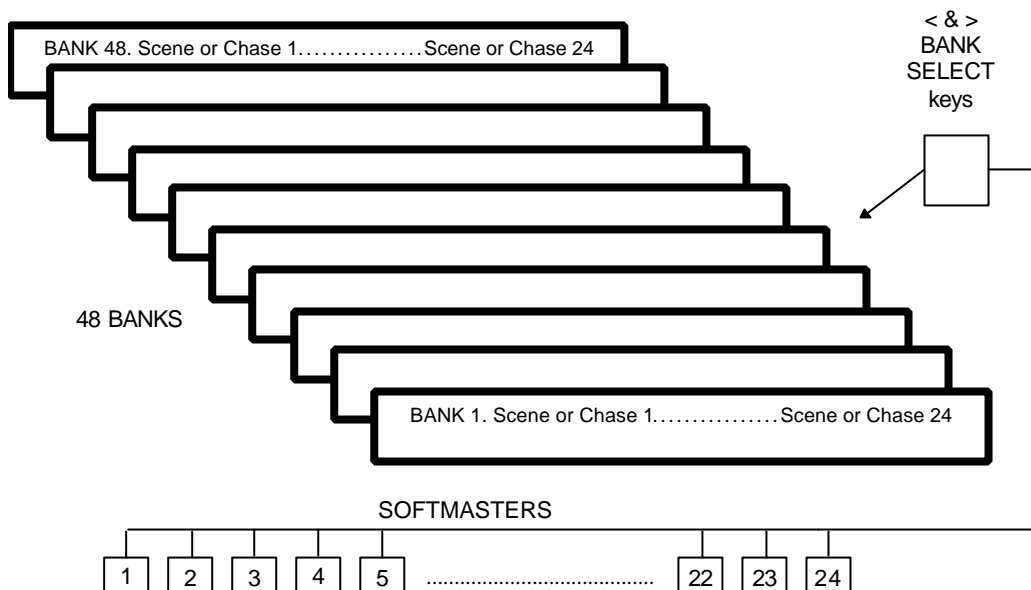
The Red Preset S/A keys are also used to select Chases and Stacks that may be assigned to the FX masters. These Chases and Stacks use separate memory. Therefore, in addition to the 192 (240) scenes, you may program 48 (60) chases and 48 (60) stacks.

SOFTMASTER MEMORY

Softmasters have their own area of memory. A Softmaster may contain a Scene or a Chase or it may be empty. There are 48 BANKS of memory available with 24 (36) memory numbers in each bank. The ^ or v keys selects the Bank and the Softmaster S/A keys select the memory numbers. The **contents** of each number in each bank is determined by what you **program** (or copy) into them.

The Softmaster memory capacity of each model is;

- Axiom 48; 48 (banks) x 16 (S/A numbers) = 768 scenes or chases.
- Axiom 60; 48 (banks) x 24 (S/A numbers) = 1140 scenes or chases.



Axiom 48 Softmaster Memory

When you change banks, the scenes and/or chases from the selected bank are automatically assigned to their respective Softmasters.

Scenes and Chases may be copied between BANKS and PAGES.

MODE/BANK/PAGE FREEZE

A “FREEZE” feature prevents the contents of any Softmaster from being changed if it is active when a different BANK is selected or 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, bank or page. This prevents scenes, chases or channels “crashing in” on stage if their fader is contributing to the output when a different mode, bank 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 along with the VIEW/RIDE key. To exit from VIEW mode either press; <VIEW/RIDE> again, or press; [F6 DONE].

SOFTMASTERS

Whenever there is a pending scene or chase due to a BANK FREEZE, the LCD readout above each pending Softmaster will alternate between the name and contents displays.

FADE TIMES

The Axiom utilises times in the following manner;

MANUAL FADES

CHANNEL FADERS, SOLO, & GRAND MASTER

Individual CHANNEL faders, the SOLO 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 faders, the Rate fader or it may be programmed in memory. On upward fades the IN time will be used and on downward fades the OUT time will be used.
- For LTP channels, the time is always programmed in memory.

When a master is moved, the output will always progress towards the current position of that master at a rate set by the relevant time setting. On upward movements the IN time will be used and on downward movements the OUT time will be used.

For example, if an IN fade time of 3 seconds has been set, then the master must be moved from bottom to top in less than 3 seconds for the fade to take 3 seconds to execute. If the master was only faded to the half way position, then the fade would take 1.5 seconds to reach that point and then stop.

A fully manual fade is achieved by setting the IN and OUT times to 0 seconds. The fade will then instantly follow the position of the master movement.

TIME SOURCES

TIME FADERS

The Time faders always controls the fade time for the Red, Yellow and Softmaster Preset masters. They may also be used to control the fade times of Softmasters and Scene masters.

The longest time (11 minutes) is when a Time fader is at its top position and the shortest time (0 seconds, or fully manual) is when it is at its bottom position.

The current time setting of both Time faders is always displayed on the bottom line of the main menus

RATE FADERS

Each of the FX masters has its own Rate fader which may provide manual control of the fade times of a stack. If a Rate fader is active, its red backlit "RATE" indicator is lit and its setting is displayed on the LCD screen.

Menu 3 gives the setting for FX1 and menu 4 gives the setting of FX 2. Rate fader times 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 fade times programmed in memory. This allows every Scene, Stack step, and Chase to have its own exclusive time.

PRESET MASTERS, SCENE MASTERS, SOFTMASTERS, 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 IN and OUT TIME faders.

SCENE MASTERS

When you program or edit a scene, you may choose the time sources.

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.

Programmed times may be set from 0 seconds up to 11 minutes. 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.

SOFTMASTERS

Softmasters containing scenes fade in exactly the same manner as Scenemasters described above.

Softmasters containing chases fade the overall chase level under the influence of the IN and OUT time faders.

Chases may also be programmed to fade between steps. See the "CHASE" section for details.

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. 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 AND SCROLLERS" 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.

SCENE MASTERS/SOFTMASTERS(CONTAINING SCENES)

Every scene has an 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 starts as soon as the Scenemaster is raised above zero and continues irrespective of any further fader movement. When a scene is faded down, all LTP channels **do not change**. Each LTP channel will only change if another Scene containing that LTP channel is faded up from the fully down position.

FX MASTERS

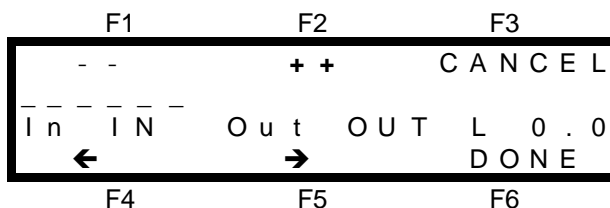
Scenes that contain LTP channels and that are programmed to a step in a Stack or a Chase will FADE IN in the same manner as they do when controlled by a Scenemaster (above). When a step in a stack is fading out, the LTP channels will only fade when they have a new level in the incoming step. If an LTP channel is not programmed in the incoming step, then it remains at its last level. A separate LTP time may be programmed for every step. 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 IN (IN Time fader)
 Out OUT (OUT Time fader) (for scenes), =NXT (for stacks)
 L (LTP) 0.0

You may set your own default times. From menu 2 press; [F1 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 "IN" (Time fader) setting, it changes to a "programmed" time. When a "programmed" In time is decremented below 0.0 seconds, it changes back to "IN" (Time fader).

In a similar fashion, when the Out time incremented, it changes from "OUT" to "= IN" 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 "= IN " and when decremented again it changes to "OUT" (Time fader).

Setting a scene default Out time of "=IN" will result in 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 automatically 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; [F1 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

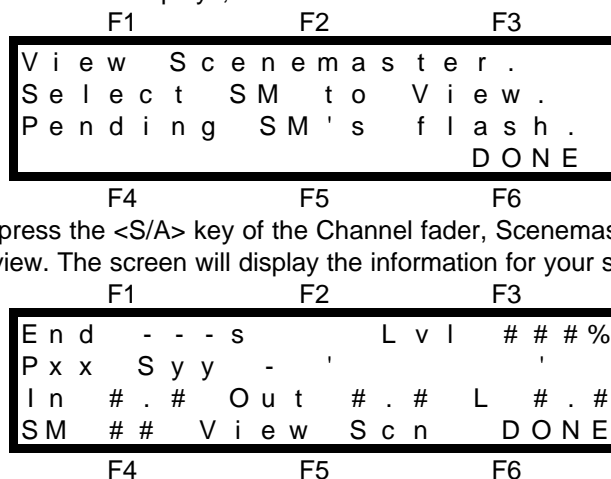
OVERVIEW

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, Presetmasters or the Softmasters 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.
- It flashes to indicate that a fader has a "PENDING" scene or channel due to a "Freeze".

VIEW

To view the contents of any Channel fader, Scene master, Presetmaster or Softmaster, quickly tap (and release) <VIEW/RIDE> and the screen displays;



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

In this example, the bottom line tells you that this fader is SM (Scene master) number ## and that you are Viewing a Scn (Scene). The actual bank or page and scene number of the scene that is currently assigned to this Scenemaster are given on the second line together with the scene name (if any).

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. It 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, the display is similar to a Softmaster or Scenemaster 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 that is fading. This allows you to vary a programmed 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 master. If you assign the RIDE key to another master or de-select RIDE, then the varied master will revert to its original programmed time setting.

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

- When you select RIDE, the fade RATE is unaltered at 100% of the programmed time.
- 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 Softmaster or Scene master, press and HOLD <VIEW/RIDE> until the RIDE menu 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 master that you wish to ride. The screen will display the information for your selection as shown below. Use the EDIT WHEEL 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 Scenemaster simply press the <S/A> key for that fader. You may switch between any Scenemasters 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 "trim pots" 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% (ie. 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.

Section 5: SCENES

OVERVIEW

A SCENE is a programmed (stored or memorised) group of channels, together with their respective levels, fade times and a descriptive 'name'. A Scene may be programmed by either taking a snapshot of the current output or created "blind" using the "PREVIEW/EDIT SCENE" function.

Two different areas are available for scene storage. Scenes are stored by either Bank and Softmaster number or by Page and Scenemaster number. There are 48 (60) banks of 16 (24) Softmasters and 4 pages 48 (60) Scene masters.

Scenes are replayed on the Bank and Softmaster or Page and Scenemaster on which they were programmed or they may be included as a step of a Stack or Chase. Scenes may be copied from any bank or page to any bank or page.

Scenemaster Pages are used only for scene storage.

Softmaster Banks are used for either scenes or chases. The contents of each Softmaster in each bank is determined by what you program (or copy) into it. If a Bank/Softmaster number has been used for a Scene, then it cannot be used for a Chase. A Chase recorded in the same number would overwrite the Scene.

Scenemasters can only be used for replaying scenes when in scene mode.

Softmasters are always available.

Individual IN, OUT and L (LTP) fade times may be programmed for every scene. These times may come from the Time faders or may be programmed in memory. The L time affects only LTP channels and is used when controlling moving fixtures or scrollers.

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

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* bank or page with a blank 'name' and with the default time settings. If you wish to use a different bank or 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 bank and page) will continue to flash.
- Double click the <S/A> (Softmaster or Red Preset) key of the scene number that you require.

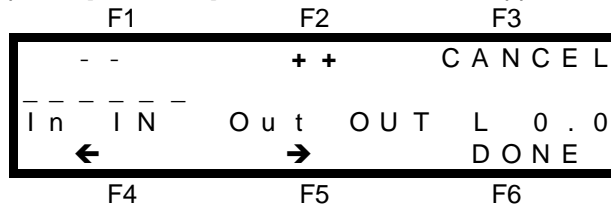
This completes the operation and a brief message will appear on the screen confirming that;

"Bank or 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.

PROGRAMMING SCENE FADE TIMES

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



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 "DESK OVERVIEW" 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 "QUICK 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 or Bank 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 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 AND SCROLLERS" section for details.

REPLAYING SCENES

OVERVIEW

Scenes may be replayed in many ways;

- Softmasters. The contents of any of the 16 (24) softmasters may be a scene..
- Scenemasters. In SCENE mode, the 48 (60) 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 Softmaster or 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 AND SCROLLERS" for more details.

SOFTMASTERS

The 16 (24) Softmasters can be used to replay either Scenes or Chases. Any one of the 48 (60) banks of memory may be selected. The **contents** of each softmaster for each bank is determined by what you **program** (or copy) into them. It may be a Scene or a Chase or it may be empty. When you change banks, the scenes or chases in the selected bank are assigned, in order, to their respective Softmasters, 1 to 16 (24).

To cycle UP or DOWN through the Banks of Softmasters press either <^> or <v> respectively.

To directly select a bank, hold either <^> or <v>, tap <S/A> (1 to 48, (60)) (Red preset S/A keys)

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

To reveal a scene on the output;

- select the bank that contains the scene.
- fade up the Softmaster Preset Master.
- fade up the Softmaster containing the scene.

SCENEMASTERS

The 48 (60) faders of the red fader bank act as Scenemasters when the Axiom is operating in SCENE mode.

Any one of 4 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 48 (60).

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

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

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 l t h P a g e	o r
B a n k	a n d S / A	k e y s

All scene <S/A> keys will flash twice to show that they are possible choices and all existing scene numbers (in the current bank and/or page) will continue to flash. You are asked to select the bank or page of the scene that is to be previewed. The *current* bank and page are shown on the bottom line. If necessary, select a different bank or 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
M O R E	C H A N S	
P x x	S y y	- ' ,
I n I N	O u t O U T	L 0 . 0
N A M E	T I M E S	D O N E

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 bank or page by simply pressing their <S/A >keys or preview scenes in other banks or pages by using the BANK select keys or <PAGE> keys, 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.

EDITING A SCENE NAME

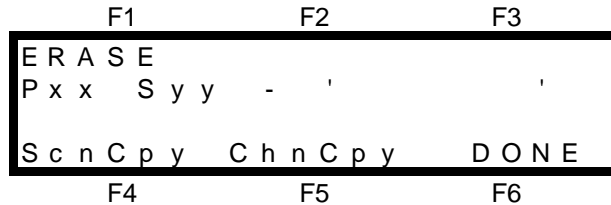
To edit the name of a scene, preview the scene (as described above), then press; [F4 NAME]. This will reveal the name editing menu. For details on how to edit the characters in the NAME, refer to "NAMES AND LABELS" in the "UTILITIES" section.

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 bank or page number and scene number that you nominate. Use the bank or page key and the <S/A> keys to select the required destination bank or page and scene number. When you make your selection the screen confirms your entries. Press; [F6 OK] to complete the copying 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

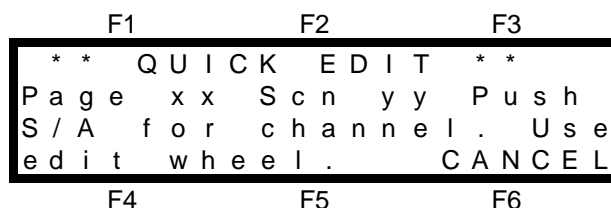
You may copy the level of any channel in a scene to any other channel in the scene. In the above (MORE) menu, press, [F5 Chn Cpy], <S/A>(source channel), <S/A> (destination channel). The screen will display both the source and destination selections. You may change the destination channel by pressing;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

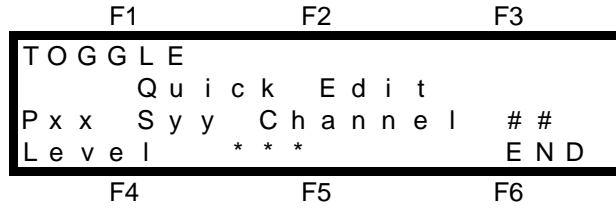
QUICK EDIT

Quick EDIT provides a *rapid* means of editing a 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 bank/page/scene label. It shows the Bank or Page number and Scene number of the last scene that was faded **UP** (from zero) on any Softmaster or Scene master. It is this scene that will be edited when you press [F1 EDIT].



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.

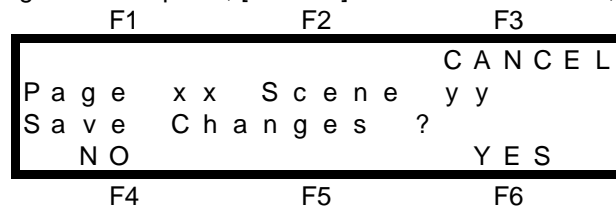


- HTP channel levels are shown as a level between 0% and 100%.
- LTP channels are shown as a level between 000 and 255.

Rotate the EDIT wheel to set the level of the channel. The "TOGGLE" function and level indications are identical to those in the "EDITING A CHANNEL LEVEL" function described earlier. You may select other channels to edit by simply pressing their channel <S/A> keys.

Hint; You may program an entirely new scene with this function by simply fading up an empty Softmaster or Scenemaster then selecting Quick EDIT. Select the channels with their <S/A> keys and set the channel levels with the Edit wheel.

When you have finished editing the scene press; [F6 END] and the menu will ask;



- Select [F3 CANCEL] to return to the previous screen and continue editing.
- Select [F4 NO] to **INSTANTLY** restore all edited levels to their original levels prior to editing.
- Select [F6 YES] maintain all the edited levels and **update** the scene.

LIVE EDIT

The LIVE EDIT function shows the **output** of the previewed master on the S/A key LED's instead of the contents of that master. This allows you to *edit* the scene fade times, whilst at the same time fading the scene up and down and observing the fades on the channel S/A key LED indicators. This feature is especially useful when you are programming scenes prior to a show when no dimmers or fixtures are connected to the Axiom. To Live Edit a scene, press; <PREVIEW/EDIT>, <S/A> (Scene to be edited). This reveals the Preview Scene menu. Press [F5 TIMES] to 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 Scenemaster up and down and see the results of your edit.

Section 6: 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. The last step in a Chase may be a LINK to another chase. Up to 99 steps may be programmed for each chase and up to 816 (1500) separate chases may be programmed into the memory. You may enter a descriptive name for every Chase.

Chases may be programmed into two separate areas of memory. One area is used for the Softmasters and the other is used for the FX masters.

- Softmaster chases are stored by Bank and Softmaster number. There are 48 (60) banks of 16 (24) Softmasters. A Softmaster may contain a Scene or a Chase or it may be empty. The **contents** of each number in each bank is determined by what you **program** (or copy) into them. If a Bank/Softmaster number has been used for a Scene, then it cannot be used for a Chase. A Chase recorded in the same number would overwrite the Scene.
- FX master chases are stored by Red preset S/A numbers. Up to 48 (60) chases may be programmed for assignment and replay on the FX masters. FX masters allow instant hands on control of their assigned chases.

Chases may be copied between the two memory areas.

Up to 18 (26) simultaneous chases may be running on stage at the one time.

Chases may be 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.

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. Chase stepping may be synchronised to the bass beat of an audio input signal.

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. Any of the parameters may be changed and steps may be inserted or deleted.

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

PROGRAMMING A CHASE

CHASE PROGRAMMING - (RAPID METHOD)

To program a Chase on a Softmaster (in the "current" bank) or an FX master, with each step consisting of a snapshot of the output of the *Axiom*, press;

<PROGRAM>,

[F5 CHASE],

<S/A> (desired Softmaster or 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 reveal the chase on the output either;

if the chase was programmed on a Softmaster, fade up the Softmaster.

if the chase was programmed on a Red preset number, press <ASSIGN>, [F5 CHASE], <S/A>, (Chase number), <S/A> (FX master), then fade up the FX master.

CHASE PROGRAMMING (COMPLETE DESCRIPTION)

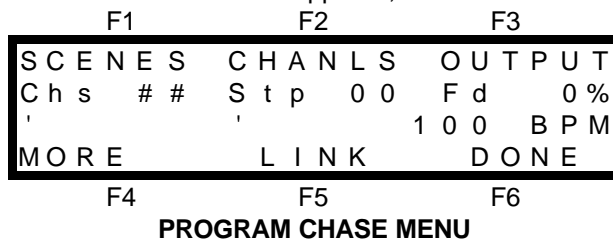
As you may program up to 816 (1500) separate chases you must give the chase a number.

Chases are stored by either;

- Bank and Chase number (B xx, C yy).
- Red preset S/A numbers

To program a Chase press; <PROGRAM>, [F5 CHASE].

All valid S/A keys will flash twice to show that they are possible number choices and then any *existing* chase numbers will continue to flash. Select the Bank (optional) then press the <S/A> key of the Chase number that you wish to Program. The PROGRAM CHASE MENU appears;



The Chase (Chs) number, current Step (Stp) number and the Fade (Fd) setting (0% by default) are shown.

Below the Chase number is the area for the Chase 'NAME' and beside the 'NAME ' is the chase rate (100 Beats Per Minute by default). You may alter the rate and fade settings and add a name 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 a [LINK] to another chase. 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 by pressing the appropriate function key.

Typical chases will usually consist of either a number of individual 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.

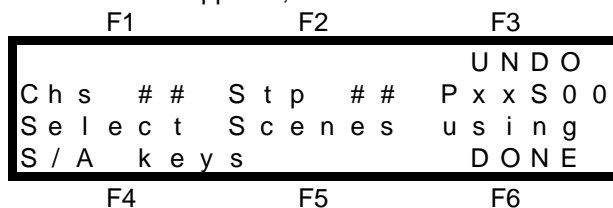
If, for example, you select CHANLS, then the Axiom will go into "Select Channel" mode allowing you to program your selected channels onto consecutive steps of the chase by simply pressing the channel S/A keys in the order that you want them to chase.

A Chase may consist entirely of individual channels or scenes or snapshots, or it may be a mixture of a few channels followed by some snapshots and then a scene and may end in a link to another chase. You determine the composition when you program or edit the chase. 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 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;



The Chase (Chs) number, current Step (Stp) number and the *current* Page (P) or Bank (B) and Scene (S) number are shown.

Press the scene number <S/A> keys in the order that you want them to chase and the steps are automatically created.

To select a scene from a bank or page other than the *current* bank or page, select that bank or page, then the scene number.

If you make an error you may step back 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 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).

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 programmed into the step. The select Channel menu appears;

	F1	F2	F3
			U N D O
C h s	# #	S t p	# # C h n # #
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, current Step (Stp) number and channel number are shown. You may now select the channels for each consecutive step.

Press the channel <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 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
			U N D O
P u s h -]]	R E C O R D		
T o r e c o r d	t h e	o u t p u t	
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. Continue to create and record steps as above. You may step back and erase each step in order by pressing; [F3 UNDO]. When all desired steps have been recorded, complete the chase by pressing [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 OTHER CHASE

The last step in a Chase may be 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 different 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 the last step in a chase, after programming the previous step, and selecting [F6 DONE], from the PROGRAM CHASE MENU press; [F5 LINK]. The LINK TO CHASE menu appears.

F1	F2	F3
A f t e r S t e p x x N O		
L I N K T O C H A S E 0 0 ?		
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 c h a s 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	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.

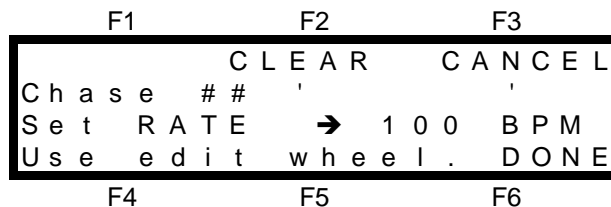
BOUNCE: The chase runs but automatically changes direction when it reaches the last or first step. In this manner, it continuously “bounces” from end to end. The indicators in the “>” (forward) key and the “<” (reverse) key indicate bounce mode as each only flashes (at the chase rate), when the chase 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 a chase is run on an FX master, you can simply change the Mode, Direction and State by using the four FX master keys as described in "MANUAL CONTROL", later in this section.

PROGRAMMING THE RATE

To program the RATE of the chase, select the MORE menu as indicated above, and then press; [F2RATE]. 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 is running.

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

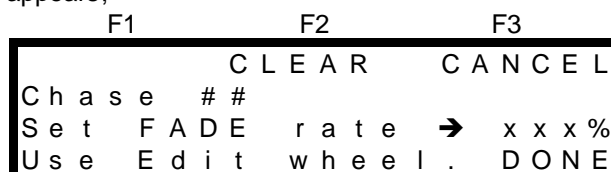
The transition from step to step may be a snap or a fade. The fade is programmed as a percentage of the chase rate.

For example, if the chase rate is set at 60 BPM (one step per second), then with Fade set at 0% 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;



F4

F5

F6

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].

REPLAYING A CHASE

Chases may be replayed on the softmasters or on the FX masters. Softmaster chases are automatically assigned when the Bank on which they were programmed is selected. FX master chases must be individually assigned.

PLAYING A CHASE ON A SOFTMASTER

The Softmaster fader controls the overall level of all HTP channels in the chase. The chase may be flashed with the SOLO key of the Softmaster. 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 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.

To control the chase you must PREVIEW/EDIT the chase. Press;

<PREVIEW/EDIT>, S/A (Softmaster), [F1 MORE], [F1 FLAGS] to set the mode or direction or [F2 RATE] and use the EDIT wheel to set the rate.

Hint; To quickly adjust the look of a Softmaster chase, copy it to an FX master for rapid access to most chase parameters then when it is running correctly, copy it back to the Softmaster.

PLAYING A CHASE ON AN FX MASTER

To assign a chase to an FX master press;

<ASSIGN>, [F5 CHASE], <S/A> (Chase number), <SOLO> (FX1 or FX2)

CONTROLLING A CHASE

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

You may control the direction, state and mode, simply pressing the correct key combinations as described below and you may manually control level and the rate. The key LEDs, together with the menu screens display extensive information about the chase.

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.

PROGRAMMED RATE

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.

MANUAL RATE

To manually control the Chase rate, match the rate setting of the FX Rate fader to the programmed rate by slowly move the FX Rate fader through its range until the RATE indicator lights. Manual control will be maintained, even if the current chase "links" to another chase. To change back to the programmed rate re-assign the chase to the FX master as described above.

Note; The manual rate that you set with the Rate fader may be "programmed" into memory via the PREVIEW/EDIT function described later in this section.

DIRECTION, STATE, MODE

PROGRAMMED SETTINGS


```

I 0 . 0 s O 0 . 0 s M E N U 4
F4           F5           F6
    
```

MENU 4 SHOWING A CHASE ASSIGNED TO FX2

The top line shows that this is the display for FX2 and indicates the 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".

Beside the *active* step contents is the chase rate in BPM. If the rate is controlled by the Rate fader, the letter M (Manual) follows the BPM value. Beside the *next* step contents is the percentage fade setting.

PREVIEWING A CHASE

You may preview the steps and programmed settings contained in a chase without revealing the chase on the output of the *Axiom*. There are two ways of previewing a chase on the *Axiom*. You may preview a chase that is stored in memory or you may preview a chase that is currently assigned to a master. Both methods are accessed from the PREVIEW / EDIT menu.

To preview a chase 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 CHASE IN MEMORY

After pressing the <PREVIEW/EDIT> key above, select; [F5 CHASE]. The screen will display the available memory and request that you choose a chase using the <S/A> keys. Press the <S/A> key of the Chase number that you wish to preview and the Chase Preview menu appears.

```

F1           F2           F3
M O R E   E D I T
C h S # # ' ' F d x x x %
S t p # # C h # # B P M x x x
←           →           D O N E
F4           F5           F6
    
```

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. The contents of the step will also be displayed on the Video monitor. When you have finished previewing the chase you may either press; <PREVIEW/EDIT> or [F6 DONE].

PREVIEWING AN ASSIGNED CHASE

You may directly preview a chase that is assigned to a Softmaster or an FX master. Press; <PREVIEW/EDIT>, <S/A> (Softmaster or FX master). Notice that when you preview an "assigned" chase that the step that you initially see is "current" step whereas previewing a chase in memory initially shows you the "first" step. All of the previewing functions are the same as previewing a chase in memory as described above.

EDITING A CHASE

There are two ways of editing a chase. You may edit a chase that is stored in memory or you may edit a chase that is currently assigned to a 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
C h 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
C h 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;

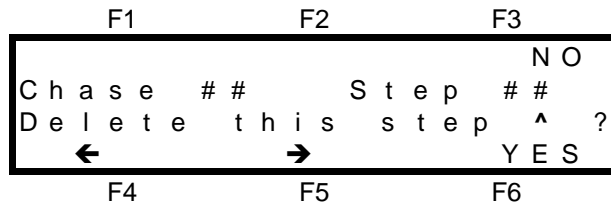
F1	F2	F3
S C E N E	C H A N L	O U T P U T
I n s e r t	w h i c h	a f t e r
S t e p # #	i n C h a s e # #	
	L I N K	D O N E

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).

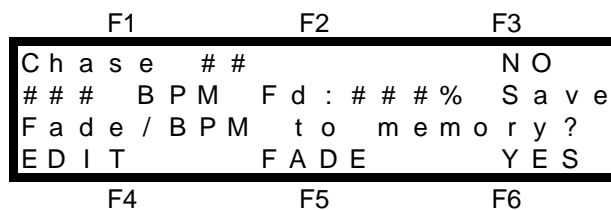
To modify a step in a chase, select the EDIT CHASE menu above, then step the chase to the step that you wish to modify and press; [F3 MODIFY]. The MODIFY function key only appears when the step that you select is a Scene or a Snapshot. If you wish to modify a step that is a single channel, delete the 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.

EDITING AN ASSIGNED CHASE (LIVE EDIT)

If a chase is assigned to an FX master or on the current bank of a Softmaster it may be directly edited on that master. To "Live Edit" a chase, press; <PREVIEW/EDIT>, <S/A> (Softmaster or 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 editing a chase LIVE over editing it in MEMORY is that you can see the the results of your actions live on stage. When you edit in memory, the channel S/A indicators and video monitor only show the static contents of each step. When you are happy with the way the chase is performing, 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 7: 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 E N E S	C H A N L S	O U T P U T
S t a c k	# #	S t e p 0 0
'	'	
N A M E	L I N K S	D O N 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
S t k # # S t p # #		C A N C E L
S e l e c t S c e n e s		P g e x x
S / A k e y s		u s i n g
F4	F5	F6

The Stack (Stk) number, current Step (Stp) number and the *current* Page (P) or Bank (B) 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 bank or page other than the *current* bank or page, select that bank or 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
F L A G		U N D O
"	" S t p # #	P x x S y 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

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) or Bank (B) 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 bank or page other than the *current* bank or page, select that bank or 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
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 or bank 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

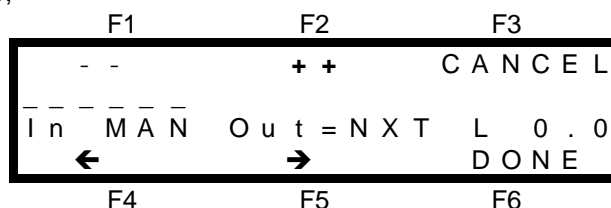
The OUT time will be =NXT.

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;



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 utilizing 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

Stacks

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
FX 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;

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
M O R E	E D I T	
S # #	P 1 S 1	" "
I n	M A N	O u t = N X T L 0 . 0
←	→	D O N E
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
I N S E R T	D E L E T E	M O D I F Y
S # #	P x S y	" "
I n	M A N	O u t = N X T L 0 . 0
←	→	D O N E
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
NO		
I n s e r t s t e p h e r e ?		
S t e p - # #		S t e p - # #
←	→	^
YES		
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
NO		
P x x S y y		
' ' S t e p # #		^
D e l e t e t h i s s t e p ?		
←	→	YES
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 A B E L	T I M E S	L 0 . 0
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
TOGGLE	REMOVE	CANCEL
Stk ##	St ##	Chn ## *TP
Level :	* * *	
- -	+ +	DONE
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 Softmaster or 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
	ERASE	CANCEL
Stack ##		
Stack Name =	'	'
NAME		DONE
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 8: PATCH

OVERVIEW

The patch allows you may patch (connect) dimmer outputs to desk channel numbers.

There are four patches stored in memory or the patch may be bypassed. A 1 to 1 patch may be automatically programmed into any patch and patches may also be copied or erased.

When the patch is bypassed, the dimmer outputs are directly connected to their matching channel numbers.

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 512 dimmer outputs.

- Any of the 512 dimmer outputs may be patched to any of the 96 (120) 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.

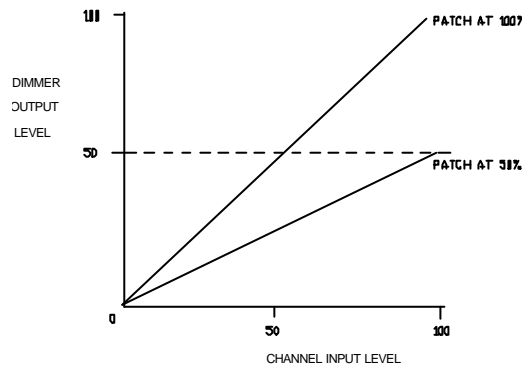
If the *Axiom* is "LOCKED", the current patch may be *previewed* but you cannot assign a different patch or bypass the current patch and editing or programming is not allowed.

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
P A T C H L E V E L M E N U		

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], [2 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 e	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 .

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

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 9: 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 or Softmaster 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 Softmaster, 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.

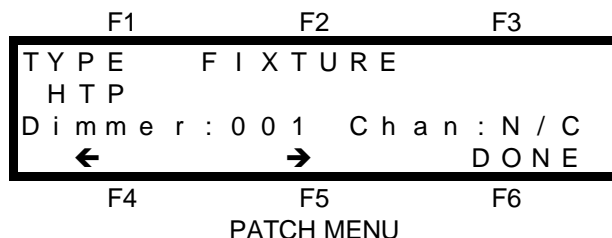
In both cases, you also need to patch the dimmer outputs to the channels that are to control them.

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

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	

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

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

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. See also "PALETTES" below.

PROGRAMMING SCENES

Scenes containing LTP channels are programmed in the normal way. Refer to the "SCENE" section for details. When programming a scene, only fixtures whose intensity (HTP) channel is above zero will have their movement channels included in the scene. 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 say 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, it is best to 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 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 the (Quick) "EDIT" function in MENU 1, or "PREVIEW/EDIT", "SCENE" 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 change channels by simply pressing the channel S/A key of the channel to be edited.

PALETTES

Palettes are scenes that only contain specific LTP channels, not the HTP and all LTP's with the same fixture number as in a normal scene. For example, a palette scene may hold only colour information and hence change all fixtures to a specific colour or another palette scene may change all fixtures to a specific gobo without affecting any other parameters. Palette scenes are used as "building blocks" when you are creating "looks" or for momentary "one off" effects.

They are created by "editing" a blank scene and adding only the required LTP channels. This technique *bypasses* the fixture numbers that group all LTP's with their HTP.

PROGRAMMING PALETTES

Program a scene with all fixtures focused side by side with an open white gate. Use this scene a "base" for all your palettes. Fade it up.

Fade up a *blank* (unused) scene then "Preview/Edit" this scene.

When you edit a channel you will take control of it live on stage.

In the "Preview/Edit" menu, select [F2 CHANS], <S/A> (channel to be controlled).

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 create many variations of the look by using palettes to change only colours or gobos etc and program each variation as a new scene.

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 or maybe a strobe effect using the fixtures shutter channel.

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.

Hint; Moving fixtures may rotate through angles up to 360°. Slow movement over long distances may appear jerky. This is because the maximum resolution of the DMX signal is 256 discrete levels making the minimum change in angle about 1.4° per step. If the fixture has a control channel for motor speed, you can use this to smooth out slow movements. Instead of setting the duration of the move with the LTP fade time, set the LTP fade time to 0 seconds and set the level of the motor speed channel to obtain the desired duration.

Refer to the "SCENES" and "STACKS" sections for more details on how LTP channels are played back.

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.

Chases are fully described in the "CHASES" section.

EDITING SCENES

If, when you fade up a scene, you find that the positional information for your moving fixture is not as you would like it, simply use the "QUICK EDIT" function to edit the levels. From MAIN MENU 1, press; [F1 EDIT], then press the <S/A> key of the channel you want to adjust and rotate the Edit Wheel to set the level. You can select different channels to adjust by pressing their <S/A> keys.

Refer to the "QUICK EDIT" section in the "SCENES" section for details.

Section 10: UTILITIES

The UTILITIES menu is available on MENU 2 and provides access to the following functions;

- MORE
- PRINT
- MIDI
- DISK
- PREFS (Preferences)

"PREFS" allows access to the following options;

- DBO
- PRESET
- LOCK
- TIMES (Default)

"MORE" allows access to the following options;

- ABOUT (Axiom info)
- RESET
- DIAGNOSTICS
- HELP (Language)
- UPGRADE (Software & Fixture library)

PRINT

The print function allows the memory contents of the *Axiom* to be printed or downloaded to a Computer.

CONNECTING A PARALLEL PRINTER

The *Axiom's* parallel printer port is not implemented in software version 0.9.

CONNECTING A SERIAL PRINTER

A serial printer may be connected to the *Axiom's* RS232C connector with a 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 may be connected to the serial port (COM port) of a computer with a 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; [F1 UTILS], [F2 PRINT]. The Print menu appears;

	F1	F2	F3
MORE	SCENES	CHASES	
Choose item to Print			
STACKS	PATCH	DONE	
	F4	F5	F6

Use the [F1 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;

	F1	F2	F3
--	++	CANCEL	
Item	# #	to # #	
←	→	PRINT	
	F4	F5	F6

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, 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

L.S.C. recommends using a word processor program to view 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.

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; [F1 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
  O F F / O N
  M i d i   i s   O F F .   C h a n   x x
  F i r s t   M I D I   n o t e   y y y
  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;

```

          F1          F2          F3
  S e l e c t   M I D I   c h a n n e l
  n u m b e r   →   x x   u s i n g
  E d i t   w h e e l .           S A V E
          F4          F5          F6
  
```

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; [F1 UTILS], [F4 DISK]. The Disk menu appears;

	F1	F2	F3
LOAD	SAVE	VERIFY	
Choose	Operation		
required	for	disk.	
PREFS	FORMAT	DONE	
	F4	F5	F6

DISK MENU

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. Software and fixture library upgrades are also loaded from disk and are described later in this section.

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.

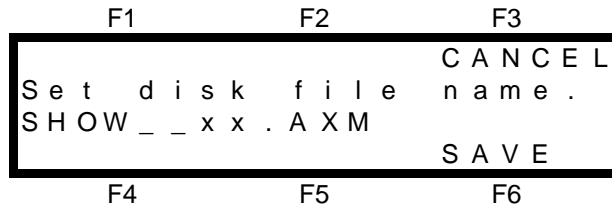
Formatting will erase all existing data on the disk.

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, Patches, Preferences. To save a show to disk select the DISK menu above and press; [F2 SAVE]. The SHOW NUMBER menu appears;



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

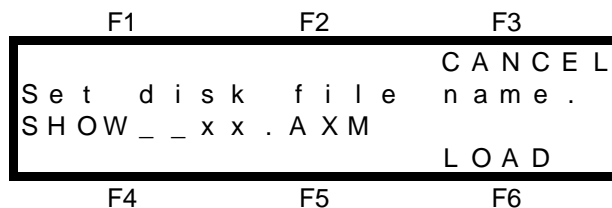
Prior to loading a show from disk or after saving a show to disk you may manually verify the disk file. Verifying a disk file causes the *Axiom* to check the integrity of the data on the disk.

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, 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 your preference for either load or save with either [F5 DISABLE] or [F3 ENABLE]. Press; [F6 DONE] when completed.

PREFERENCES

Preferences allows access to the following options;

- DBO
- PRESET
- LOCK
- TIMES (Default)

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
i	s		
C	L	A	S
I	N	V	E
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
U	s	e	
1	0		
-	-	-	-
			D
	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].

TIMES

Refer to "DEFAULT TIMES" in the "DESK OVERVIEW" section for details.

MORE

The MORE function in the UTILS menu accesses the following options;

- ABOUT (Axiom info)
- HELP (Language)
- RESET
- UPGRADE (Software)
- DIAGNOSTICS

ABOUT

The ABOUT screen gives details of the version number and date of the software in your Axiom. From menu 2, press; [F1 UTILS], [F1 MORE], [F1 ABOUT]. The [F6] function key becomes active, (it lights), and pressing it will display the number of channels available in both the Preset and WIDE Preset modes respectively and the memory capacity. To exit press the unlabelled but lit [F6] key. The ABOUT screen also appears momentarily when you switch on the Axiom.

ROM

The Axiom is a computer based lighting control console. In the unlikely event that the software may become faulty, the Axiom will detect an error and the screen will display a "Bad ROM checksum. ###" message when switched 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 and 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, MIDI setups, 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, edit wheels, memory, database and the disk. It also allows you to bypass any faulty faders by either jamming them fully ON or fully OFF. To access the diagnostics, from menu 2, press; [F1 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

DIAGNOSTIC MENU

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 F 4	&	F 6 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 0 0 0	Lo : 0 0 0	Now : 0 0 0
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 to assist in rectifying the problem. To dump the memory, insert a formatted disk in the disk drive and from the DIAGNOSTICS MENU above, press; [F3 MEMORY], [F1 DUMP].

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].

UPGRADE

L.S.C. Electronics 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 operating software of your *Axiom* and the fixture library are stored in "FLASH PROM" and may be simply upgraded from a floppy disk containing the new data.

The upgrade is contained in a single file called either "AX48Vxxx.PRG" or AX60Vxxx.PRG", where 48 or 60 defines the model of the *Axiom* and xxx defines the version of the software.

WARNING; Performing a software upgrade will ERASE all the programmed memory from the Axiom. All Scenes, Stacks, Chases, MIDI setups, Patches etc are erased.

To upgrade the software, insert the disk containing the upgrade file, then from menu 2, press; [F1 UTILS], [F1 MORE], [F5 UPGRADE]. The *Axiom* will check the integrity of the data on the disk then ask you if you wish to upgrade. When you select [F6 YES], the *Axiom* will ask you to confirm by pressing [F4 YES]. The upgrade takes several minutes to complete and the display indicates the progress. At the completion of the transfer of the data from the disk, switch the *Axiom* OFF, wait a few moments and then switch it back ON to commence operation with the new software.

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 b j e c t	# # #	
* * * * *	- E d i t	N a m e
←	→	D O N E
F4	F5	F6

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, the Red preset S/A keys or an external keyboard. 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

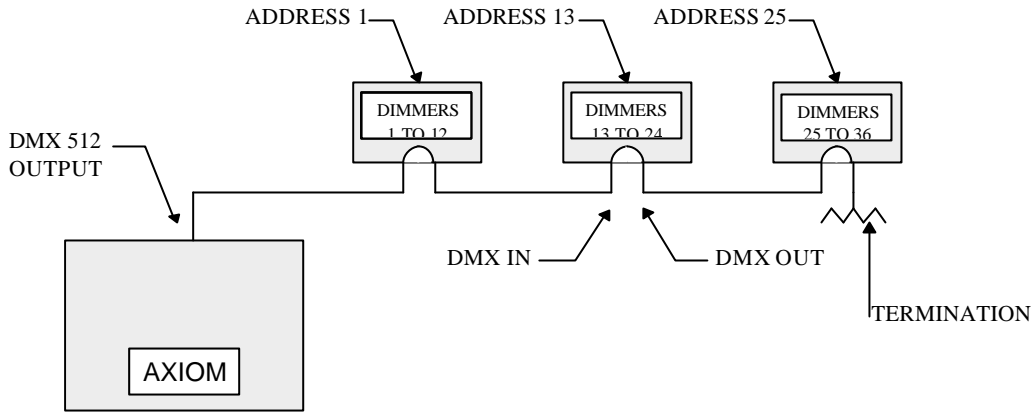
- Up to 512 channels of control on a single pair of wires.
- Up to 1,000 metres per cable run.
- Feeds are easily distributed via DMX512 splitters and/or DMX loop through.
- Multiple units may be set to the same address. For example,
 - By setting several dimmers to the same address, a number of dimmers 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

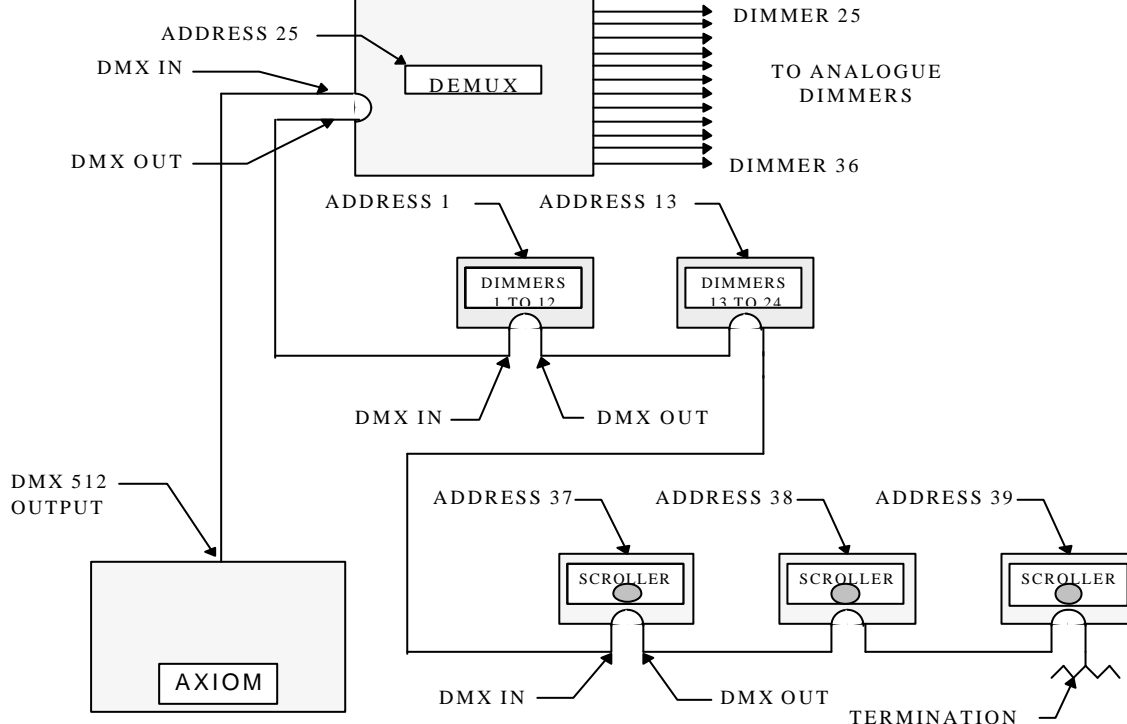
The *Axiom* has DMX512 as its standard output. However, if you are using older analogue dimmers, you may still control them by using a demultiplexer. A demultiplexer is a device that accepts a DMX512 input and produces analogue outputs to drive analogue equipment (dimmers). By using a demultiplexer with 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 setups 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. It also provides a Softmaster Presetmaster to control the overall level of all Softmasters (below).

SCENE

A Scene is a *programmed* group of channels (at their respective levels) plus "IN", "OUT" and "LTP" fade times and a descriptive name.

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.

SCENEMASTER

In "Scene Mode", the red bank of faders become scene masters. A Scenemaster provides a means of controlling the level of a scene.

SOFTMASTER

A Submaster provides a means of controlling the level of a scene or a chase.

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.

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