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ILLUSION 120/240 OPERATING MANUAL



zero[®]88





ILLUSION 120/240 OPERATING MANUAL

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

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

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

Issue 2 - November 2000

Manual Stock No. 73 - 740 - 00
Software Version 4.0
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Figure 1 - 1: The Illusion Lighting Desk

This Manual

This manual describes the operation and programming of the Illusion 120 and Illusion 240 lighting desks.

The operating software and functionality of the two desks is the same. Where the Illusion 240 differs from the Illusion 120, this will be indicated in parentheses, eg The Illusion lighting desk has 120 (240) channels of control.

This chapter contains a general overview of the desk followed by a brief description of the front panel controls and displays, and details of layout and content of the monitor screen.

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

For a more detailed description of each of the desk functions (setup, memories, submasters, cue line etc.) refer to the appropriate chapter(s) in the manual.

The manual concludes with chapters on the Super User functions, other features and the technical specification of the desk.

Conventions

Throughout this manual the following conventions are used.

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

GRAND MASTER, GO, PAUSE.

Data entry via the numeric keypad and associated keys is shown in bold type, for example:

1 @ 50 ENTER

Options and fields which appear on the monitor screen are shown in italics, for example:

Floppy Disk, Illumination, Desk Setup.

The colours specified in this manual for various items displayed on the monitor screen refer to those defined in the *Normal* display scheme.

If a different display scheme is selected, the colours displayed on the monitor may be different to those specified in this manual.

Introduction

The Illusion Lighting Desk

This section provides a summary of the Illusion 120/Illusion 240 lighting desk, highlighting its main functions.

Graphical Interface

All setup, programming and playback information is displayed graphically on the monitor screen. Continuous on-screen help is provided at the bottom of the screen.

Function keys on the front panel enable quick and direct access to the main setup, programming, playback and information screens.

Channels

The Illusion Lighting desk has 120 (240) channels of control.

Each channel can be named and set up to operate as either a Brightness, Attribute or Scroller channel.

The desk is therefore capable of handling generics, scrollers and intelligent fixtures.

Desk channels can be patched to one or more DMX channels (1 - 512). Brightness channels can be patched proportionally, if required.

Channels can be excluded from memory data, if required. This allows data for particular channels to be loaded directly onto submasters (eg. house lights, orchestra lights etc.) These channels are not affected by outputting memory data via the Playback X, Playback A/B or submasters.

A channel may be associated with another channel (eg. lamp and scroller) allowing ease of fixture programming.

Channel data for memories and submasters is programmed, edited and previewed from the Channel Data Window (CDW).

Channel selection is via the numeric keypad on the front panel or the mouse. Groups of channels can be defined in *Desk Setup*. Data values can be set using the data input wheel, numeric keypad or external keyboard.

Memories

Memories can be recorded as scenes, multi-part scenes, chases, sound to light or ripplesound. In multi-part scenes, specified channels and transition times can be programmed in each part.

Chase, Sound to Light and Ripplesound memories have their own modifiers (Direction, Attack, Drive, and Speed).

Memories can be created, modified or deleted from either the *Memories* or *Cueline* screens.

Tracking

If Tracking is enabled, only changes made to the channel data are recorded into the memories. Otherwise all channel values are recorded into the memory.

Memory Stack

The Memory Stack is made up of all the programmed memories. Jumps and loops can be programmed into the Memory Stack, if required.

Cueline

The *Cueline* screen provides a graphical representation of the Memory Stack.

Playback X

Playback X provides a simple method of playing back the memory stack using the GO button. There are also MASTER, PAUSE, OVERRIDE and GO PREVIOUS controls.

Playback A/B

Playback A/B allows memories to be loaded manually or automatically onto the A and B MASTERS and then faded in/out manually or timed.

Submasters

There are 108 (240) submasters, divided into 9 (20) pages of 12 which can be loaded with channel data or memories.

Each submaster has its own fade times, trigger levels and modifiers (where applicable).

The submasters can be used when programming memories and for playing back channel data and memories.

One page is always active, which is indicated by the display on the front panel. Page Overlay is provided to allow submasters from different pages to be used at the same time.

Other Functions

There are 4 AUXILIARY CONTROL buttons which can be programmed and patched to DMX channels.

There are 10 (50) macros available which can be programmed with a series of button pushes.

Up to 6 remote switches may be assigned to certain front panel buttons or macros.

Super User

Super User functions are provided for clearing memories, submasters and show data, renumbering memories, resetting the desk and locking the desk to prevent unauthorised editing of desk setup and show data.

Desk Output

The 120 (240) desk channels are output via DMX 512. The desk channels can be patched to any DMX channels between 1 - 512.

Peripherals

The desk has a floppy disk drive to enable desk setup and show data to be saved and loaded. Software upgrades will also be performed via floppy disk.

Various desk setup and show data reports can be printed out via the parallel port.

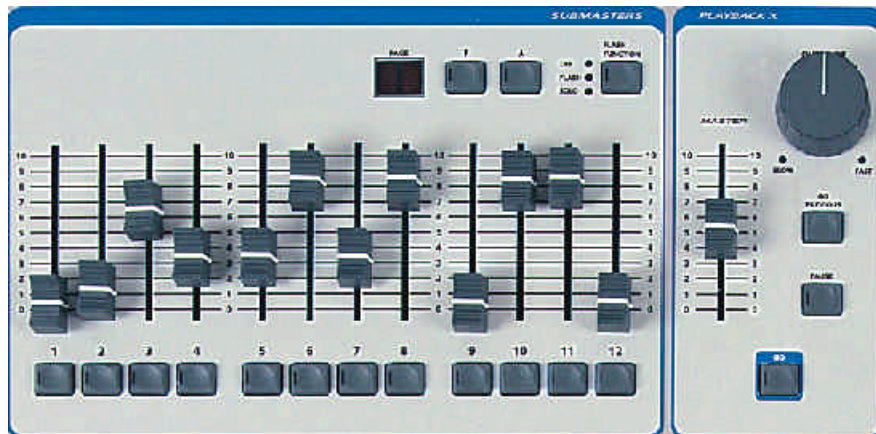


Figure 1 - 2: Submaster and Playback X Controls

Front Panel Controls and Displays

This section provides a brief description of the controls and displays on the front panel of the desk.

The front panel controls have been divided into the following sections:

- Submaster Controls
- Playback X Controls
- Memory Controls
- Effects Controls
- Playback A/B Controls
- Other Controls

Submaster Controls

• SUBMASTER FADERS

The 12 SUBMASTER FADERS control the output levels of the channel data or memory data loaded onto them.

• SUBMASTER FLASH BUTTONS

The 12 SUBMASTER FLASH BUTTONS are used to flash or solo the channel data or memory data on the submaster to the level of the GRAND MASTER. The action of the buttons is determined by the FLASH FUNCTION button.

The SUBMASTER FLASH BUTTONS can also be used to start and stop a chase, when applicable.

Each button has a yellow light in it which is used to indicate page overlay.

• FLASH FUNCTION BUTTON

This button determines the function of the SUBMASTER FLASH BUTTONS. The accompanying red lights show the function selected - OFF, FLASH, SOLO or 'Go' (FLASH and SOLO lit).

• SUBMASTER PAGE UP/DOWN

The submaster PAGE UP and PAGE DOWN buttons are used to select the current Submaster page, 1-9 (1-20).

• PAGE DISPLAY

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

Playback X Controls

• MASTER FADER

The MASTER fader controls the maximum output level of the brightness channels in the memories on the memory stack. Attribute and scroller channels are not affected by the MASTER fader.

• GO BUTTON

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

• GO PREVIOUS BUTTON

This button initiates a crossfade between the memory currently being output and the previously output memory from the memory stack.

• PAUSE BUTTON

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

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

• OVERRIDE CONTROL

This control is used to slow down or speed up progression through the memory stack. When the control is moved away from the central neutral position the red SLOW or FAST light flashes accordingly.

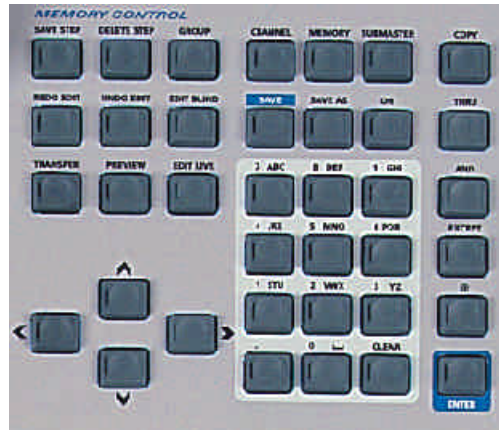


Figure 1 - 3: Memory Controls

Memory Controls

- **TRANSFER BUTTON**

This button is used to transfer a memory onto a submaster. It is applicable when the Memories, Cueline or Submaster screen are displayed on the monitor screen.

- **PREVIEW BUTTON**

This button allows the user to preview the channel data for a selected memory or submaster on the monitor screen. While the channel data is being previewed, the red light in the PREVIEW button is illuminated.

- **EDIT LIVE BUTTON**

This button brings up the Channel Data Window allowing the user to edit live the channel data for the selected memory or submaster. While the channel data is being edited live, the red light in the EDIT LIVE button is illuminated.

- **EDIT BLIND BUTTON**

This button brings up the Channel Data Window allowing the user to edit blind the channel data for the selected memory or submaster. While the data is being edited blind, the red light in the EDIT BLIND button is illuminated.

- **UNDO EDIT BUTTON**

This button allows the user to systematically undo edits made to channel data in the Channel Data window. Each time the button is pressed the last edit is undone.

- **REDO EDIT BUTTON**

This button undoes an UNDO EDIT, ie. reverses the action of the UNDO EDIT button.

- **SAVE STEP BUTTON**

This button is used to save the current step when programming a chase, sound to light or ripplesound memory.

- **DELETE STEP BUTTON**

This button is used to delete a step from a chase memory.

- **GROUP BUTTON**

This button is used in conjunction with the numeric keypad to select a pre-defined group of channels.

- **CURSOR BUTTONS**

These four buttons are used to move around the fields on the monitor screen. These buttons are equivalent to the cursor keys on the external keyboard.

- **CHANNEL BUTTON**

This button is used to open the Channel Data Window for programming purposes. This button can also be used in conjunction with the numeric keypad to select channel numbers, where applicable.

- **MEMORY BUTTON**

This button is used in conjunction with the numeric keypad to select a memory number.

- **SUBMASTER BUTTON**

This button is used in conjunction with the numeric keypad to select a submaster number.

- **COPY BUTTON**

This button allows the user to copy memory data or submaster data from one location to another.

- **SAVE BUTTON**

This button is used to save memory or submaster data to the currently selected memory or submaster. The action is dependent on the currently active screen.

- **SAVE AS BUTTON**

This button is used to save the channel data to a different memory or submaster from that currently selected. The action is dependent on the currently active screen.

- **ON, THRU, AND, EXCEPT, '@' BUTTONS**

These buttons are used in conjunction with the numeric keypad to select combinations of channels and set their values. The value of the ON button can be defined by the user in Setup.

The '/', '+', '-' and '*' buttons on the external keyboard can be used to mimic the THRU, AND, EXCEPT and '@' buttons on the front panel respectively.

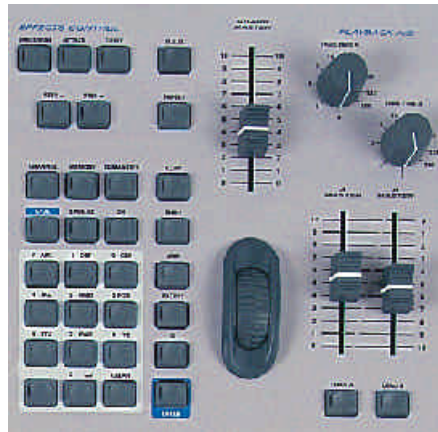


Figure 1 - 4 : Effects Controls, Numeric Keypad and Playback A/B

• NUMERIC KEYPAD

The numeric keypad consists of twelve buttons labelled '0' .. '9', '.' and CLEAR. These buttons are used for entering numeric data (channel number, group number, memory number, submaster number, data levels etc..).

The buttons labelled '0' - '9' can also be used to enter alphanumeric data where applicable (see chapter 11 for further details).

The CLEAR button is used to deselect selected channels, or unprogram programmed channels (where applicable).

• ENTER BUTTON

This button is used to confirm setup or programming data. The Enter or Carriage Return buttons on the external keyboard can be used to mimic the ENTER button on the front panel.

Effects Controls

• DIRECTION BUTTON

This button is used to select the direction of a chase memory.

• ATTACK BUTTON

This button is used to select the attack of a chase, sound to light or ripplesound memory.

• DRIVE BUTTON

This button is used to select the drive of a chase memory.

• STEP - AND STEP + BUTTONS

These buttons are used to select a required step when programming or editing a chase, sound to light or ripplesound memory. These buttons can also be used to manually step through a chase being output.

Playback A/B Controls

• PLAYBACK A/B MASTER FADERS

The A MASTER and B MASTER faders control the output levels of the memories loaded onto them. The B MASTER fader is reversed (100% at the bottom of its travel) to facilitate manual crossfades when moving the A MASTER and B MASTER faders.

• LOAD A AND LOAD B BUTTONS

The LOAD A and LOAD B buttons are used to load a selected memory onto the A MASTER and B MASTER faders respectively.

• FADE TIME A AND FADE TIME B

The FADE TIME A and FADE TIME B controls are used to set the fade times for the A MASTER and B MASTER faders respectively. The two times can be set independently from 0 (manual) to 180 seconds.

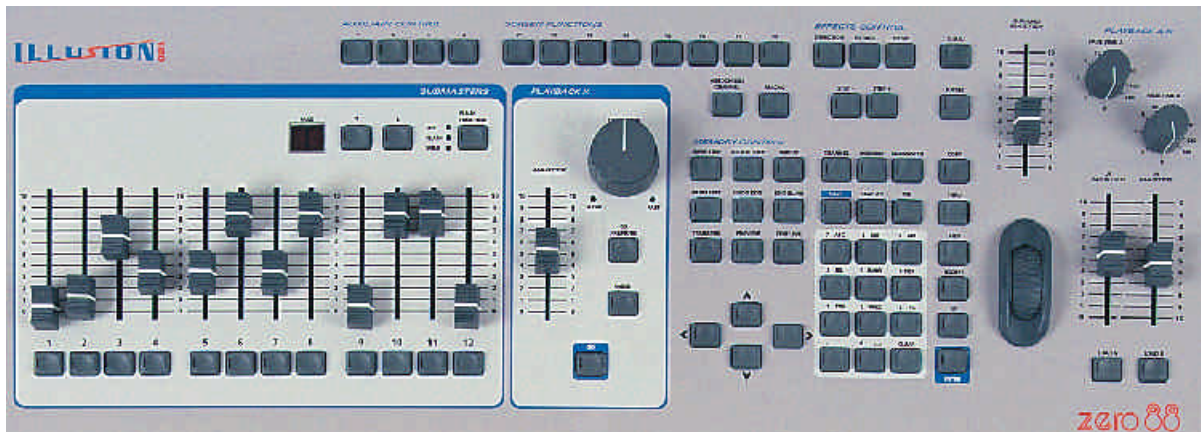


Figure 1 - 5: Illusion Front Panel

Other Controls

- **AUXILIARY CONTROL BUTTONS**

These four buttons are used to activate the auxiliary controls.

Each AUXILIARY CONTROL button contains a red light which indicates the state of the corresponding auxiliary output (on, off or fading).

- **SCREEN FUNCTIONS BUTTONS**

These buttons (labelled F1-F8) are used to access the main setup, programming, playback and information screens. They can also be used to select specific functions as indicated on the monitor display.

- **ASSOCIATED CHANNEL BUTTON**

This button is used to switch between selected channels and their associated channels in the Channel Data Window.

- **MACRO BUTTON**

This button is used in conjunction with other front panel buttons to define and run macros.

- **DBO BUTTON**

The DBO (Dead Black Out) button controls the desk outputs of the brightness channels.

Pressing the DBO button toggles between DBO active (all brightness channels at zero) and DBO not active (normal desk outputs).

The red light in the DBO button flashes when DBO is active. Attribute and scroller channels are not affected by the DBO button

- **TOPSET BUTTON**

This button brings up the Topset screen on the monitor allowing the user to adjust the Topset values of brightness channels.

- **GRAND MASTER FADER**

The GRAND MASTER fader is used to control the maximum brightness channel output levels from the desk. Attribute and scroller channels are not affected by the GRAND MASTER fader.

- **DATA INPUT WHEEL**

The wheel is used to adjust channel levels, times etc. The data item(s) being adjusted is indicated on the monitor display.

NOTE

Function Keys on keyboard

The function keys F1 - F8 on the external keyboard can be used to mimic the screen selection buttons F1 - F8 on the front panel.

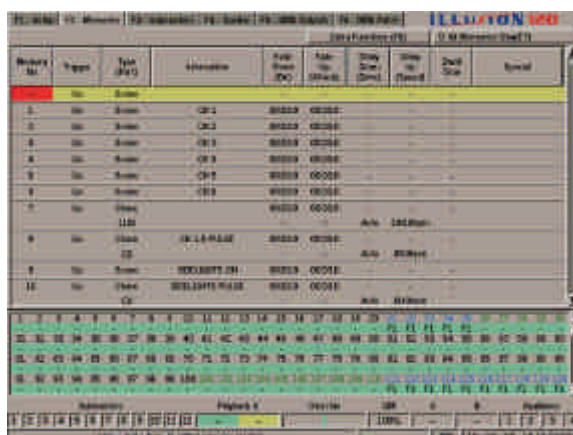


Figure 1 - 6: Memories Screen

The Monitor Screen

The monitor screen is divided horizontally into a number of different sections which are described below.

The Illusion 120 or Illusion 240 logo is displayed in the top right hand corner of the screen to indicate which version of software is running in the desk.

Screen Selection Buttons

The top section of the monitor screen contains the screen selection buttons which are labelled *F1 - F6*.

Clicking on one of these buttons, or pressing the corresponding SCREEN FUNCTION button, or function key on the external keyboard, displays the selected screen in the main data area of the monitor screen.

Main Data Area

The centre section of the monitor screen shows information which is dependent on the currently selected screen (Setup, Memories etc.)

Channel Data Display (CDD)

This area of the screen can be adjusted in Desk Setup (see chapter 3) or on-screen using the mouse.

The CDD shows the output values of the 120 (240) desk channels in a numerical format.

The channel numbers are displayed on a grey background. The text colour of the channel number indicates the channel type as follows:

Brightness Channels	Black
Attribute Channels	Green
Scroller Channels	Blue.

The output values of the channels are displayed on a green background.

An output value of zero is displayed as “-” rather than “0”.

For scroller channels, if the output value is an exact frame value it is displayed as “Fn”, otherwise the actual percentage or DMX value is displayed.

Output values of topsetted channels are displayed in red text, rather than the normal black.

Fade Status Bar

The Fade Status Bar displays status information on the Submasters, Playback X, Override, Grand Master, Playback A/B and Auxiliaries.

The *Submasters* are shown in grey when zero, red when fading, and green when above zero. When the submaster is outputting data from a different page (overlaid), the background is orange.

The *Playback X* area shows the current (green) and next (yellow) memories in the memory stack. When a fade is taking place a red bar moves across the whole area.

The *Override* field indicates the position of the OVERRIDE control (neutral = green line, fast or slow = red bar).

When the desk is in SMPTE or MIDI Time modes, the *Override* field is replaced by the *Timecode* field (see chapter 5 for details).

The *Grand Master* field indicates the position of the GRAND MASTER fader. When DBO is active a red flashing “DBO” is displayed in this field.

The *Playback A/B* fields indicate which memories (if any) are loaded onto the A MASTER and B MASTER faders. The backgrounds are grey when the master is at zero, red when fading, and green when above zero.

The *Auxiliaries* are grey when off, red when fading, and green when on.

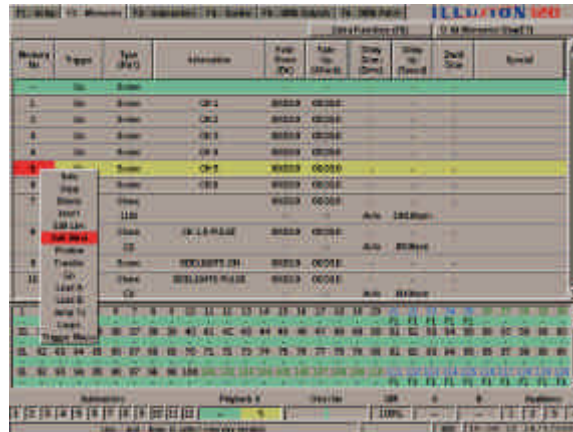


Figure 1 - 7: Memories Screen showing Drop Down Menu

Information Bar

The Information Bar contains operating help text, tracking, topset and lock indicators, memory meter and clock.

The operating help text relates to the current position of the cursor on the main screen or popup window displayed on the monitor.

When Tracking is enabled, "TRK" is displayed in the Information Bar.

When Topset has been adjusted, "TOP" is displayed in the Information Bar.

When the desk is locked, a padlock icon is displayed in the Information Bar.

The Memory Meter indicates the number of memory blocks left (see chapter 5 for further details).

The clock field shows the current time and date. The time is in 24 hour format and the date in dd/mm/yy format.

Mouse Interface

A mouse interface is available for use on all the monitor screens (Setup, Memories etc.)

The mouse must be plugged in before the desk is switched on.

Activating screen buttons and selecting fields in data tables can be achieved using the mouse pointer and left mouse button.

On fields where several options are available (eg. memory type, direction etc.) left clicking in the field will scroll through the available options.

Where appropriate, right clicking on a selected item or window will bring up a menu of options.

This allows certain functions (eg. programming memories) to be done entirely using the mouse and external keyboard, if preferred. See the relevant chapters for further details.

Remote Switches

The Remote Switches socket on the back panel of the desk allows up to six remote switches be connected to the desk.

Each of these remote switches can be assigned to a front panel button or macro.

Remote switches can only be assigned to certain front panel buttons and cannot be assigned to faders or rotary controls.

For details on setting up, assigning, enabling and testing remote switches see chapter 3 .

Pressing a remote switch which is assigned to a front panel button will have the same effect as pressing the front panel button.

Pressing a remote switch which is assigned to a macro will have the same effect as running that macro.

NOTE

Selecting Soft Buttons from the Front Panel

Where soft buttons are displayed (without corresponding front panel button), use the cursor keys to select the required soft button, then press the ENTER key to activate it.



Figure 2 - 1: The Illusion Lighting Desk

Getting Started

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

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

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

Finally it gives a summary of how memories can be edited and played back from the Cueline screen.

Before starting a new lighting session it may be necessary to clear an existing show or reset the desk. If this is the case refer to chapter 10 Super User for further details.

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



Figure 2 - 2: Channel Data Window (Graphical Format)

Turning on the Desk

1. Connect the DMX cable, monitor, keyboard and mouse to the desk.
2. Connect the power supply to the desk and switch on at the mains.
3. Ensure that DBO is not active (the red light in the DBO button is off).
4. Set the Playback X MASTER and GRAND MASTER faders to full.
5. Set all SUBMASTER faders to zero.
6. Press the SCREEN FUNCTION BUTTON F2 to display the Memories screen (if not already on display).
7. Press the CHANNEL button on the front panel. The Channel Data Window (CDW) is displayed on the monitor.
8. Set the channels to the required value(s) as described in the following section. The values are output live on the DMX.

Setting Channel Levels

There are several methods of selecting channels and setting their levels as described below.

Using the numeric keypad and associated keys to select channel(s) and set their levels:

1 @ 50 ENTER

5 THRU 10 @ 70 ENTER

23 AND 33 AND 44 @ 90 ENTER

1 THRU 10 EXCEPT 7 ON

Using the wheel to continually adjust the level(s) of the selected channels:

1 <wheel>

5 THRU 10 <wheel>

20 AND 30 <wheel>

The mouse can also be used to select channels by left clicking on the channel number in the CDW (selected channels are shown in red).

If the channel data is shown in bar graph format, left clicking in the bar graph area will set the level of the channel.

Recording Channel Data

The next sections explain how to save the channel data in the CDW into a memory and onto a submaster.

Recording a Scene into a Memory

1. Set up a scene on the outputs as described in the previous sections.
2. Press the SAVE AS button on the front panel. The Save As window is displayed.
3. Enter the required memory number in the field provided, then select ENTER or click on the OK button in the window.

Recording a Scene onto a Submaster

1. Set up a scene on the outputs as described in previous sections.
2. Press the SAVE AS button on the front panel. The Save As window is displayed.
3. Select the Submaster option with the cursor keys or the mouse. Enter the submaster number, then select ENTER or click on the OK button in the window.

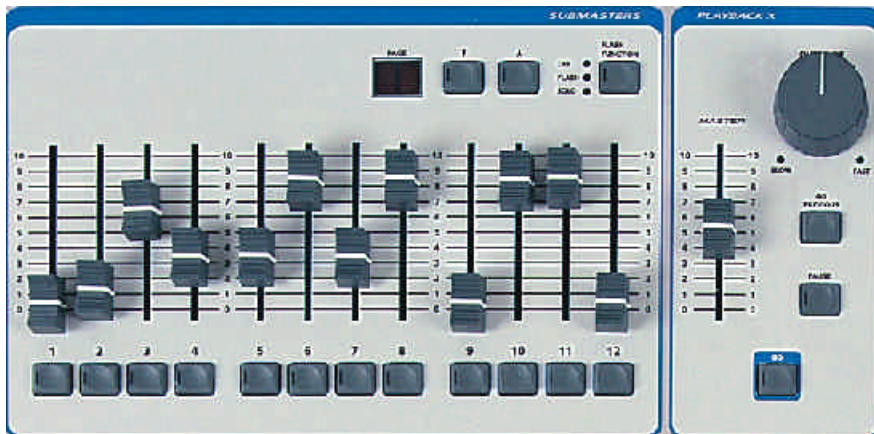


Figure 2 - 3: Submaster and Playback X Controls

Playing Back the Memories

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

Replaying the Memory Stack

1. If not already selected, press SCREEN FUNCTION button F2 to display the Memories screen.
2. Set the Playback X MASTER and the GRAND MASTER to full.
3. Select memory 1 using the cursor keys or the mouse. A yellow highlight bar is displayed on the selected memory.
4. Press the GO button. The outputs will fade from their current levels to those programmed into memory 1, using the transition times for memory 1. The highlight bar moves to the next programmed memory automatically.
5. To output the next programmed memory, press the GO button again.
6. Repeat step 5 until the end of the memory stack is reached. Pressing the GO button again will then return to memory 1.

Playback Using Submasters

The Submasters can be used to playback loaded channel data (see earlier) or transferred memories.

Transferring a Memory onto a Submaster

1. Select a programmed memory, using the cursor keys or mouse.
2. Press the TRANSFER button on the front panel, or right click and select the Transfer option from the menu. A Transfer window is displayed showing the memory number, a submaster number and its associated parameters.
3. Enter the required submaster page and number in the field provided.
4. Adjust the other submaster parameters, if required.
5. Select the OK button in the Transfer Window to complete the transfer operation.

Outputting Data from a Submaster

The channel data or memory loaded onto a submaster is output as follows:

1. Select the required submaster page using the PAGE UP or PAGE DOWN buttons as appropriate.
2. Move the appropriate submaster fader to the level required.

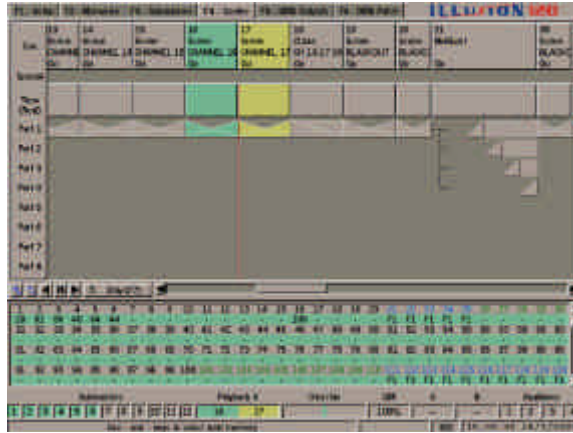


Figure 2 - 4 Cueline Screen

The Cueline Screen

The Cueline screen shows a graphical representation of the Memory Stack, and represents the same data displayed on the Memories screen.

Programming and editing memory data and running the Memory Stack can be done from the Cueline screen, if preferred.

Any changes made to memory data or the memory stack on the Cueline screen are reflected in the Memories screen and vice versa.

Press the SCREEN FUNCTION BUTTON F4 to display the Cueline screen on the monitor.

Editing Transition and Dwell Times

The transition and dwell times of a cue/memory are easily adjusted from the Cueline screen.

1. Ensure that the Cueline screen is in Stay mode, using F7, if necessary.
2. Select a cue (memory) using the cursor keys or the mouse. Five handles, shown as red boxes, are displayed in Track 1.
3. To adjust the delay, fade or dwell time - left click on the appropriate red square, hold the mouse button down, and drag the handle forwards or backwards to the required time (shown next to the handle). Release the mouse button.

Editing Channel Data

The channel data for a cue (memory) can also be edited from the Cueline screen.

1. Select the cue to be edited using the cursor keys or mouse.
2. Position the mouse pointer on Part 1. Right click and select the Edit Live or Edit Blind option from the menu. The Channel Data Window is displayed on the screen.
3. Adjust the channel data levels, as required. Press the SAVE button to commit the changes to the memory.

Running the Show from the Cueline Screen

The Memory Stack can also be played back from the Cueline screen using the Playback X controls on the front panel or the soft buttons on the Cueline screen.

1. If not already selected, press SCREEN FUNCTION button F4 to display the Cueline screen.
2. Set the Playback X MASTER and the GRAND MASTER to full.
3. Select memory 1 using the cursor keys or the mouse. A yellow highlight column is displayed on the selected memory.
4. Press the GO button. The outputs will fade from their current levels to those programmed into memory 1, using the transition times for memory 1. The highlight bar moves to the next programmed memory automatically. The CUELINE (red vertical line) moves across the screen showing the progress of the fade.
5. To output the next programmed memory, press the GO button again.
6. Repeat step 5 until the end of the memory stack is reached. Pressing the GO button again will then return to memory 1.

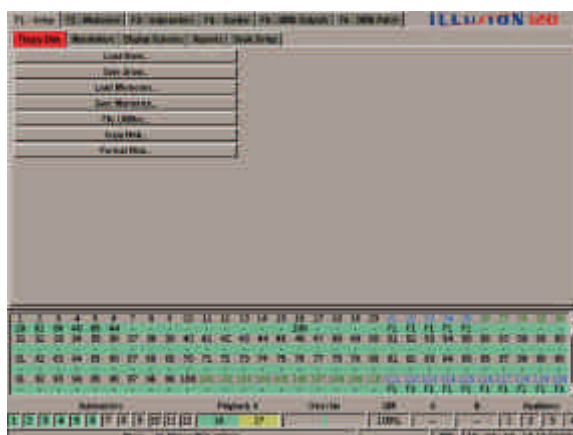


Figure 3 - 1: Setup Screen

Setup Options

Press the SCREEN FUNCTION button F1 or select the *Setup* screen selection button using the mouse. The *Setup* screen is displayed containing the following options:

- Floppy Disk
Used for loading and saving show data and memory data to floppy disk, file utilities, copying and formatting disks.
- Illumination
Used for setting the desk lamp brightness.
- Display Scheme
Used for setting the preferred display scheme on the monitor.
- Reports
Used for generating, printing and saving various reports on desk setup and show data.
- Desk Setup
Used for setting up desk defaults (fade times, trigger levels etc), assigning channels, DMX patching, and setting up auxiliary controls and remote switches.

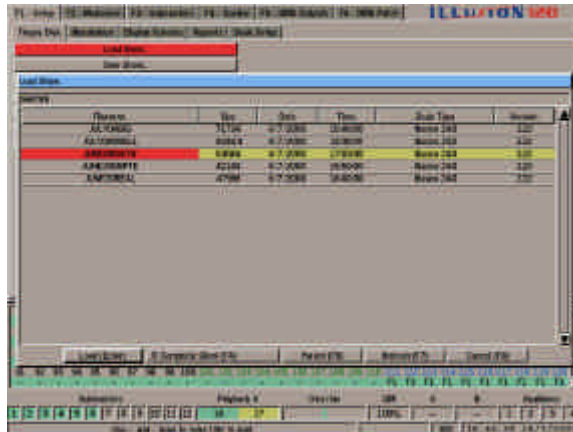


Figure 3 - 2: Load Show Window

Floppy Disk Functions

The following sections describe the various options available under the *Floppy Disk* tab.

Loading and Saving Shows

When a show is loaded from floppy disk, all existing show data on the desk (setup, memories, submasters etc.) is automatically cleared before the new show data is loaded.

When loading or saving a show to floppy disk the following options are available:

Desk Setup Only
Desk Setup & Memories
Desk Setup & Submasters
Complete Show

To choose one of these options, use the soft button in the *Load Show* or *Save Show* window, or F4 on the front panel or keyboard, before loading or saving the show.

An Illusion 120 showfile will load onto an Illusion 240 desk with no changes to the show data.

An Illusion 240 showfile will load onto an Illusion 120 desk, but only the data for channels 1-120, submaster pages 1-9, groups 1-20 and macros 0-9 will be loaded.

Load Show from Disk

1. Select *Floppy Disk* from the Setup options.
2. Insert a floppy disk containing the saved show into the disk drive.
3. Select *Load Show*, and press ENTER. There is a slight delay while the disk is being read.
4. The *Load Show* window is displayed on the monitor screen, and contains a list of showfiles found in the top directory plus any other directories.
5. Select the required load option (using F4). Use the cursor keys or the mouse to select the required showfile from the disk, then press ENTER, or click on the *Load* button in the window.
6. A progress window is displayed while the show is being loaded. When the loading is complete, click on the *OK* button to close the window.

Save Show to Disk

1. Select *Floppy Disk* from the Setup options.
2. Insert a DOS formatted 3.5" 1.44 MB floppy disk into the disk drive.
3. Select *Save Show*, and press ENTER. There is a slight delay while the disk is being read.
4. The *Save Show* window is displayed. Select the required save option (using F4). Select an existing show and press ENTER, or just press ENTER to move to the *Filename* field.
5. Modify the filename, if required, and then press ENTER to save the show to disk.
6. If the file already exists in the selected directory, a warning is displayed. Select *Overwrite* to overwrite the existing file, or *Cancel* to abandon the operation.
7. A progress window is displayed while the show is being saved. When the operation is complete, click on the *OK* button to close the window.

NOTES

Load/Save Show Windows

Filenames are sorted alphabetically.

The selected show is indicated by a yellow highlight bar.

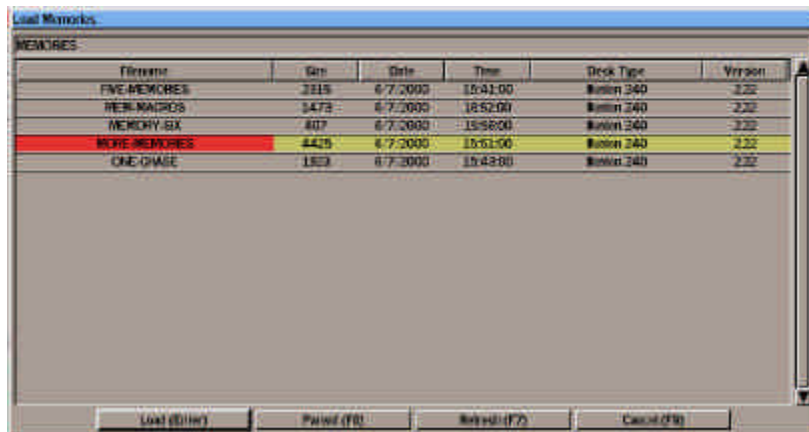


Figure 3 - 3: Load Memories Window

Loading and Saving Memories

The Illusion desk provides the facility to save and load individual memories to floppy disk.

This makes it possible to maintain a library of useful memories for a given lighting installation, without having to save the complete show each time.

Individual memories can be added into a show being created on the desk. The memory data is loaded into a specified destination and the channel data is treated according to the current setup on the desk.

User confirmation is required before overwriting existing programmed memories on the desk.

Memories can be loaded from a normal showfile or a file containing memory data only.

Loading Memories

1. Select *Floppy Disk* from the Setup options. Insert a floppy disk containing the memory data file into the floppy disk drive.
2. Select *Load Memories* and press ENTER. There is a slight delay while the disk is being read. The *Load Memories* Window is displayed containing a list of files and directories found on the disk.
3. Use the cursor keys or the mouse to select the required file, then press ENTER or click on the *Load* button in the window. A popup window is displayed. There is a slight delay while the file is read.
4. Use the cursor keys or mouse to select the required memory to be loaded. Move to the *Load As Memory* column and enter the required destination memory number.
5. Repeat step 4 for each memory to be loaded.
6. Press F7 or click on the OK button in the window. A popup window is displayed showing progress. When loading is complete, press ENTER or click on the OK button in the window.

Saving Memories

1. Select *Floppy Disk* from the Setup options. Insert a DOS formatted 3.5" 1.44 Mb floppy disk into the floppy disk drive.
2. Select *Save Memories* and press ENTER. There is a slight delay while the disk is being read. The *Save Memories* Window is displayed containing a list of files and directories found on the disk.
3. Use the cursor keys or mouse to select a file, then press ENTER to move to the *Filename* field.
4. Modify the filename, if required then click on the *Save* button in the window or press ENTER. A popup window is displayed showing the programmed memories in the desk.
5. Use the cursor keys or mouse to select a memory to be saved. Move to the *Save This Memory* column and press ENTER to change the text to *Yes*.
6. Repeat step 5 for each memory to be saved.
7. Press F7 or click on the OK button in the window. A popup window is displayed showing progress. When saving is complete, press ENTER or click on the OK button in the window.

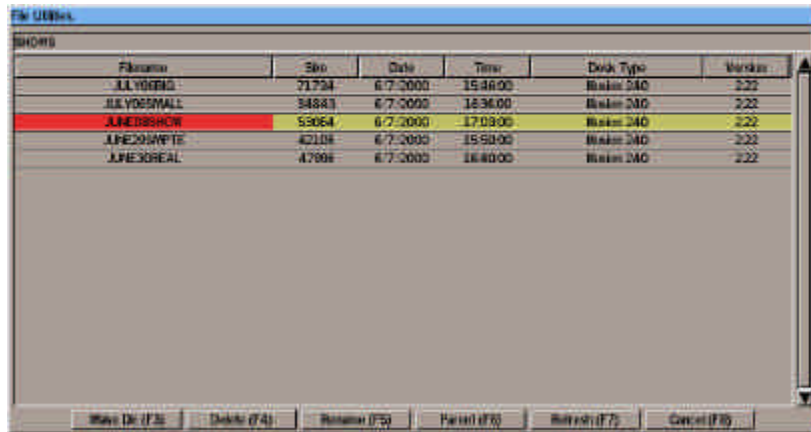


Figure 3 - 4 : File Utilities Window

File Utilities

The Illusion desk provides basic file utilities for creating directories, and deleting and renaming directories and files on the floppy disk.

1. Select *Floppy Disk* from the Setup options.
2. Insert a floppy disk containing data into the disk drive.
3. Select *File Utilities*, and press ENTER. There is a slight delay while the disk is being read.
4. The *File Utilities* window is displayed on the monitor screen.

File Utilities Window

The *File Utilities* Window contains a list of files found in the top directory plus any other directories on the disk. The currently selected directory or file is highlighted.

Use the left and right cursor keys to move up and down directories (if applicable) and the up and down cursor keys to move the highlight bar up and down the list.

At the bottom of the *File Utilities* window are several soft buttons. The action of each of these buttons is described in the following sections.

Make Directory (F3)

This option allows you to create a new directory on the floppy disk.

1. Select the *Make Dir* button in the *File Utilities* window. The *Make Directory* window is displayed.
2. Enter the required name in the *Name* field, then select the *OK* button in the window.

Delete (F4)

This option allows you to delete a directory or file on the floppy disk.

1. Use the cursor keys to select the directory or file to be deleted.
2. Select the *Delete* button in the *File Utilities* window. A confirmation window is displayed.
3. Select the *Delete* button to confirm.

Rename (F5)

This option allows you to rename a directory or file on the floppy disk.

1. Use the cursor keys to select the directory or file to be renamed.
2. Select the *Rename* button in the *File Utilities* window. The *Rename* window is displayed.
3. Enter the required name in the *Name* field, then select the *OK* button in the window.

Parent (F6)

Selecting this button takes you to the parent directory of the one currently displayed in the *File Utilities* window.

Refresh (F7)

Selecting this button reads the floppy disk and displays the contents in the *File Utilities* window.

This allows you to swap disks and read the contents of the new disk without having to close the window.

Cancel (F8)

Selecting this button closes the *File Utilities* window.

NOTE

Setup - Floppy Disk Functions

To ensure that the Illusion floppy disk drive functions correctly, remove the floppy disk before turning the power off.

Failure to do this may result in the drive not detecting the presence of a disk when the desk is turned back on.

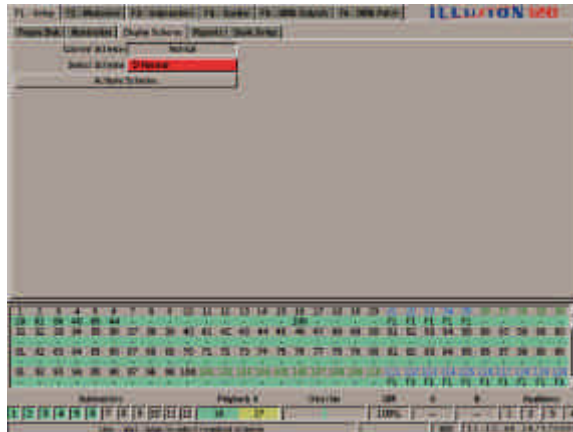


Figure 3 - 5: Display Schemes

Copy Disk

This function allows the contents of one floppy disk to be copied to another.

1. Select *Floppy Disk* from the Setup options.
2. Select the *Copy Disk* option. A confirmation window is displayed. Select the *Copy* button in the window to continue.
3. Follow the instructions displayed in the window. It is necessary to swap between the source and destination disks several times in order to copy the contents of the source disk.

Format Disk

This function formats a floppy disk.

1. Insert the disk to be formatted into the floppy disk drive.
2. Select *Floppy Disk* from the Setup options.
3. Select the *Format Disk* option. A confirmation window is displayed. Select the *Format* button in the window to continue.
4. The *Format Disk* window is displayed showing the progress of the operation.

Illumination

The Desk Lamp Brightness can be adjusted as follows:

Select *Illumination* from the Setup options. Move to the *Desk Lamp Brightness* field, then adjust the brightness using the wheel, or by entering the required value directly.

Display Schemes

Two monitor display schemes are provided to suit different ambient conditions.

Changing Display Scheme

1. Select *Display Scheme* from the Setup options. The current display scheme is indicated.
2. Move to the *Select Scheme* button and use the < and > keys or the mouse to select the required scheme.
3. Select the *Activate Scheme* button. The display scheme will change to the selected scheme.

NOTES

Disk Errors

If any errors occur while accessing the floppy disk, saving or loading show data or memories, an error message is displayed on the monitor screen.

Display Schemes

The colours referred to in this manual are for the Normal Display Scheme. The colours may vary in other display schemes.

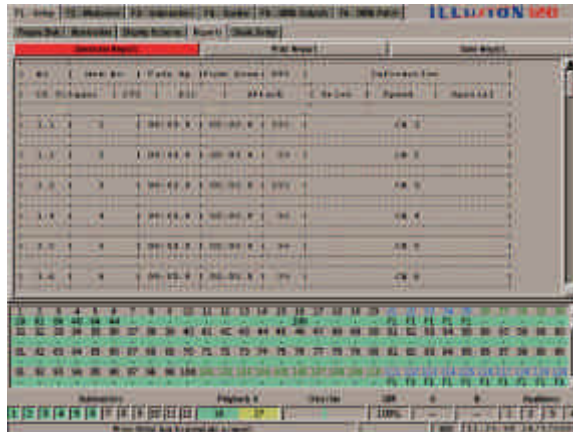


Figure 3 - 6: Reports Screen

Reports

The Illusion desk can generate a number of different reports relating to channel usage, desk setup, memory and submaster data.

These reports can be viewed on the monitor screen, printed out or saved to a file on floppy disk. A summary of the different types of report available is given below.

Unused Channels

This report comes in two sections and lists the unused HTP (brightness) and LTP (attribute and scroller) channels.

An unused HTP channel is a channel which is programmed at zero or left at zero in all memories throughout the show.

An unused LTP channel is a channel which does not change throughout the show (eg a scroller may be set to a value in the first memory and then not change in the rest of the show).

Channel Usage by Memory

This report lists the channels used in each programmed memory in the show.

A channel is used if it is programmed at a non-zero value in a memory.

There is an option to include or exclude LTP channels.

Channel Incidence

This report lists the control channels and the number of memories (instances) in which they are used (ie. programmed at a non-zero value in a memory).

There are options to include or exclude LTP channels, sort by channel number or channel usage, and include or exclude unused channels (ie. those whose instances = 0).

Desk Setup

This report displays data on the current Desk Setup. The report is divided into the following sections: Desk Defaults, Channel Setup, Auxiliary Setup, Groups, Remote Switches and Tracking. Each section may be included or excluded from the report.

Memories

This report displays information on each of the programmed memories (number, type, information etc.). There is an option to include or exclude the channel data for the memories.

Submasters

This report displays information on each of the programmed submasters (number, information, fade times etc.). There is an option to include or exclude the channel data for those submasters loaded with channel data.

Generating a Report

1. Select *Reports* from the Setup options. Select the *Generate Report* button. The *Generate Report* window is displayed.
2. Select the report type and any other options as required, then select the *OK* button in the window.
3. A window showing progress is displayed; when the generation is complete, the report is displayed in the main area of the screen.

Printing a Report

1. Connect a suitable printer to the parallel port; ensure it is switched on and on-line.
2. Generate the required report as described above.
3. Select the *Print Report* option. A window showing progress is displayed.

Saving a Report

1. Insert a floppy disk into the floppy disk drive.
2. Generate the required report as described above, then select the *Save Report* option. The *Save Report* window is displayed.
3. Enter a filename in the field provided, then select the *Save* button in the window. A window showing progress is displayed.

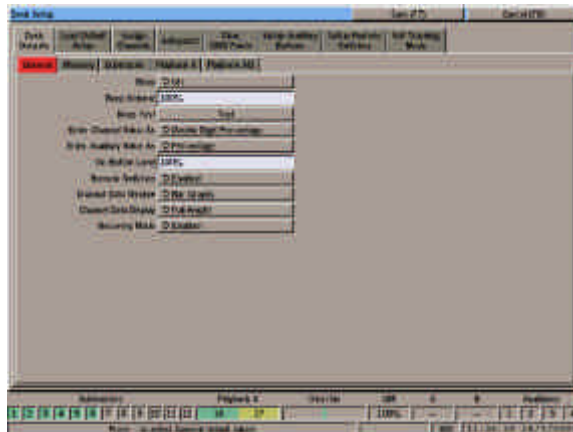


Figure 3 - 7: Desk Setup - Desk Defaults - General

Desk Setup

Select *Desk Setup* from the Setup options. The Desk Setup Window is displayed on the monitor screen and contains the following options:

Desk Defaults
Load Default Setup
Assign Channels
Autopatch Out
Autopatch In (240 only)
Clear DMX Patch
Setup Auxiliary Buttons
Setup Remote Switches
Set Tracking Mode

Each of these options is described in the following sections.

Desk Defaults

The Desk Defaults section allows the desk to be set up to your own personal preferences.

Select *Desk Defaults* from the Desk Setup options. The following options are displayed:

General
Memory
Submaster
Playback X
Playback A/B

Select the required option, then use the cursor keys or mouse to move to the field to be edited. Adjust the value as required. A summary of each of the desk default fields is given in the following sections.

General Defaults

- BEEP
When set to *On*, the desk provides confirmation and warning beeps.
- BEEP VOLUME
Sets the beep volume level.
- BEEP TEST
Generates a beep at current volume.
- ENTER CHANNEL VALUE AS
The format for entering channel data in the CDW (see chapter 11 for details).
- ENTER AUXILIARY VALUE AS
The format for entering auxiliary data. (Percentage or DMX).
- ON BUTTON LEVEL
Sets the default ON button value.
- REMOTE SWITCHES
Enables or disables remote switches.
- CHANNEL DATA WINDOW
Selects bargraphs or numerics only.
- CHANNEL DATA DISPLAY
Sets the Channel Data Display to the required height.
- RECOVERY
Enables or disables recovery mode.
- DMX IN
Enables or disables DMX In.

NOTES

Beeps

A long warning beep is sounded whenever an error/warning message is displayed on the monitor screen.

A short confirmation beep is sounded when memory or other data is specifically saved.

Recovery Mode

The Recovery Mode determines how the desk performs when switched off and back on, either deliberately or accidentally.

Recovery Disabled - The desk will come up showing the Memories Screen, the highlight bar on memory zero. There are no outputs (unless any submasters containing data are raised). Page 1 of the submasters is displayed with no page overlays in operation.

Recovery Enabled - The desk will come up showing the screen which was on display when the desk was switched off. The previous position in the Memory Stack is reinstated, ie the current and next memory are as before. Any chase memories running are restarted from step 1. The submasters come up on the page that they were on, complete with any overlays that were in operation at the time.

DMX In

The DMX In option is only displayed on the Illusion 240, or an Illusion 120 with a SMPTE & DMX In upgrade kit fitted.

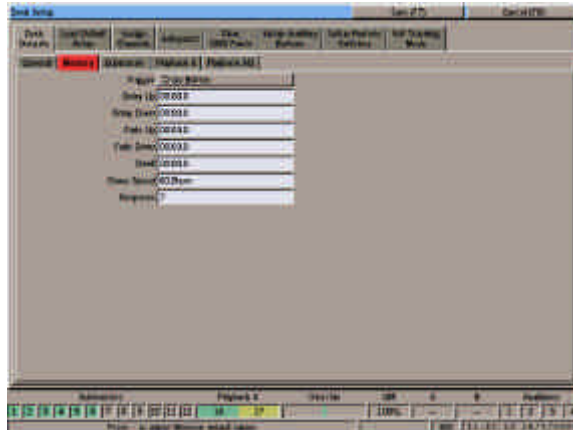


Figure 3 - 8: Desk Setup - Desk Defaults - Memory

Memory Defaults

- TRIGGER
The memory can be triggered automatically or by the GO button.
- DELAY DOWN
The delay before the current memory begins to fade out.
- FADE DOWN
The time for the current memory to fade out.
- DELAY UP
The delay before the next memory begins to fade in.
- FADE UP
The time for the next memory to fade in.
- DWELL
The hold time from the end of the transition to the end of the memory.
- CHASE SPEED
The default chase speed (1 - 600 beats per minute).
- RESPONSE
The default speed (response) for sound to light and ripplesound memories (1-16).

Submaster Defaults

- FADE UP
The default time to fade up the channel or memory data on a submaster, when it is moved through its full travel.
- FADE DOWN
The default time to fade down the channel or memory data on a submaster, when it is moved through its full travel.
- ATTRIBUTE TRIGGER LEVEL
The default value at which attribute channels are triggered.
- CHASE TRIGGER
The default chase trigger (Transfer, Fader Level or Flash Button).
- CHASE TRIGGER LEVEL
The default chase trigger level.
- MACRO TRIGGER LEVEL
The default macro trigger level.

Playback X Defaults

- TIME INPUT
Defines the time input mode for Playback X (Real, SMPTE or MIDI).
- TIME DISPLAY
Number of frames/sec (24,25 or 30) when Time Input is SMPTE or MIDI.

Playback A/B Defaults

- PLAYBACK A/B MODE
Determines whether Playback A/B operates in Manual or Auto Load mode.
- PLAYBACK A ATTRIBUTE TRIGGER LEVEL
The level at which attribute channels are triggered when the A MASTER fader is raised to output the loaded memory.
- PLAYBACK B ATTRIBUTE TRIGGER LEVEL
The level at which attribute channels are triggered when the B MASTER fader is raised to output the loaded memory.

Load Default Setup

The Default Setup is all desk channels assigned to Brightness, included in memories and patched to their corresponding DMX channel at a proportion of 100%.

Select *Load Default Setup* from the Desk Setup options. A warning message is displayed on the monitor screen. Select *Load* to confirm the operation.

When the default setup is loaded, all existing memory and submaster data is cleared.

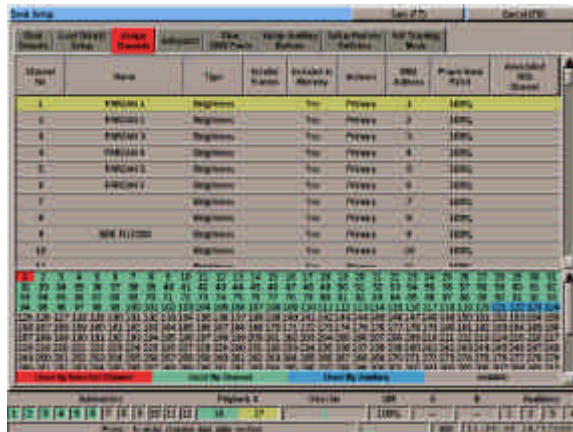


Figure 3 - 9: Desk Setup - Assign Channels

Assign Channels

This option allows you to set up and patch each of the desk channels. The data is displayed on the screen as a table, showing the channel number, name, type, DMX address(es) etc.

Defining the Channels

1. Select *Assign Channels* from the Desk Setup options. The channel table and colour-coded DMX map are displayed.
2. Select a channel by scrolling up or down using the cursor keys, or press the CHANNEL key followed by the channel number and then ENTER, or left click on the channel number using the mouse. The highlight bar will move to the selected channel.
3. Move to the *Name* field. Enter a description of the channel, if required (max. 20 characters).
4. Move to the *Type* field. Select *Brightness*, *Attribute* or *Scroller* using the ENTER key.
5. If the channel type is set to *Scroller*, move to the *Scroller Frames* field. Enter the required number of frames.
6. Move to the *DMX In Channel* field (240 only). Enter the DMX In channel address using the numeric keypad or keyboard.
7. Move to the *Included in Memory* field. Select Yes or No using the ENTER key.

Patching Channels (1)

1. Move to the *DMX Address* field of the channel to be patched using the cursor keys or mouse.
2. Enter the DMX address in the field using the numeric keypad or keyboard.
3. If the DMX address entered is valid, the channel table and DMX map are updated. If the DMX address is already used, a warning message is displayed.

Patching Channels (2)

1. Select the channel to be patched using the cursor keys or mouse.
2. Using the mouse, left click on the required DMX address in the colour-coded DMX map on the screen.
3. If the DMX address entered is valid, the channel table and DMX map are updated. If the DMX address is already used, a warning message is displayed.

Proportional Patching

1. Select the channel to be patched using the cursor keys or mouse.
2. Move to the *Proportional Patch* field. Set the value as required.

Adding Duplicates

A duplicate is an additional instance of a desk channel which is patched to a different DMX output address.

Up to 9 duplicates may be added to each desk channel. An extra line is displayed on the screen for each duplicate defined.

Duplicates are added automatically when patching the desk channel using either of the following methods:

1. Specifying additional DMX address(es) separated by AND when entering the address in the *DMX Address* field (eg. 101 AND 102 AND 103)
2. Left clicking with the mouse on additional addresses in the DMX map.

Providing the DMX address is valid, an extra line will be added for each duplicate showing it patched to the specified address.

NOTES

Proportional Patch

Only *Brightness* channels may be proportionally patched (0% - 400%). *Attribute* channels are fixed at 100%.

Adding Duplicates

Use the AND key on the front panel or '+' key on external keyboard to separate DMX addresses when adding duplicates.

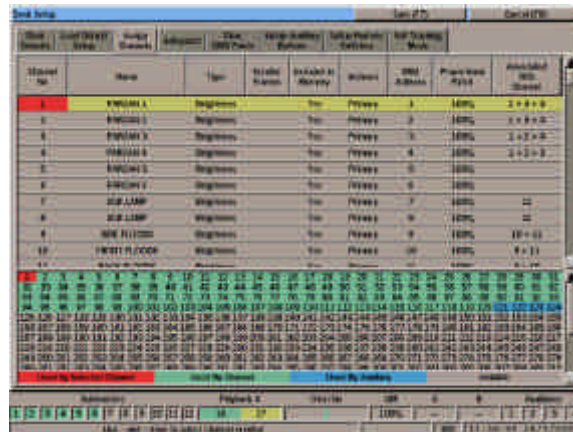


Figure 3 - 10: Assign Channels Screen

Unpatching Channels

There are two methods for unpatching channels manually.

1. Move to the *DMX Address* field for the required channel. Enter a DMX address of 0 or press the CLEAR button.
2. Using the mouse, left click on the corresponding DMX address in the DMX map.

In both cases the channel is unpatched and the channel table and DMX map updated.

If a duplicate is unpatched, it is removed from the channel table.

Associating Channels

A channel may be associated with up to three other channels.

For example, a channel representing a colour scroller may be associated with its corresponding lamp, or up to four separate lamps may be associated together.

Channels are associated by entering their numbers into the data table as follows:

1. Select one of the channels to be associated and move to the *Associated with Channel* field.
2. Enter the associated channel number in the field. If more than one channel is to be associated, enter each channel number separated by a '+' (using the AND key).

If the data entered is valid the channel table is updated.

If the data is invalid, eg. a channel number entered is already associated with another channel, a warning message is displayed.

To remove an association - enter 0 in the *Associated with Channel* field for a channel which is in the association.

Find Channel Function

This function provides a quick method for finding out which desk channel is patched to a particular DMX channel.

1. Using the mouse, right click on the required DMX channel number in the DMX map, and select the Find Channel option.

If a desk channel is patched to the DMX channel, the highlight bar will automatically move to the corresponding desk channel number in the channel table.

If an auxiliary or nothing is patched to the selected DMX channel an error message is displayed.

NOTE

Associated Channels

In the Assign Channels screen, channel associations are displayed in the right hand column. Multiple associations are indicated by '+' between the channel numbers.

For example, if channels 1, 2, 3 and 4 were associated together, the final column for channel 1 would show "2+3+4", the final column for channel 2 would show "1+3+4" etc.

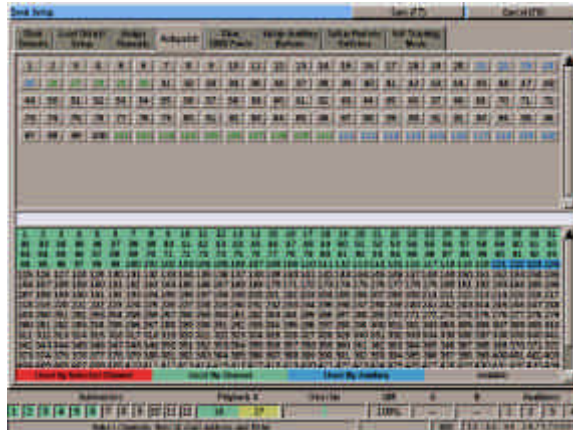


Figure 3 - 11: Desk Setup - Autopatch Out Screen

Autopatching

The autopatching facility allows selected desk channels to be patched to the DMX in a single operation.

Autopatch Out

The Autopatch Out screen contains a channel selection area, a command line area and a DMX map which shows the current state of the DMX patch.

Patching Selected Channels

1. Select *Autopatch Out* from the Desk Setup options, then press the down cursor key to enter the Autopatch Out screen. The command line changes to white.
2. Select the channels to be patched by using the numeric keypad or the mouse. The selected channels are displayed in red.
3. To patch the selected channels, press the @ key followed by the required DMX start address and then ENTER (or using the mouse click on the start address in the DMX map on the screen). The selected channels are patched and the DMX map is updated to show their position.

Unpatching Channels

1. Select *Autopatch Out* from the Desk Setup options, then press the down cursor key to enter the Autopatch screen. The command line changes to white.
2. Select the channels to be unpatched using the numeric keypad or by using the mouse. The selected channels are displayed in red.
3. To unpatch the selected channels, press the @ key followed by CLEAR. The selected channels are unpatched and the DMX map is updated.

Autopatch In (240 Only)

On the Illusion 240, there is also an *Autopatch In* function which allows the Illusion desk channels to be patched to DMX In channels in a single operation.

This is indicated by the additional *Autopatch In* tab in the Desk Setup options.

The *Autopatch In* function works in the same way as the *Autopatch Out* function, except that only brightness channels can be patched to DMX In, and the Illusion desk channels can only be patched to DMX channels 1-48.

Clear DMX Patch

This option will unpatch all channels and auxiliaries which have been patched to DMX output addresses.

It does not clear the DMX In patch, if setup (Illusion 240 only).

Select *Clear DMX Patch* from the Desk Setup options, then select the *Clear DMX Patch...* button. A confirmation window is displayed. Select the *Clear* button to confirm the operation.

NOTES

Autopatching

A warning message is displayed requiring user confirmation if an attempt is made to patch a selection of channels which contain both brightness and attribute channels. If confirmation is given, all the brightness channels are patched first, followed by the attribute channels.

If a channel with duplicates is autopatched, the duplicates will be patched immediately after the primary instance of the channel.

If an invalid DMX address is entered an error message is displayed.

If an attempt is made to autopatch channels which would result in their overlapping existing channels or auxiliaries, a warning message is displayed.

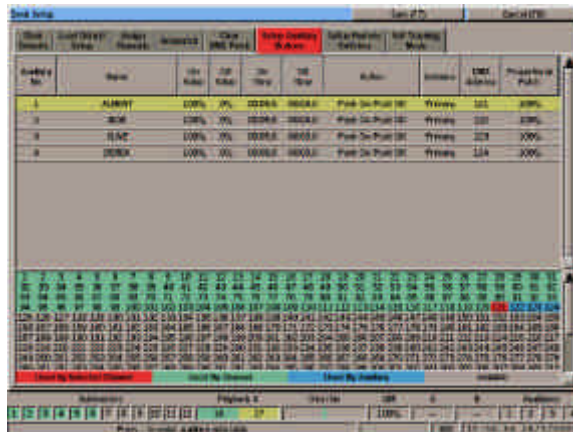


Figure 3 - 12: Desk Setup - Setup Auxiliaries

Setup Auxiliary Buttons

The desk provides 4 auxiliary buttons which can be programmed and patched to DMX channels. They are normally used to control smoke machines etc.

Programming Auxiliaries

1. Select *Setup Auxiliary Buttons* from the Desk Setup options. The auxiliary screen is displayed.
2. Select an auxiliary by scrolling up or down using the cursor keys, or use the mouse. The highlight bar moves to the selected auxiliary.
3. Move to the *Name* field. Enter a description using the front panel or external keyboard (max. 20 characters).
4. Move to the *On Value* field. Set to the required value.
5. Move to the *Off Value* field. Set to the required value.
6. Move to the *On Time* field. Set to the required value.
7. Move to the *Off Time* field. Set to the required value.
8. Move to the *Action* field. Select the required action (momentary or push on/off).

Patching Auxiliaries (1)

1. Move to the *DMX Address* field of the auxiliary to be patched using the cursor keys or mouse.
2. Enter the DMX address in the field using the numeric keypad or keyboard.
3. If the DMX address entered is valid, the auxiliary table and DMX map are updated. If the DMX address is already used, an error message is displayed.

Patching Auxiliaries (2)

1. Select the auxiliary to be patched using the cursor keys or mouse.
2. Using the mouse, left click on the required DMX address in the colour-coded DMX map on the screen.
3. If the DMX address entered is valid, the auxiliary table and DMX map are updated. If the DMX address is already used, an error message is displayed.

Proportional Patching

1. Select the auxiliary to be patched using the cursor keys or mouse.
2. Move to the *Proportional Patch* field. Set the value as required (0-400%).

Adding Duplicates

A duplicate is an additional instance of an auxiliary which is patched to a different DMX address.

Up to 9 duplicates may be added to each auxiliary. An extra line is displayed on the screen for each duplicate defined.

Duplicates are added automatically when patching the auxiliary using either of the following methods:

1. Specifying additional DMX address(es) separated by AND when entering the address in the *DMX Address* field (eg. 101 AND 102 AND 103)
2. Left clicking with the mouse on additional addresses in the DMX map.

Providing the DMX address is valid, an extra line will be added for each duplicate showing it patched to the specified address.

Playback of Auxiliaries

The playback of auxiliary buttons, including the effects of fade times and button actions on the resulting outputs, is covered in Chapter 11.

NOTE

Auxiliary Buttons

Auxiliary buttons cannot be patched to the same DMX address as a desk channel.

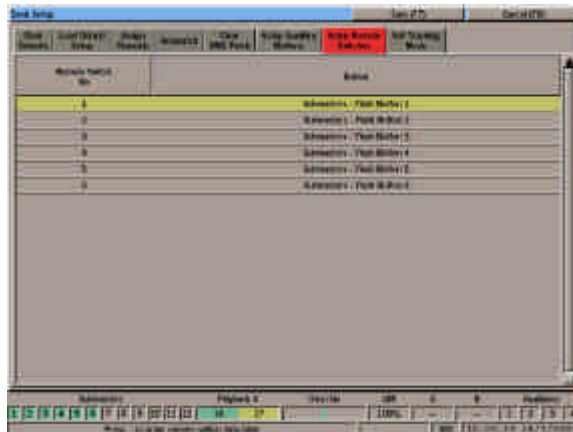


Figure 3 - 13: Desk Setup - Setup Remote Switches

Setup Remote Switches

The desk provides the facility for up to 6 remote switches to be connected to the desk and assigned to front panel buttons or macros. The following front panel buttons may be assigned to remote switches:

AUX CONTROLS 1-4,
DIRECTION, ATTACK, DRIVE,
STEP+, STEP-, DBO,
PAGE UP, PAGE DOWN,
FLASH FUNCTION,
FLASH BUTTONS,
GO, PAUSE, and GO PREVIOUS.

The default assignments are as follows:

Remote Switch 1 - AUX CONTROL 1
Remote Switch 2 - AUX CONTROL 2
Remote Switch 3 - AUX CONTROL 3
Remote Switch 4 - AUX CONTROL 4
Remote Switch 5 - GO Button
Remote Switch 6 - Not Assigned

Assigning a Remote Switch

1. Select *Setup Remote Switches* from the Desk Setup options. The Remote Switch data is displayed on the monitor screen.
2. Use the cursor keys to scroll up or down the table, or use the mouse. The highlight bar moves to the selected switch.
3. Move to the right hand column of the table using the cursor keys or the mouse.
4. Use the ENTER key or left click with the mouse to scroll through the available options. Select the option required.

Clearing Remote Switches

1. Select a remote switch as described earlier. Press the CLEAR button, or right click and select the *Clear* option. A confirmation window is displayed.
2. Click on the *Clear* button to confirm the operation.

Testing Remote Switches

1. Press a remote switch connected to the desk. The corresponding line in the table changes to green if the switch is working correctly.
2. Repeat for each remote switch to be tested.

NOTE

Testing Remote Switches

When testing a remote switch in Desk Setup, the front panel button or macro assigned to the remote switch is not actioned.



Figure 3 - 14 : Desk Setup - Set Tracking Mode

Set Tracking Mode

This option provides the facility to enable or disable Tracking on the desk. The default state is normal mode, ie. Tracking disabled.

For further information on programming in Tracking mode see chapter 5.

Enable/Disable Tracking

1. Select *Set Tracking Mode* from the Desk Setup options.
2. Move to the *Tracking Mode* field. Use the cursor keys or mouse to select *Enabled* or *Disabled* as required.

Saving or Cancelling Desk Setup

The Desk Setup Window can only be closed by either Saving or Cancelling the Desk Setup.

To save the Desk Setup -select the Save button in the Desk Setup Window or press F7 on the front panel or keyboard.

To cancel the Desk Setup - select the Cancel button in the Desk Setup Window or press F8 on the front panel or keyboard.

NOTES

Desk Setup

While the Desk Setup Window is displayed the screen function keys (F1 - F8) are disabled. Therefore it is not possible to display any of the other screens (Memories, Submasters, Cueline etc.) until Desk Setup has been exited in a controlled manner, either by saving or cancelling.

Saving Desk Setup

Any changes made to the Desk Setup will only take effect when the Desk Setup is saved.

It is possible to continue running the show while in Desk Setup, but the DMX outputs will be halted momentarily if the Desk Setup is saved.

Tracking Mode

When Tracking is enabled, "TRK" is displayed in the Information Bar at the bottom of the monitor screen.

Changing Tracking Mode

Changing the Tracking Mode from enabled to disabled or vice versa will result in changes to the channel data in the programmed memories.



Figure 4 - 1: Channel Data Window (Graphical Format)

Introduction

The Channel Data Window (CDW) is displayed on the monitor screen when setting up or adjusting channel levels on the outputs, editing or previewing channel data for a memory or submaster.

There are two different formats of CDW - bargraph or numerics only. The choice of CDW format is part of the Desk Setup options - see chapter 3 for details.

The bargraph CDW is displayed at the top right of the monitor screen; the numeric CDW is displayed at the bottom of the screen, in the area normally occupied by the Channel Data Display.

The CDW consists of a header at the top of the window, a centre section containing bar graphs or numerical values for each of the desk channels, and a command line area at the bottom.

CDW Header

If the CDW is opened using the CHANNEL or GROUP button from the Memories, Submaster, Cueline, DMX Output or DMX Patch screen, the header contains the words "Edit Live - Channel Data" and soft buttons labelled *Save Options (F5)*, *Proportional (F6)* or *Incremental (F6)* and *Close (F8)*.

If a memory is selected from the Memories or Cueline screen and the CDW is opened using the EDIT LIVE, EDIT BLIND or PREVIEW buttons, the header contains the memory number (plus the step number, step name or part number for appropriate memory types). Various soft buttons are also displayed in the header depending on how the CDW was opened and the memory type.

If a submaster loaded with channel data is selected, and the CDW is opened using the EDIT LIVE, EDIT BLIND or PREVIEW buttons, the header contains the page and submaster number. Various soft buttons are also displayed in the header depending on how the CDW was opened.

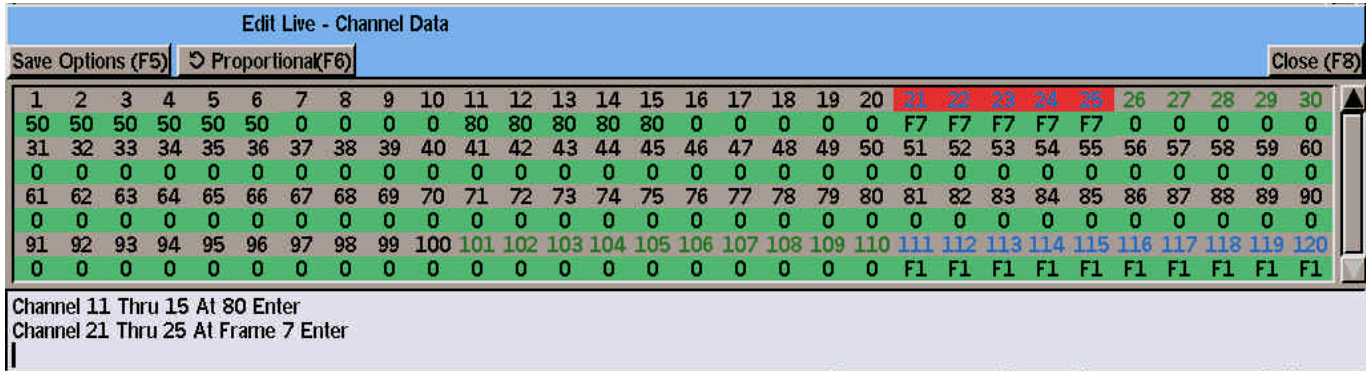


Figure 4 - 2: Channel Data Window (Numeric Format)

Channel Numbers

In both display formats (bar graphs or numerics only), the channel numbers are displayed in boxes.

The channel number appears above the pair of bargraphs (bar graph format) or above the two/three values for the channel (numerics format).

The text colour of the channel number is used to indicate the channel type. The text colour of the background is used to indicate whether the channel is included in memory data and whether it is currently selected or not. This is summarised as follows:

Text Colours:

Brightness Channels - Black
Attribute Channels - Green
Scroller Channels - Blue

Background Colours:

Included & not selected - Grey
Included & selected - Red

Excluded & not selected - Dark Grey
Excluded & selected - Dark Red

Bar Graph Display

Each bar graph is divided into two halves. The left half shows the current output level for the channel and is coloured green.

When editing live, the right half shows the programmed level of the channel and is coloured yellow.

When editing blind, the right half shows the current level for the channel and is coloured blue. When the level matches the programmed level or when the data is saved, the bar changes from blue to yellow.

The channel value is displayed beneath the bar graphs as a percentage or DMX value depending on the option selected in Desk Setup.

The colour of the box containing the channel value indicates if the channel is programmed, and if the current value is equal to the programmed value.

Editing Live - unprogrammed channels are grey. Programmed channels are yellow when the programmed value is equal to the current value, otherwise green.

Editing Blind - unprogrammed channels are grey. Programmed channels are yellow when the programmed value is equal to the current value, otherwise blue.

For Multi Part Scenes, channels which are programmed in other parts are displayed in orange.

Numerics Only Display

When the numerics only option is selected in Desk Setup, the data for each channel is represented by two or three numbers.

The first number is the channel number, the second is the current output level of the channel, and the third the programmed level (only displayed when editing or previewing a memory or submaster).

The output and programmed levels of the channel are displayed as a percentage or DMX value. The colours of the boxes containing the channel values are the same as those described for the Bar Graph Display in the previous section.

Topsetted Channels

If a channel has been topsetted, a red line is displayed across the output bar graph at the topset level and the output value is displayed in red text rather than the normal black.

Command Line Area

The command line area is used to echo the channel selection and level data entered by the user from the numeric keypad or external keyboard.

When the ENTER button is pressed to complete the command, the wheel is moved, or the ON button pressed, the text on the command line is cleared.

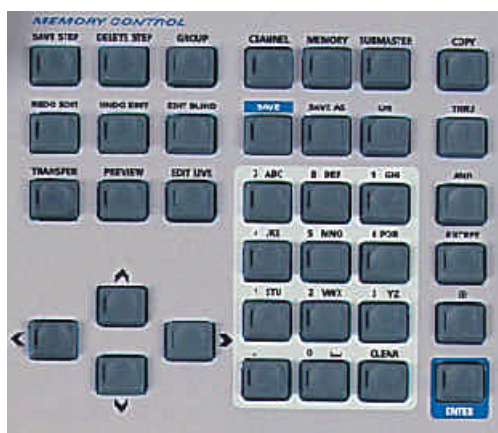


Figure 4 - 3: Memory Control Buttons and Numeric Keypad

Selecting Channels

Individual channels, combinations or groups of channels can be selected using the numeric keypad and associated buttons on the front panel or external keyboard.

Channels can also be selected (and deselected) by left clicking the channel number in the CDW.

The ASSOCIATED CHANNEL button can be used to deselect a selected channel and select its associated channel.

The currently selected channels are displayed on a red background in the CDW.

Deselecting Channels

The EXCEPT key can be used to deselect a single channel.

EXCEPT 7

The EXCEPT and THRU keys can be used to deselect a range of channels.

EXCEPT 7 THRU 10

Pressing the CLEAR key on the front panel will deselect all currently selected channels.

Setting Channel Levels

There are several methods which can be used to set channel levels.

- The numeric keypad and associated buttons on the front panel.
- The numeric keys and associated keys on the external keyboard.
- The control wheel on the front panel.
- The mouse in the CDW.

The new channel levels are displayed in the CDW when the ENTER or ON key is pressed, the wheel is moved or the mouse is used to adjust the level(s).

The new channel levels are output live on the DMX if the channel data is being edited live.

If editing blind, the DMX outputs are not affected.

The following sections give examples on how to use the various controls to select the required channel(s) and set the levels.

The programming of scroller channels is covered separately later in this chapter.

All examples in this chapter use the *Double Digit Percentage* format. For details of entering levels using different formats, see chapter 11.

Setting a Single Channel

1 @ 50 ENTER

sets channel 1 to 50%

The AND Key

The AND key is used to select a number of channels.

1 AND 3 AND 5 @ 50 ENTER

sets channels 1, 3 and 5 to 50%

The THRU Key

The THRU key is used to select a range of continuous channels. The channel ranges can be specified in either direction.

1 THRU 6 @ 50 ENTER

sets channels 1,2,3,4,5 and 6 to 50%

11 THRU 8 @ 75 ENTER

sets channels 8,9,10 and 11 to 75%

The EXCEPT Key

The EXCEPT key is used to remove a selected channel.

1 THRU 6 EXCEPT 4 @ 0 ENTER

sets channels 1,2,3,5 and 6 to 0%



Figure 4 - 4: Channel Data Window

The GROUP Key

The GROUP key is used to select a pre-programmed group of channels, together with their programmed levels. See section on Groups later in this chapter for further details.

Setting Channels to Zero

The ENTER key can be used as a quick method of setting the selected channel(s) to zero.

CHANNEL 1 ENTER
CHANNEL 5 AND 6 ENTER
CHANNEL 11 THRU 20 ENTER

Setting Channels to Full

The @ key can be used as a quick method of setting the selected channel(s) to full.

CHANNEL 1 @@
CHANNEL 5 AND 6 @@
CHANNEL 11 THRU 20 @@

The ON key

The ON key is a quick method of setting the selected channel(s) to the 'ON' value (defined in Desk Setup).

CHANNEL 21 ON

sets channel 21 to the 'ON' value.

Adding Channel Data from a Memory

The desk provides the facility to include the channel data from another programmed memory into the CDW.

MEMORY <n> @ <x> ENTER

The values of the programmed brightness channels in memory <n> are multiplied by x% and added into the channel data in the CDW on a HTP basis.

The values of the programmed attribute and scroller channels in memory <n> are copied directly into the corresponding channels in the CDW, replacing the original data.

If the memory specified is a chase, sound to light or ripplesound memory, the channel data for the first step is used.

If the memory specified is a multi part scene, the programmed channels from all the programmed parts of the memory are combined, and then added into the CDW as described above.

If the memory specified is invalid, or unprogrammed, an error message is displayed and the channel levels in the CDW are not altered.

Adding Channel Data from a Submaster

The desk provides the facility to include channel data loaded onto a submaster, or the channel data from a memory transferred onto a submaster, into the CDW.

SUBMASTER <p-s> @ <x> ENTER

The values of the programmed brightness channels in the channel data or the memory transferred onto the submaster are multiplied by x% and added into the channel data in the CDW on a HTP basis.

The values of the programmed attribute and scroller channels in the channel data or the memory transferred onto the submaster are copied directly into the corresponding channels in the CDW, replacing the original data.

If the memory transferred onto the specified submaster is a chase, sound to light or ripplesound memory, then the channel data from the first step is used.

If the submaster specified is invalid, or does not contain channel data or a transferred memory, an error message is displayed and the channel levels in the CDW are not altered.

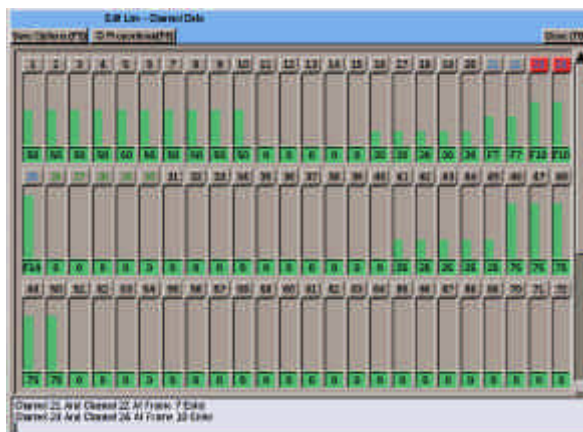


Figure 4 - 5 : CDW Showing Scroller Channels

Using the Wheel

The control wheel can be used to continually adjust the level(s) of the selected channel(s). The soft button in the CDW header (or F6 on the front panel or external keyboard) toggles the operation of the wheel between incremental and proportional editing. The text on the soft button indicates the selected mode.

Incremental Editing

When incremental mode is selected, moving the wheel will increase or decrease each of the selected channels by the same amount.

Proportional Editing

When proportional mode is selected, moving the wheel will increase or decrease each of the selected channels by the same proportion.

Using the Mouse

The mouse can be used to adjust the level of any channel by clicking in the bar graph area, or selecting a channel value, holding down the left mouse button and moving the mouse up or down.

If more than one channel is currently selected, and the mouse is used to adjust the level of one of the selected channels, all the selected channels will increase or decrease by the same amount.

Scroller Channels

Scroller channels can be programmed by frame number or actual percentage or DMX values using the numeric keypad and associated keys, wheel or mouse.

Programming Scrollers by Frame Number

A Scroller channel or a selection of scroller channels can be set to a specific frame number using the numeric keypad and associated keys as follows:

Select the required channel(s), then enter @ followed by the frame number and ENTER. For example:

CHANNEL X @ <frame no> ENTER

CHANNEL X AND Y @ <frame no> ENTER

CHANNEL X THRU Y @ <frame no> ENTER

This syntax only works when all the selected channels are scrollers. The keyword **FRAME** is inserted into the command line after the @ to indicate that the next number entered will be taken as a frame number.

If the frame number entered is too high for a scroller channel then the channel will be set to its highest frame value.

Programming Scrollers by Value

Scroller channels can also be set to any percentage or DMX value using the keypad, wheel or mouse using the various methods described below:

If the selected channels contain a combination of scrollers and other channel types, the number entered after the @ will be taken as a percentage or DMX value (depending on the current option selected in Desk Setup). All the selected channels are set to the specified value, for example:

CHANNEL X AND Y @ <value> ENTER

CHANNEL X THRU Y @ <value> ENTER

Select the required scroller channel(s) and adjust the level using the wheel or the mouse.

Select the required scroller channel(s) and press the ON button. The selected channels will be set to the programmed value of the ON button.

Displaying Scroller Values

If the current value of a scroller channel is equal to a specific frame value it will be displayed as **F <no>**, otherwise it will be displayed as the actual percentage or DMX value.

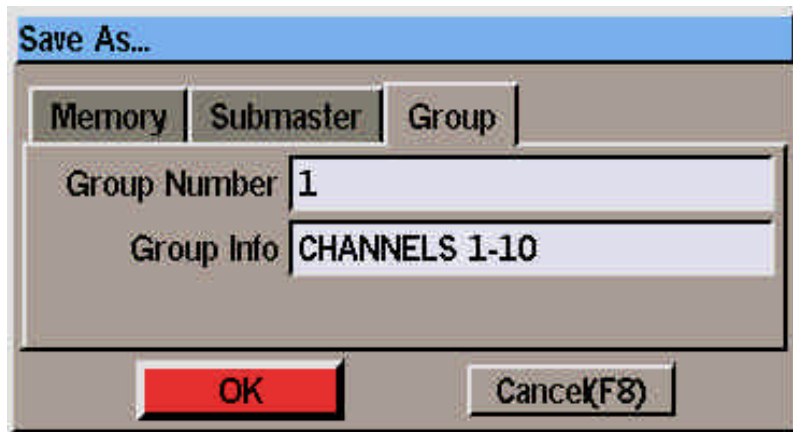


Figure 4 - 6 : Save As Window (Group)

Groups

The Illusion desk provides 20 (30) user-programmable groups.

Groups can be recorded and then used when programming channel data in memories or submasters.

A group consists of a number of selected channels together with their programmed levels (eg. Channels 1-5 at 50%).

Groups are programmed and used in the Channel Data Window as described in the following sections.

Programming a Group

From the Channel Data Window, the channel data for the selected channels can be saved to a group.

When editing a chase, sound to light or ripplesound memory, the channel data for the current step is saved into the specified group.

1. Use the STEP+ or STEP- buttons to select the required step (if appropriate).
2. Press the SAVE AS button on the front panel, or right click in the CDW and select the *Save As* option from the menu. The *Save As* window is displayed.
3. Select the *Group* option by pressing the GROUP button or select the *Group* tab.
4. Enter the required group number, enter a text description of the group in the *Group Info* field, if required, then select the *OK* button in the window.

If the specified group is unprogrammed, the channel data is saved into the group, and the popup window is closed.

If the specified group is already programmed, a warning message is displayed. Select *Overwrite* or *Cancel* as required.

Using Groups in the CDW

A pre-programmed group can be added into the channel data in the CDW as follows:

To set the channels defined in a group to their programmed levels - enter the following command:

GROUP <n> @ 100 ENTER or

GROUP <n> ON or

GROUP <n> @@

Where <n> is the group number.

To set the channels defined in a group to a proportion of their programmed levels - enter the following command:

GROUP <n> @ <p> ENTER

Where <n> is the group number and <p> is the required proportion (eg 50 would be 50% in double digit percentage mode).

The Brightness channels programmed in group n are multiplied by the specified proportion and copied into the CDW (they are not mixed in on a HTP basis).

The Attribute or Scroller channels programmed in group n are copied directly into the CDW, replacing the original channel data.



Figure 4 - 7: Preview Groups Window

Using the Wheel

When a group has been added into the CDW as described in the previous section, the channels programmed in the group are shown as selected in the CDW.

The wheel can then be used to adjust the levels of the selected channels, either incrementally, or proportionally, depending on the current editing mode, indicated by the soft button in the CDW header.

Selecting Group Channels

It is also possible to select the channels programmed into a group without using their programmed levels as follows:

Enter the programmed group number in the command line, then move the control wheel, for example:

GROUP 1 <wheel>

The channels in group 1 are selected, and moving the wheel adjusts their levels incrementally, or proportionally, depending on the current mode indicated in the CDW header.

Previewing Groups

This function is only available from the CDW and displays which groups are currently programmed on the desk.

1. Ensure that the command line in the CDW is clear.
2. Press the PREVIEW button, followed by the GROUP button on the front panel. A popup window is displayed showing the number and information text for each of the programmed groups in the desk.
3. Press ENTER or click on the OK button in the window to close the popup and return to the CDW.

Viewing Group Data

The selected channels and their corresponding levels in a programmed group can be viewed by generating the Desk Setup Report - see the Reports section in chapter 3 for details.

NOTES

Recording Group Data

When editing channel data live - the output levels of the selected channels are saved into the group. When editing channel data blind - the programmed levels of the selected channels are saved into the group.

Entering the Group Number followed by Enter in the Save As Window effectively selects the OK button. Therefore the command SAVE AS GROUP <n> ENTER will save the selected channels and their current values into group n.

Selected Channels and Group Channels

The desk makes a distinction between channels manually selected (via keypad, keyboard or mouse) and those selected automatically as part of a group. This determines whether a channel is set to an absolute value or to a proportion of its programmed group value.

If a command line contains both channel and group selections, then the designation of the selected channels is determined by the order of the commands, with the latest taking precedence.

Example: Group 1 is programmed with channels 6-10 at 80% and the following command is entered:

```
CHANNEL 1 THRU 10 AND GROUP 1 @
50 ENTER
```

Channels 1-5 will be set to 50%, channels 6-10 to 40% (ie. 50% of their group programmed value).



Figure 4 - 8: Channel Info Window

Unprogramming Channels

To unprogram channels in a partial memory, select the channels to be unprogrammed then press **@ CLEAR** on the front panel.

For example - if channels 1 to 10 are programmed, and you enter the following:

1 THRU 5 @ CLEAR

Channels 1 to 5 have their values reset to zero and are marked as unprogrammed; channels 6 to 10 remain unaltered.

Undoing and Redoing Edits

The UNDO EDIT and REDO EDIT buttons on the front panel can be used to undo and redo channel edits from the Channel Data Window.

Pressing the UNDO EDIT button will undo the last channel edit made. The text "UNDO" appears in the command line of the CDW.

Pressing the UNDO EDIT button several times will undo the channel edits one at a time back as far as the last save or the maximum edits that can be stored (20).

Pressing the REDO EDIT button will redo the last channel edit that was undone. The text "REDO" appears in the command line of the CDW.

Displaying Channel Information

This function allows data on a selected channel to be displayed temporarily while the CDW is on display.

Right click on the channel number in the CDW. The *Channel Info* window is displayed containing information on the selected channel. Click on the OK button or press ENTER to close the window.

Closing the Channel Data Window

The CDW is normally closed using the *Close* button in the header, by pressing F8, or by saving the channel data to a specified memory, submaster or group.

If the CDW was originally opened using the CHANNEL or GROUP button, and channel levels have been adjusted live, these levels will remain on the outputs when the CDW is closed without saving.

These temporary edits to the output levels will remain until the outputs are altered via the Playback X, Playback A/B or submasters.

NOTES

Selecting Non-Zero Channels

When the command line is clear, pressing ENTER ENTER will deselect any selected channels, then select all the non-zero brightness channels.

When editing live - all non-zero output channels are selected. When editing blind - all non-zero programmed channels are selected.

Deleting Commands

Use the left cursor key to delete items entered on the command line in the CDW.

Undo/Redo Edits

It is not possible to undo/redo channel edits across different steps or parts of a memory, because in order to move to a different step or part, any channel edits must first be saved or lost.

Saving Channel Data

If the Channel Data Window was opened as a result of editing a memory or submaster, both Save and Save As options are available.

If the CDW was opened by pressing the CHANNEL button, only the Save As option is available.

Memory No.	Type	Type (Alt)	Address	Sub-Address	Sub-Address (Alt)	Step Size	Step Size (Alt)	Dwell Time	Special
1	Scene		001	0000	0000				
2	Scene		002	0000	0000				
3	Scene		003	0000	0000				
4	Scene		004	0000	0000				
5	Scene		005	0000	0000				
6	Scene		006	0000	0000				
7	Scene		007	0000	0000				
8	Scene		008	0000	0000				
9	Scene		009	0000	0000				
10	Scene		010	0000	0000				
11	Scene		011	0000	0000				
12	Scene		012	0000	0000				
13	Scene		013	0000	0000				
14	Scene		014	0000	0000				
15	Scene		015	0000	0000				
16	Scene		016	0000	0000				
17	Scene		017	0000	0000				
18	Scene		018	0000	0000				
19	Scene		019	0000	0000				
20	Scene		020	0000	0000				
21	Scene		021	0000	0000				
22	Scene		022	0000	0000				
23	Scene		023	0000	0000				
24	Scene		024	0000	0000				
25	Scene		025	0000	0000				
26	Scene		026	0000	0000				
27	Scene		027	0000	0000				
28	Scene		028	0000	0000				
29	Scene		029	0000	0000				
30	Scene		030	0000	0000				
31	Scene		031	0000	0000				
32	Scene		032	0000	0000				
33	Scene		033	0000	0000				
34	Scene		034	0000	0000				
35	Scene		035	0000	0000				
36	Scene		036	0000	0000				
37	Scene		037	0000	0000				
38	Scene		038	0000	0000				
39	Scene		039	0000	0000				
40	Scene		040	0000	0000				

Figure 5 - 1: Memories Screen

Introduction

The desk provides a maximum of 400 programmable memories. The different memory types available are:

- Scene
- Multi-Part Scene
- Chase
- Sound to Light
- Ripplesound
- All-Fade (Tracking only)

Memory Numbers

Memory numbers can be whole numbers (1, 2, 3..) or numbers with a decimal point (eg 1.1, 1.2). This allows 9 memories to be inserted between two whole number memories. The range of available memory numbers is 0.1 to 999.9.

Memory Zero

Memory Zero is a special scene memory with a Go button trigger. The delay times, fade times and dwell time are set to zero, and all channels are set to 0%. It is displayed on the Memories and Cueline screens as memory number “—”.

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

When output via Playback X, Playback A/B or a submaster, only the brightness channels are affected.

Memory Storage Limits

The desk has a maximum capacity of 400 memories.

The different memory types require different amounts of memory.

A Scene memory uses one memory block. A Multi-Part Scene memory uses one memory block per part (max. 8). A Chase memory uses one memory block per step (max. 99) Sound to Light and Ripplesound memories use 4 memory blocks each (one per ‘step’).

Therefore, if memories other than scenes are programmed the number of available memories is reduced accordingly.

For example the desk capacity is 400 scenes or 100 sound to light memories or 40 ten-step chases, or any combination of memory types such that the total number of memory blocks required does not exceed 400.

Low Memory Warning

The desk monitors the number of memory blocks used. The Memory Meter in the Information Bar (next to the time and date display) shows the number of memory blocks remaining.

When the number of memory blocks available is getting low (10% remaining) the Memory Meter turns red. When there are no more blocks left, the Memory Meter flashes red.

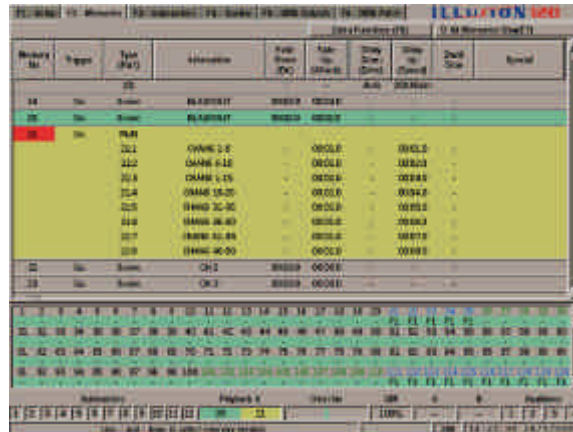


Figure 5 - 2: Memories Screen showing Multi-Part Scene Memory

Memories - Common Data

The following data is common to all memories regardless of their type .

- Memory Number.
- Memory Type - can be defined as Scene, Multi-part Scene, Chase, Sound to Light or Ripplesound.
- Information - A text string used to describe the memory (max. 30 characters).
- Trigger - Determines if the memory is triggered automatically, by a GO button press, or at a specified time (eg. 12:30pm).
- Delay Down Time - The time delay before the previous memory begins to fade out when the memory is triggered.
- Fade Down Time - The time taken for the previous memory to fade out.
- Delay Up Time - The time delay before the memory begins to fade in after it is triggered.
- Fade Up Time - The time taken for the memory to fade in.
- Dwell Time - The time between the completion of the transition to the memory and the trigger point for the next memory.

Scene Memory

A scene memory has all the common data plus a single set of channel data.

Multi-Part Scene Memory

A multi-part scene memory can contain a maximum of 8 parts.

The memory has all the common data, except that each part has its own information, transition and dwell times and a set of channel data.

Chase Memory

A chase memory consists of a number of steps (maximum 99), each containing a set of channel data. It also has the following modifiers:

- Direction - The order in which the steps are output (forwards, backwards or ping-pong).
- Attack - The transition between each step (snap, slow attack, slow decay or crossfade).
- Drive - The method by which the chase progresses (Auto, Vari, Bass or Manual).
- Chase Speed - The basic speed of the chase (1 - 600 bpm).

Sound to Light Memory

A sound to light memory consists of 4 defined 'steps' (Lo, Lo-Mid, Hi-Mid and Hi), each containing a set of channel data.

In addition to the common data, a sound to light memory contains the following modifiers:

- Attack - Determines how the output follows the sound input waveform.
- Speed - Determines how quickly the outputs react to the changes in the sound input waveform.

Ripplesound Memory

A ripplesound memory consists of 4 defined 'steps' (Band 1, Band 2, Band 3 and Band 4), each containing a set of channel data.

In addition to the common data, a ripplesound memory contains the following modifiers:

- Attack - Determines how the output follows the sound input waveform.
- Speed - Determines how quickly the outputs react to the changes in the sound input waveform.

All-Fade Scene

This memory type is only available when Tracking is enabled. It is the same as a Scene memory except that all channels are programmed.

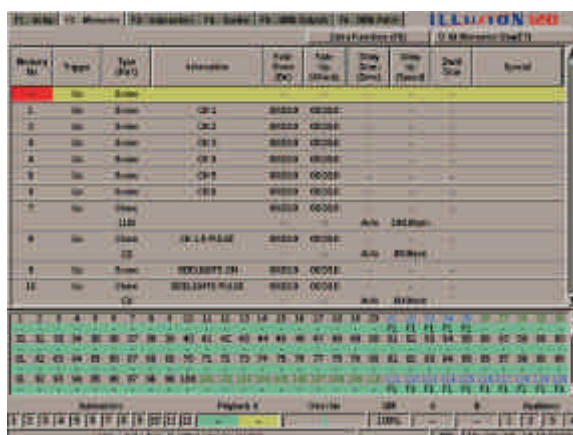


Figure 5 - 3: Memories Screen

Full and Partial Memories

In a Full memory all the desk channels are recorded into the memory. It is not necessary to specifically set all the channels. Those channels not set will be recorded at their current output levels if editing live, or their current programmed levels if editing blind.

In a Partial memory only those channels specifically programmed are recorded into the memory. Unprogrammed channels are treated as transparent (ie. they remain at their previous level until changed by a subsequent memory).

The Channel Data Window shows which channels are programmed and which are unprogrammed.

The desk software determines automatically whether memories are recorded as full or partial as follows:

If Tracking is enabled - All memory types are recorded as partial memories, except for All Fade Scenes where all the channels are recorded.

If Tracking is disabled - Multi-Part Scene memories are recorded as partial memories, all other memory types are recorded as full memories.

Unprogramming Channels

The ability to 'unprogram' channels is only applicable to partial memories.

When Tracking is enabled, or Multi-Part Scene memories are being programmed, it may be necessary to 'unprogram' channels to make them transparent.

To unprogram channels - select the channel(s) in the normal way and then press the @ and CLEAR buttons on the front panel.

For example, if channels 1 to 10 are currently programmed and the following is entered:

1 THRU 5 @ CLEAR

Channels 1 to 5 will become unprogrammed, channels 6 to 10 will remain unaltered.

Excluded Channels

In Desk Setup a channel may be defined as excluded from memory data.

Excluded channels can be selected, and have their levels set in the same way as included channels.

When channel data is saved to a memory, the data for any excluded channels is stored in the memory, but it is not output on the DMX when the memory is output via Playback X, Playback A/B or a submaster.

When channel data is loaded directly onto a submaster, the data for the excluded channels is stored and is output on the DMX when the submaster is raised.



Figure 5 - 4: Enabling Tracking Mode in Desk Setup

Tracking Mode

When Tracking Mode is enabled, the desk works by recording only the changes made to the channel data from one memory to the next. The exception is All Fade Scenes, where all the channels are recorded into the memory.

This results in the feature that when a memory is edited, any changes made to the channel data are reflected forward through subsequent memories, until a memory is encountered where such channels are changed.

Programming Memories in Tracking Mode

The way that the desk provides the Tracking facility is to make use of Partial Memories together with the systematic programming of the memories as follows:

Before programming any memories set Tracking to enabled in Desk Setup (see chapter 3 for details).

Memories should then be programmed in ascending numerical order. As each memory is programmed only the channels which have changed will be recorded into the memory (ie. they are stored as Partial memories).

Editing Memories in Tracking Mode

When Tracking is enabled, and the channel data in a memory is modified, the new channel values will be reflected in subsequent memories (when they are played back), up to the point where a memory containing programmed values for those channels, or an All-Fade Scene is encountered.

Using this method, only the channel data in the edited memory is changed; subsequent memories are not modified.

Playback of Memories in Tracking Mode

When memories are played back in ascending numerical order then those channels not specifically programmed will track through the memories (ie. remain at the same value until changed by a memory).

If the memories are played back out of sequence only those channels programmed in each memory will be affected when the memory is output.

Enabling or Disabling Tracking

WARNING - If the Tracking Mode in Desk Setup is changed after memories have been programmed, the memory data will be modified as follows:

Tracking changed from Disabled to Enabled - All the channels in the memories and memory steps will be marked as programmed.

Tracking changed from Enabled to Disabled - The software will go through each of the programmed memories in ascending numerical order, and change any unprogrammed channels to the last value programmed for that channel. For chase, sound to light and ripplesound memories it will go through each step in order. Any jumps or loops in the memory stack will be ignored.

NOTE

Chases in Tracking Mode

If tracking is enabled, the values for each channel are stored in each step of the chase memory, but a channel is only marked as programmed when the value for the channel is specifically changed. Therefore each channel will either be unprogrammed in every step of the chase or programmed in every step of the chase.

Memory No	Trigger	Type (Part)	Information	Fade Down (Dir)	Fade Up (Attack)	Delay Down (Drive)	Delay Up (Speed)	Dwell Time	Special
--	Go	Scene		-	-	-	-	-	
1	Go	Scene	CH 1	00:03.0	00:03.0	-	-	-	
2	Go	Scene	CH 2	00:03.0	00:03.0	-	-	-	
3	Go	Scene	CH 3	00:03.0	00:03.0	-	-	-	
4	Go	Scene	CH 4	00:03.0	00:03.0	-	-	-	
5	Go	Scene	CH 5	00:03.0	00:03.0	-	-	-	
6	Go	Scene	CH 6	00:03.0	00:03.0	-	-	-	

Figure 5 - 5: Memories Screen showing Soft Function Buttons

The Memories Screen

The Memories screen is used in the programming, editing and playback of memories from the Memory Stack.

To display the Memories screen press the SCREEN FUNCTION key F2 or select the Memories screen selection button using the mouse.

The memory data is displayed in the form of a table with the memory numbers listed in increasing numerical order down the screen.

Unprogrammed memories, if displayed, have an asterisk (*) next to the memory number.

Display Mode Button (F7)

The SCREEN FUNCTION key F7 is used to toggle between the two display modes described below.

All Memories/Stay

All programmed and unprogrammed memories are displayed on the screen. When running the show using the GO button, the screen does not follow the current and next memories.

Programmed Memories/Follow

Only programmed memories are displayed on the screen. When running the show using the GO button, the screen follows the next memory in the stack.

Extra Functions Button (F8)

The SCREEN FUNCTION key F8 is used to display a drop down menu containing the *Extra Functions* options *Insert*, *Jump To*, *Loops*, *Trigger Macro* and *Cancel*. See later this chapter and chapter 7 for further details.

Memory Types

The data displayed for the different memory types is as follows:

For all memory types - the memory number, type, information text, trigger, delay times, fade times and dwell time are displayed on the screen.

For Chase memories - the number of chase steps is displayed under the memory type, and the modifiers are displayed under the delay and fade times.

For Sound to Light or Ripplesound memories - the modifiers are displayed under the delay and fade times.

For Multi-Part Scene memories - the information, delay times, fade times and dwell time for each part are displayed on a separate line below the main memory data. Unprogrammed parts are indicated by an asterisk (*) next to the part number.

Jumps, Loops and Macro Triggers

There is an additional column headed *Special* at the end of each memory, which contains information relating to jumps and loops in the Memory Stack and macro triggers (see chapter 7 for details).

Current and Next Memories

The current memory being output is indicated on the screen by a green highlight bar.

The next memory to be output is indicated on the screen by a yellow highlight bar.

The currently selected field in the memory data table is indicated by a red cursor.

NOTES

Timed Triggers

If the memory trigger is set to *At Time*, the actual time is displayed underneath the Trigger.

Zero Transition Times

If a delay, fade or dwell time is set to zero, it is displayed on the Memory Screen as "-".

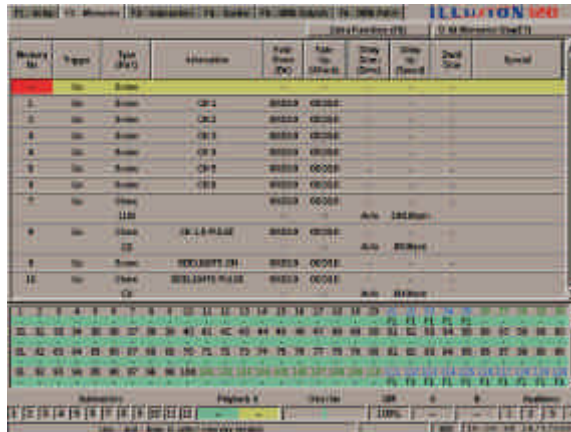


Figure 5 - 6: Memories Screen

Programming Memories

The following pages deal with programming the different memory types described earlier in this chapter.

Any differences in options, display formats etc between Real Time and SMPTE/MIDI Time formats are described at the end of this chapter.

Selecting a Memory

1. If the Memories screen is not on display, press the SCREEN FUNCTION button F2.
2. Use the SCREEN FUNCTION BUTTON F7 to select all memories or programmed memories, as required.
3. Select the required memory using any of the following methods:
 Use the up and down arrow keys on the front panel or external keyboard to scroll up or down the table.
 Press the MEMORY button on the front panel, followed by the required memory number and then ENTER.
 Position the mouse pointer over the required memory and press the left mouse button.
4. In each case the highlight bar moves to the selected memory number.

Programming a Scene Memory

1. Select an unprogrammed memory.
2. Move to the *Trigger* field - select Go button, Automatic or At Time as required.
3. Move to the *Type* field and select Scene (if not already selected).
4. Move to the *Information* field. Enter a textual description of the memory, if required.
5. Set up the transition and dwell times for the memory by moving to the *Delay Down*, *Fade Down*, *Delay Up*, *Fade Up* and *Dwell Time* fields as appropriate and entering the required times.
6. To program the channel data for the memory, press the EDIT LIVE or EDIT BLIND button on the front panel, or right click and select the Edit Live or Edit Blind option from the menu. This opens the Channel Data Window (CDW).
7. Set the channel levels to the required values (see chapter 4).
8. To save the channel data into the currently selected memory, press the SAVE button on the front panel, or right click in the CDW and select the Save option from the menu. The Channel Data Window is closed.

NOTES

Selecting a Memory

When using the up/down cursor keys to scroll through the memory list, moving down from the last memory takes you back to the first, moving up from the first takes you through memory zero to the last memory in the list.

When selecting a memory number directly, if the EDIT LIVE or EDIT BLIND button is pressed instead of the ENTER button, the highlight bar moves to the selected memory and the Channel Data Window is opened.

Editing Live or Blind

If the memory is being edited live, the DMX outputs will change as the channel levels are adjusted. If the memory is being edited blind, the DMX outputs are not affected by setting levels in the CDW.

Timed Triggers

For a memory with a timed trigger, the actual time appears underneath the trigger, and is displayed in hours, minutes and seconds (eg. 21:30:00 represents 9:30 pm).

Transition and Dwell Times

Transition and Dwell times of zero are displayed as '-' on the Memories screen.

Abandoning Channel Edits

To abandon channel data edits made to a memory, press the EDIT LIVE or EDIT BLIND button on the front panel, or right click in the CDW and select the Cancel option.

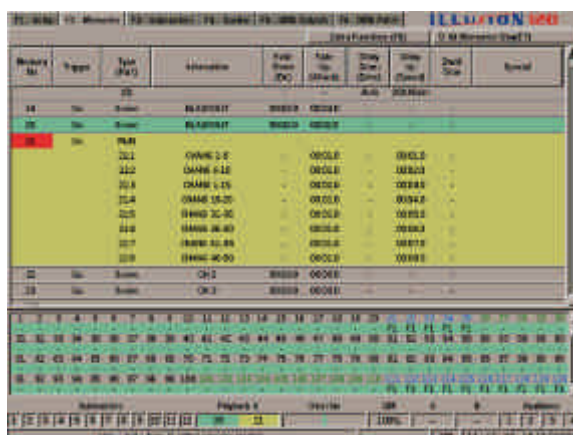


Figure 5 - 7: Memories Screen showing Multi-Part Scene Memory

Programming a Multi-Part Scene Memory

A multi-part scene memory is shown as up to nine lines of data on the memories screen.

The first line contains the memory number, type, information and trigger.

The next eight lines contain the part number, information, transition and dwell times for each of the eight parts of the memory.

1. If the Memories screen is showing programmed memories only, press the F7 button to show all memories.
2. Select an unprogrammed memory.
3. Move to the *Type* field and select Multi-Part Scene. The memory is displayed as nine separate lines of data.
4. Move to the *Information* field. Enter a textual description of the memory, if required.
5. Move to the *Trigger* field - select Go button, Automatic or At Time, as required.
6. Move to the part of the memory to be programmed.
7. Move to the *Information* field for the part. Enter a textual description of the part, if required.
8. Set up the transition and dwell times for the part by moving to the *Delay Down*, *Fade Down*, *Delay Up*, *Fade Up* and *Dwell Time* fields as appropriate and entering the required times.

9. To program the channel data for the part, press the EDIT LIVE or EDIT BLIND button on the front panel, or right click and select the Edit Live or Edit Blind option from the menu. This opens the Channel Data Window (CDW).
10. Set the channel levels to the required values (see chapter 4).
11. To save the channel data into the currently selected part, press the SAVE button on the front panel, or right click in the CDW and select the Save option from the menu. The Channel Data Window is closed.
12. Repeat steps 5 - 10 for each part of the memory to be programmed.

Display of Multi-Part Scenes in the Channel Data Window

When part of a multi-part scene is being edited, any channels which are programmed in other parts of the memory are indicated by an orange background in the value box.

The CDW contains a soft button (F7), which toggles between *Show This Part* and *Show All Parts*.

When *Show This Part* is selected - no additional data is displayed.

When *Show All Parts* is selected - orange bar graphs and/or channel values for channels programmed in the other parts are displayed in orange. If editing live the channels programmed in the other parts are output live on the DMX.

Programming an All-Fade Scene Memory

All-Fade Scene memories are only available when the desk is in Tracking Mode.

In an all-fade scene memory, all the channels are programmed.

Programming an all-fade scene is exactly the same as programming a normal scene memory except that the memory type is set to *All-Fade* instead of *Scene*, and data is recorded for all channels.

NOTES

Channel Data in Multi-Part Scenes

Only those channels changed and marked as programmed are recorded into each part of a multi part scene memory. Channels that are not programmed are transparent.

A channel may be only be programmed in one part of a multi part scene memory.

Attempting to program channels already programmed in other parts of the memory will generate a warning message.

The channel data for a multi-part scene can only be saved into the currently selected part of the memory. Pressing the SAVE AS button generates an error message.

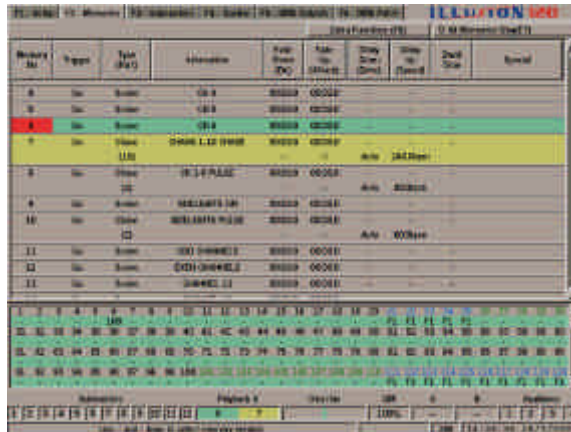


Figure 5 - 8: Memories Screen showing Scenes and Chases

Programming a Chase Memory

1. Select an unprogrammed memory.
2. Move to the *Trigger* field - select Go button, Automatic or At Time as required.
3. Move to the *Type* field and select Chase (if not already selected).
4. Move to the *Information* field. Enter a textual description of the memory, if required.
5. Set up the transition and dwell times for the memory by moving to the *Delay Down*, *Fade Down*, *Delay Up*, *Fade Up* and *Dwell Time* fields as appropriate and entering the required times.
6. Move to the *Direction* field - select Forwards, Backwards or Ping Pong as required.
7. Move to the *Attack* field - select snap, slow attack, slow decay or crossfade as required.
8. Move to the *Drive* field - select Auto, Vari Bass or Manual as required.
9. Move to the *Speed* field - adjust the speed as required.

Programming the Chase Steps

1. To program the first step in the chase, press the EDIT LIVE or EDIT BLIND button on the front panel, or right click and select the Edit Live or Edit Blind option from the menu. This opens the Channel Data Window. Step 1 is indicated as unprogrammed (*).
2. Set the channel levels to the required values (see chapter 4). Select the required build option via the soft button in the CDW header or F4 (see notes at end of this section).
3. Press the SAVE STEP button on the front panel, or select the Save Step button in the CDW. The channel data is saved into the step and a new step is automatically added to the end of the chase.
4. To program the next step, set the channel levels to the required values, then press SAVE STEP.
5. Repeat step 4 until all the steps have been programmed.
6. On the last step of the chase press the SAVE button on the front panel, or right click in the CDW and select the Save option from the menu. The last step is saved and the CDW is closed.

Adjusting Chase Modifiers

To see the effects of adjusting the chase modifiers while previewing the memory:

1. Select a programmed chase memory.
2. Press the PREVIEW button on the front panel to open the Channel Data Window.
3. The changing channel levels can be seen in the CDW. The Modifiers section of the CDW is displayed showing the current modifier values.
4. Adjust the Direction, Attack, Drive and Speed modifiers using the front panel buttons or by clicking on the screen buttons in the CDW with the mouse.
5. To save the new values into the memory press the SAVE button or click on the Save button in the CDW.
6. Press the PREVIEW button to close the CDW.

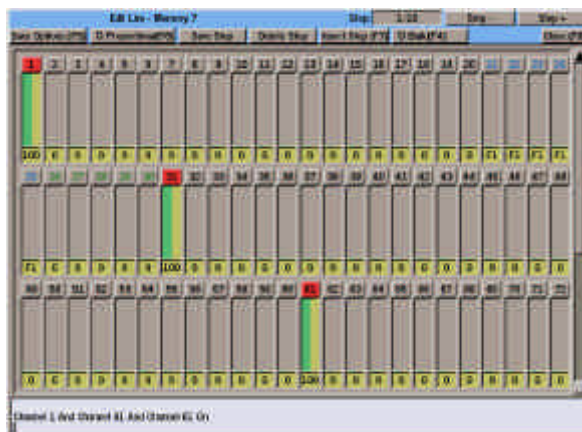


Figure 5 - 9: CDW showing Editing a Chase Memory

Inserting a Step into a Chase

1. Select a programmed chase memory.
2. Press the EDIT LIVE or EDIT BLIND button on the front panel, or right click and select the Edit Live or Edit Blind option from the menu. The CDW is opened showing Step 1.
3. Use the STEP + or STEP - buttons to select a step.
4. Press the Insert Step button in the CDW, or F7 on the front panel. A new step is inserted after the selected step, and shown in the CDW.
5. Set the channel levels to the required values.
6. Select the Save Step button in the CDW or press the SAVE STEP button on the front panel to save the step into the memory.
7. To insert more steps - repeat steps 3 - 6.
8. Press the SAVE button to save the complete memory and close the CDW.

Deleting a Step from a Chase

1. Select a programmed chase memory.
2. Press the EDIT LIVE or EDIT BLIND button on the front panel, or right click and select the Edit Live or Edit Blind option from the menu. The Channel Data Window is opened and shows Step 1.
3. Use the STEP + or STEP - buttons to select the step to be deleted.
4. Press the DELETE STEP button. The selected step is deleted and the Channel Data Window shows the previous step (except if step 1 is deleted, in which case it shows the new step 1).

NOTES

Build and Non-Build Chases

When programming or editing a chase memory, there is a soft button in the CDW which toggles between Build and Non-Build modes.

Build mode - when a new step is added, the channel data remains as in the previous step.

Non-Build mode - when a new step is added, the channel data is cleared to zero.

NOTES

Chase Modifiers

The Direction, Attack, Drive and Speed modifiers can also be set using the DIRECTION, ATTACK and DRIVE buttons and wheel on the front panel.

Chase Drives

Auto - progresses automatically without any external input.

Vari - speeds up and slows down according to the tempo of the sound input, with the basic speed set by the chase speed.

Bass - each step is triggered by a bass beat of a sound input.

Manual - requires a STEP+ or STEP- button press to move to next step.

Inserting and Deleting Steps

When a step is inserted or deleted, any steps after the inserted or deleted step are renumbered accordingly.

When a chase contains a single step, it cannot be deleted using DELETE STEP. The only way that the step can be deleted is to delete the entire memory.

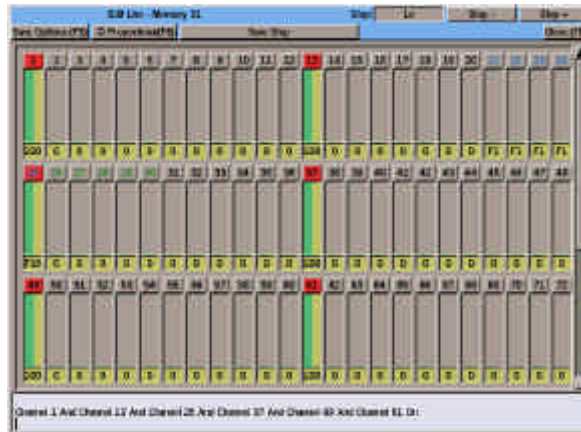


Figure 5 - 10: CDW showing Editing a Sound to Light Memory

Programming a Sound to Light Memory

1. Select an unprogrammed memory.
2. Move to the *Trigger* field - select Go button, Automatic or At Time as required.
3. Move to the *Type* field and select Sound to Light (S/L).
4. Move to the *Information* field. Enter a textual description of the memory.
5. Set up the transition and dwell times for the memory by moving to the *Delay Down*, *Fade Down*, *Delay Up*, *Fade Up* and *Dwell Time* fields as appropriate and entering the required times.
6. Move to the *Attack* field - select the required option.
7. Move to the *Speed* field - adjust the value as required.
8. Press the EDIT LIVE or EDIT BLIND button on the front panel, or right click and select the Edit Live or Edit Blind option from the menu. The Channel Data Window is opened showing the Lo Step.
9. Set the channel levels to the required values.
10. Select the Save Step button in the CDW or press the SAVE STEP button on the front panel to save the step into the memory.

11. To program the remaining steps (Lo-Mid, Hi-Mid, and Hi) use the STEP+ and STEP- buttons to select the required step, then set the channel levels to the required values. Select Save Step, to save the step into the memory.
12. To save the complete memory data into the currently selected memory, press the SAVE button on the front panel, or right click in the CDW and select the Save option from the menu. The Channel Data window is closed.

Programming a Ripplesound Memory

Programming a ripplesound memory is exactly the same as programming a sound to light memory, except that the four 'steps' are called Band 1, Band 2, Band 3 and Band 4.

Adjusting Modifiers

To see the effects of adjusting the modifiers while previewing a sound to light or ripplesound memory:

1. Ensure that a sound input is connected to the desk.
2. Select a programmed sound to light or ripplesound memory.
3. Press the PREVIEW button on the front panel to open the Channel Data Window.
4. The changing channel levels can be seen in the CDW. The Modifiers section of the CDW is displayed showing the current modifier values.
5. Adjust the Attack and Speed modifiers using the front panel buttons and wheel or by clicking on the screen buttons in the CDW with the mouse.
6. To save the new values into the memory press the SAVE button or click on the Save button in the CDW.
7. Press the PREVIEW button to close the CDW.

NOTE

Attack and Speed Modifiers

The Attack and Speed modifiers can also be set using the ATTACK button and wheel on the front panel.

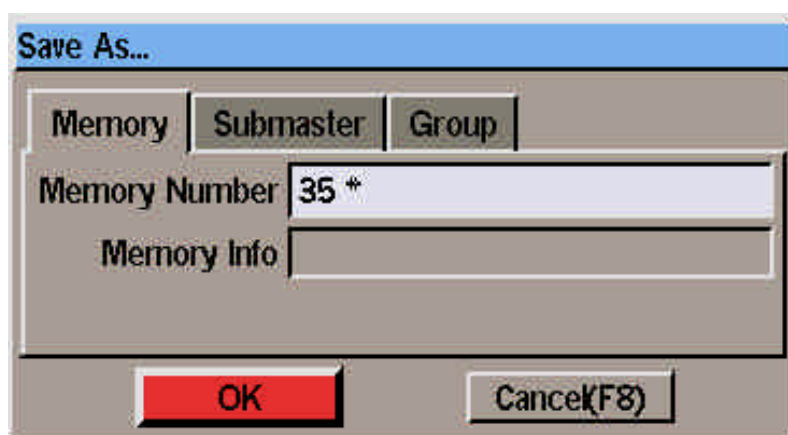


Figure 5 - 11: Save As Window (Memory)

Saving Channel Data

From the CDW, the channel data can be saved to a memory, or directly onto a submaster, if required.

When editing a chase, sound to light or ripplesound memory, the channel data for the current step is saved into the specified destination.

Channel data saved to a specified memory is always saved as a Scene.

When editing live, various save options are provided via the *Save Options* button displayed in the CDW header.

If a memory (or submaster) is accidentally overwritten with channel data, this can be reversed using the UNDO EDIT button.

These functions are described in the following sections.

Saving Channel Data to a Scene Memory

1. Use the STEP+ or STEP- buttons to select the required step (if appropriate).
2. Press the SAVE AS button on the front panel, or right click in the CDW and select the *Save As* option from the menu. The *Save As* window is displayed.
3. Select the *Memory* option by pressing the MEMORY button or select the *Memory* tab.
4. Enter the destination memory number, then select the OK button in the window.

If the destination memory is unprogrammed, the channel data is saved into the memory, and the popup window is closed.

If the destination memory is already programmed, a warning message is displayed. Select *Overwrite* or *Cancel* as required.

Saving Channel Data to a Submaster

1. Use the STEP+ or STEP- buttons to select the required step (if appropriate).
2. Press the SAVE AS button on the front panel, or right click in the CDW and select the *Save As* option from the menu. The *Save As* window is displayed.
3. Select the *Submaster* option by pressing the SUBMASTER button or select the *Submaster* tab.
4. Enter the destination submaster (page and submaster number) then select the OK button in the window

or

Select the submaster page using the PAGE UP or PAGE DOWN buttons, then press the required SUBMASTER FLASH button.

If the specified submaster is unprogrammed, the channel data is loaded onto the submaster and the popup window is closed.

If the specified submaster is already programmed, a warning message is displayed. Select *overwrite* or *cancel* as required.

NOTE

Save As.. Window

When the *Save As.. Window* is opened, the next unprogrammed memory number is automatically displayed in the *Memory Number* field.

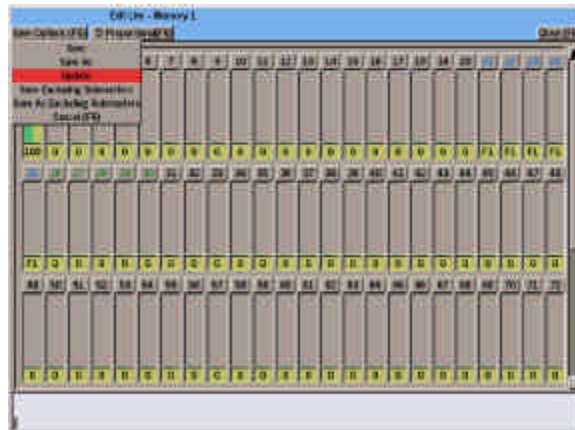


Figure 5 - 12: CDW showing Save Options Menu

Save Options

When channel data is being edited live in the CDW, various save options are available to the user.

Press F5 or click on the *Save Options* button in the CDW header to display a menu of available options.

The actual options available will depend on the item being edited. Each of the save options is described below:

- Save

This option performs the normal Save operation and is equivalent to pressing the SAVE button.

- Save As

This option performs the normal Save As operation and is equivalent to pressing the SAVE AS button.

- Update

This option is only available when editing a memory or submaster. Any channels which have been changed are saved into the item being edited; any outputs originating from submasters or Playback A/B are not saved.

- Update Step

This option is only available when editing a chase, sound to light or ripplesound memory. Any channels which have been changed are saved into the step being edited; any outputs originating from submasters or Playback A/B are not saved.

- Save Excluding Submasters

This option is the same as **Save** except a popup window is displayed allowing the outputs from individual submasters and Playback A/B to be excluded prior to saving the channel data (see following section).

- Save As Excluding Submasters

This option is the same as **Save As** except a popup window is displayed allowing the outputs from individual submasters and Playback A/B to be excluded prior to saving the channel data to a specified destination (see following section).

- Save Step Excluding Submasters

This option is only available when editing a chase, sound to light or ripplesound memory, and is the same as the **Save Step** function except a popup window is displayed allowing the outputs from individual submasters and Playback A/B to be excluded prior to saving the channel data to the current step (see following section).

- Cancel (F8)

This option closes the *Save Options* menu.

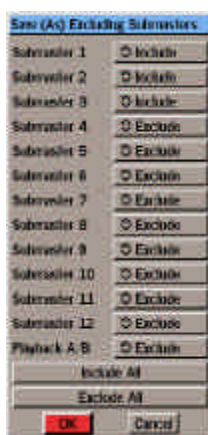


Figure 5 - 13: Save (As) Excluding Submasters Window

Save (As) Excluding Submasters Window

This popup window is displayed when the *Save Excluding Submasters*, *Save As Excluding Submasters* or *Save Step Excluding Submasters* option is selected from the *Save Options* menu (see previous section).

It allows the channel data outputs resulting from each of the submasters and Playback A/B to be selectively included or excluded in the channel data prior to it being saved.

Use the cursor keys or mouse to select the required submaster or Playback A/B and select *Include* or *Exclude* as required.

Select the *Include All* button to set all the submasters and Playback fields to *Include*.

Select the *Exclude All* button to set all the submasters and Playback fields to *Exclude*.

Select the *OK* button to confirm the settings in the window and save the channel data.

Select the *Cancel* button to cancel the operation and close the window.

Undoing an Accidental Save

If channel data is accidentally saved to a memory (or submaster) it is possible to reverse the save operation using the UNDO EDIT button.

Press the UNDO EDIT button. The *Undo Save* window is displayed.

Select the *Undo Save Only* button to restore the channel data in the memory or submaster to its previous values.

Select the *Undo Save & Restore Channel Data* button to restore the channel data in the memory or submaster to its previous values and open the CDW as follows:

If previously editing live - the CDW is opened (as if the CHANNEL button was pressed) and the channel data which was saved is added into the channel data in the CDW and output live.

If previously editing blind - the CDW is opened in a special blind mode and the channel data which was saved is added into the channel data in the CDW. The channel data is not output live.

Select the *Cancel* button to cancel the undo save operation.

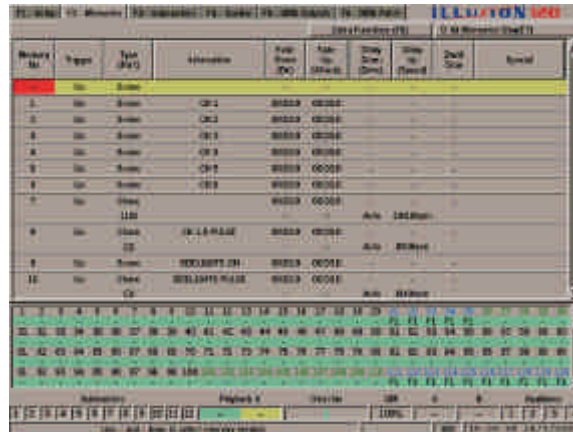


Figure 5 - 14: Memories Screen

Modifying Memory Data

When any memory data (other than the channel data) is edited, a modify flag (M) is displayed next to the memory number.

To commit the edits to the memory, press the SAVE button on the front panel, or right click and select the Save option from the menu. The edits are saved and the modify flag is removed.

If memory data has been modified and not saved, and an attempt is made to change memory number or to display a different screen on the monitor, a warning message is displayed on the screen.

The modifications can be saved or lost. Select the required button in the popup window. The modify flag is removed and the popup window closed.

Editing Memories Live

When a programmed memory is selected and the EDIT LIVE button pressed, the selected memory is faded in and output live on the DMX.

The current memory on the Memory Stack is temporarily removed from the outputs (except when Tracking is enabled, where it remains on the outputs).

Any changes made to the channel data are visible in the Channel Data Window and appear live on the outputs.

Editing Memories Blind

When a programmed memory is selected and the EDIT BLIND button is pressed, the selected memory becomes the next memory. The current memory on the Memory Stack and the DMX outputs remain unaffected.

Any changes made to the channel data are only visible in the Channel Data Window and do not affect the DMX outputs.

Switching between Live and Blind Editing

When editing a memory live or blind with the CDW open, pressing the 'other' Edit button on the front panel will switch the edit mode.

The lights in the two EDIT buttons will change state, the text in the CDW header will show the new edit mode and the bar graphs or numbers in the CDW will change colours accordingly.

If a memory is being edited blind and the EDIT LIVE button is pressed, the selected memory will be output live on the DMX.

If a memory is being edited live and the EDIT BLIND button is pressed, the selected memory is removed from the outputs. Any subsequent changes made to the channel levels will only be reflected in the CDW. The DMX outputs will be unaffected.

Changing the Type of a Programmed Memory

WARNING - changing a programmed memory's type may have serious consequences on the memory data stored. The results of changing memory type are detailed below.

- Scene to Multi-Part Scene

The channel data and transition times for the scene are copied into part 1 of the multi-part scene. Parts 2 - 8 are unprogrammed.

- Scene to Chase

The channel data for the scene is copied into step 1 of the chase.

- Scene to Sound to Light

The channel data for the scene memory is copied into the Lo 'step'. The channel data in the other three 'steps' is set to zero if Tracking is disabled, or zero and unprogrammed if Tracking is enabled.

- Scene to Ripplesound

The channel data for the scene memory is copied into the Band 1 'step'. The channel data in the other three 'steps' is set to zero if Tracking is disabled, or zero and unprogrammed if Tracking is enabled.

- Scene to All-Fade Scene

All programmed channels are copied, all unprogrammed channels are set to zero and programmed.

- Multi-Part Scene to Scene

The channel data for each programmed part is combined into a single set of channel data, with any unprogrammed channels set to zero.

- Multi-Part Scene to Chase

The multi-part scene memory is converted into a scene, and then the scene is converted into a chase, as described above.

- Multi-Part Scene to Sound to Light

The multi-part scene memory is converted into a scene, and then the scene is converted into a sound to light, as described above.

- Multi-Part Scene to Ripplesound

The multi-part scene memory is converted into a scene and then the scene is converted into a ripplesound.

- Multi-Part Scene to All-Fade Scene

As for multi-part scene to scene except that all unprogrammed channels are set to zero.

- Chase to Scene

The channel data for step 1 becomes the channel data of the scene memory. All other steps are lost.

- Chase to Multi-Part Scene

The chase memory is converted into a scene, and then the scene is converted into a multi-part scene.

- Chase to Sound to Light

The channel data for the first 4 steps of the chase are copied into the Lo, Lo-Mid, Hi-Mid and Hi 'steps' respectively. All other steps from the chase are lost. If the chase was less than 4 steps long, the channel data in the extra 'steps' in the sound to light memory are set to zero if Tracking is disabled or zero and unprogrammed if Tracking is enabled.

- Chase to Ripplesound

The channel data for the first 4 steps of the chase are copied into the Band 1, Band 2, Band 3 and Band 4 'steps' respectively. All other steps from the chase are lost. If the chase is less than 4 steps long, the channel data for the extra 'steps' in the ripplesound memory are set to zero if Tracking is disabled or zero and unprogrammed if Tracking is enabled.

- Chase to All-Fade Scene

As for chase to scene except that all unprogrammed channels are set to zero.

- Sound to Light to Scene

The channel data from the Lo 'step' is copied into the channel data for the scene. All other 'steps' from the sound to light memory are lost.

- Sound to Light to Multi-Part Scene

The sound to light memory is converted into a scene, and then the scene is converted into a multi-part scene, as described above.

- Sound to Light to Chase

The channel data for the four 'steps' is copied into steps 1,2,3 and 4 of the chase. The memory becomes a four step chase.

- Sound to Light to Ripplesound

The channel data for the Lo, Lo-Mid, Hi-Mid and Hi 'steps' are copied into the Band 1, Band 2, Band 3 and Band 4 'steps' respectively.

- Sound to Light to All-Fade Scene

As for sound to light to scene except that all unprogrammed channels are set to zero.

- Ripplesound to Scene

The channel data from the Band 1 'step' is copied into the scene. All other 'steps' from the ripplesound memory are lost.

- Ripplesound to Multi-Part Scene

The ripplesound memory is converted into a scene, and then the scene is converted into a multi-part scene, as described above.

- Ripplesound to Chase

The channel data from Band 1, Band 2, Band 3 and Band 4 'steps' are copied into steps 1,2,3 and 4 respectively. The memory becomes a four step chase.

- Ripplesound to Sound to Light

The channel data from Band 1, Band 2, Band 3 and Band 4 'steps' are copied into the Lo, Lo-Mid, Hi-Mid and Hi 'steps' respectively.

- Ripplesound to All-Fade Scene

As for ripplesound to scene except that all unprogrammed channels are set to zero.

- All-Fade Scene to other Types

The all-fade scene is converted into a scene, then the scene is converted into the other memory type as described above.

NOTE

All Fade Scenes

All-Fade scenes are only available if Tracking is enabled.

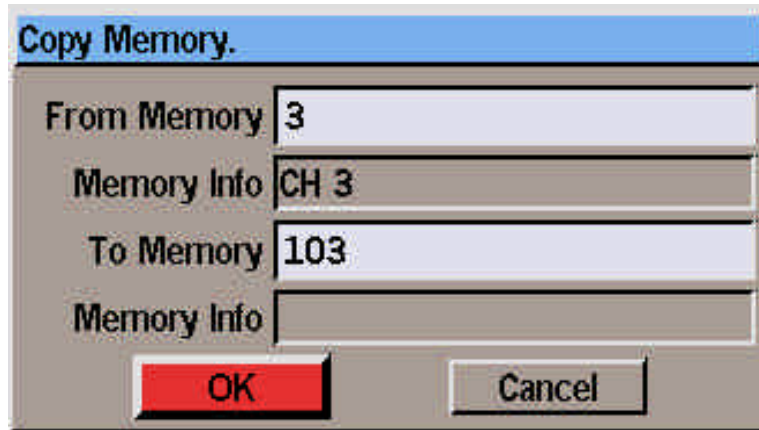


Figure 5 - 15: Copy Memory Window

Copying Memories

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

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

If there is not sufficient memory available to perform the copy operation a warning message is displayed on the screen.

Copying to a Memory

1. Select an unprogrammed memory
2. Press the COPY button on the front panel, or right click and select the Copy option from the menu. A window is displayed requesting a memory number to copy from.
3. Enter the source memory number in the field provided and then select the OK button in the window.

If a valid source memory is entered, the source memory will be copied into the currently selected memory and the Copy window closed.

If the source memory number specified is invalid, or the source memory is unprogrammed, an error message is displayed.

Copying from a Memory

1. Select a programmed memory.
2. Press the COPY button on the front panel, or right click and select the Copy option from the menu. A window is displayed requesting a memory number to copy to.
3. Enter the destination memory number in the field provided, then select the OK button in the window.

If the destination memory is unprogrammed, the currently selected memory is copied into the destination memory and the copy window is closed.

If the destination memory is programmed, a warning message is displayed. Select overwrite to overwrite the destination memory.

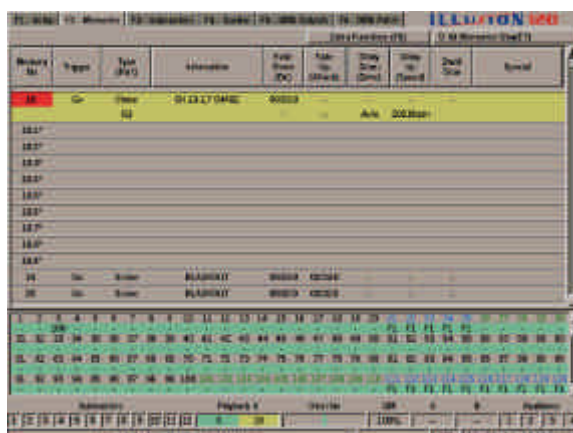


Figure 5 - 16: Memories Screen showing Inserts

Inserting Memories

The desk provides the facility to insert nine point memories between two whole number memories.

For example, memory numbers 3.1, 3.2, 3.3 ... 3.9 may be inserted between memories 3 and 4.

Select a whole number memory. Press the F8 button on the front panel and select the Insert option from the menu, or right click and select the Insert option from the menu. The point memories will be inserted after the selected memory.

NOTE

Inserting Memories

The Memory screen will switch automatically to showing all memories when the Insert function is performed, so that the inserted memories are visible on the screen.

Once memories have been inserted, they cannot be removed. They can be renumbered in Super User, if required (see chapter 10).

If an attempt is made to insert memories where they already exist, an error message is displayed.

Previewing a Memory

Previewing a memory allows the channel data for the memory to be examined without affecting the outputs. When previewing it is not possible to edit the channel data.

Select a programmed memory. Press the PREVIEW button, or right click and select the *Preview* option from the menu. The light in the PREVIEW button is illuminated and the Channel Data Window is opened.

To preview other memories in the memory stack, use the left and right arrow keys or click on the *Previous* or *Next* buttons in the CDW header.

To exit Preview mode, press the PREVIEW button. The light in the PREVIEW button goes out, the Channel Data Window is closed.

NOTES

Previewing Chases

If a chase is previewed, it 'runs' at the programmed speed, direction, attack etc.

Previewing Sound to Light Memories

If a sound to light or ripplesound memory is previewed, it 'runs', providing there is a sound input connected to the desk.

Previewing Multi-Part Scenes

The whole memory or individual parts may be previewed by selecting the memory number or part number prior to pressing the PREVIEW button.

Deleting a Memory

Select a programmed memory, then press the CLEAR button on the front panel, or right click and select the *Clear* option from the menu. A confirmation window is displayed.

Select the *Delete* button to confirm deletion of the memory or the *Cancel* button to abandon the operation.

NOTES

Deleting Memories

If a deleted memory had previously been transferred to one or more submasters, the relevant submaster(s) are also cleared.

If a deleted memory was the first or last memory in a loop in the memory stack, an additional warning is displayed in the confirmation window. Deleting the memory also deletes the loop.



Figure 5 - 17: Transfer Window

Transferring Memories onto Submasters

Programmed memories can be transferred onto submasters and then output by raising the corresponding submaster fader.

Transferring a Memory

1. Select a programmed memory.
2. Press the TRANSFER button on the front panel, or right click and select the Transfer option from the menu. A Transfer Window is displayed showing the memory number, the submaster number and its associated parameters.
3. Enter the required submaster page and number in the field provided.
4. Adjust the other submaster parameters, if required.
5. Select the OK button in the Transfer Window to complete the transfer operation.

NOTES

Transferring Memories to Submasters

Multi-Part Scenes cannot be transferred onto submasters. An error message is displayed if this is attempted.

Confirmation has to be given before a memory can be transferred onto a submaster containing channel data.

Confirmation is not required when transferring a memory onto a submaster which already contains a memory.

When a memory is transferred onto a submaster, its information text is automatically copied into the information field for the submaster.

If the ENTER button is pressed after entering the memory number in the Transfer Window, the OK button is actioned immediately.

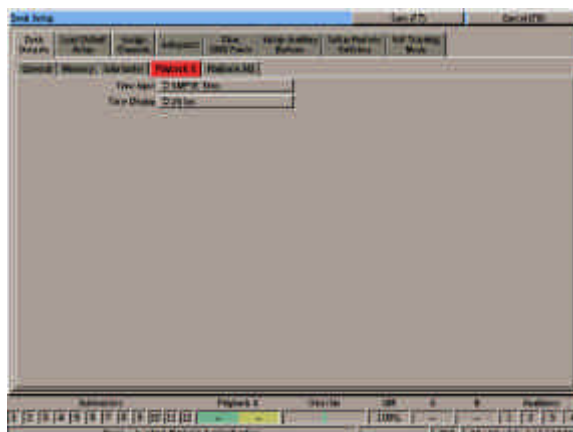


Figure 5 - 18: Setting Time Input Mode in Desk Defaults

SMPTE/MIDI Time Modes

This section describes the differences in options, display formats, operation etc. when *Time Input* is set to *SMPTE Time* or *MIDI Time* in *Desk Setup* (see *Playback X Defaults* in chapter 3 for further details).

Memory Triggers

When *Time Input* is set to *Real Time*, the memory triggers available are *Go*, *Automatic* and *At Time*. If the Trigger is set to *At Time* the start time is specified and displayed in the format **hh:mm:ss**.

When *Time Input* is set to *SMPTE Time* or *MIDI Time*, the memory triggers available are *Automatic* and *At Time* only. If the Trigger is set to *At Time* the start time is specified and displayed in the format **hh:mm:ss:ff**, where ff is frames.

Transition Times

On the Memories screen, the transition times (delay, fade and dwell times) are displayed as follows:

When *Time Input* is set to *Real Time*, the times are displayed in the format **mm:ss.t** where t is tenths of seconds.

When *Time Input* is set to *SMPTE* or *MIDI Time*, the times are displayed in the format **mm:ss.ff** where ff is the number of frames.

Programming Memories

When programming memories with an *At Time* trigger in SMPTE or MIDI time modes, the start time is specified and displayed in hours, minutes, seconds and frames (see earlier).

This start time is then fixed and can only be adjusted by the user.

It is possible to specify a start time which would overlap a previous memory and to program memories in a non-chronological order although this is not recommended practice.

A memory with an *At Time* trigger has higher priority and will be triggered when the incoming SMPTE or MIDI timecode signal equals the programmed start time, regardless of the current position in the memory stack.

Editing Memories

If the start time of a memory is modified, the duration of a memory is changed (by altering the delay, fade or dwell times), or memories are added or removed from the memory stack - all other memories with *At Time* triggers will not be affected.

Jumps

Jumps can be programmed into the memory stack in all *Time Input* modes (see chapter 7).

A memory which is jumped to will only run immediately if its trigger is set to *Automatic*.

Loops

Loops can be programmed into the memory stack in all *Time Input* modes (see chapter 7).

When the desk is in SMPTE or MIDI mode - the first memory in a loop can have an *Automatic* or *At Time* trigger. The *Loop Trigger* is always Automatic.

Display of SMPTE and MIDI Timecode

When the desk is in SMPTE Time or MIDI Time modes the timecode value (whether generated internally or externally) is displayed in the Fade Status Bar on the monitor screen.

The Override field is replaced by the Timecode field. The Timecode is displayed in the format **hh:mm:ss.ff**.

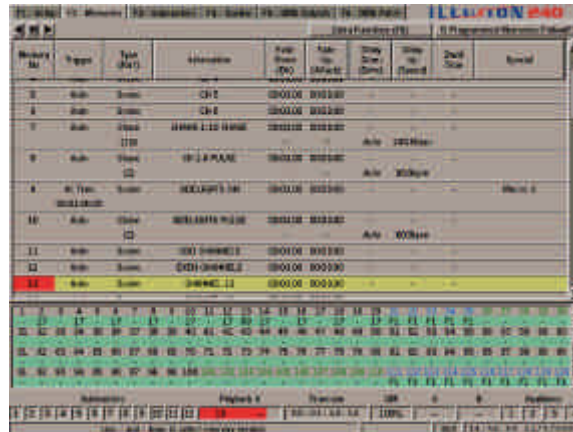


Figure 5 - 19: Memories Screen (SMPTE Time Mode)

Running SMPTE/MIDI Shows

When the desk is running in SMPTE or MIDI time mode, there is an option available to choose between an *Internal* or *External* time source.

The Internal time source allows shows which are programmed in SMPTE or MIDI time modes to be tested manually when the external SMPTE or MIDI time code signal is not available.

The External time source is used when a SMPTE or MIDI time code signal is connected to the desk.

Selecting the Time Source

From the Memories screen - select the *Extra Functions* button, then select the *Internal Timecode* or *External Timecode* option from the menu.

From the CueLine screen - select the soft button displayed to the right of the zoom buttons. This button toggles between *Internal* and *External*.

Internal Time Source

When the time source is set to *Internal*, the desk generates the required SMPTE or MIDI timecode signal internally.

The GO, PAUSE and GO PREVIOUS buttons on the front panel are then used to play, pause and reset the timecode respectively.

The OVERRIDE control on the front panel is used to speed up or slow down the timecode signal.

Three soft buttons are also provided on the Memories and CueLine screens to play, pause and reset the timecode signal.

External Time Source

When the time source is set to *External*, the show can only be run if a suitable external SMPTE or MIDI timecode signal is provided.

The GO, PAUSE and GO PREVIOUS buttons and OVERRIDE control on the front panel are disabled.

The Playback X MASTER fader works as normal.

Changing Time Input Mode

If memories have been programmed and the *Time Input* mode is changed in *Desk Setup* the trigger data for the memories will be modified as follows:

- Real Time to SMPTE
Go triggers are changed to *Automatic*. *Automatic* triggers stay the same. *At Time* triggers remain the same; the number of frames is set to zero (eg. 12:34:56 is converted to 12:34:56.00).
- Real Time to MIDI
Go triggers are changed to *Automatic*. *Automatic* triggers stay the same. *At Time* triggers remain the same; the number of frames is set to zero.
- SMPTE to Real Time
Automatic triggers stay the same. *At Time* triggers are rounded to the nearest second (eg 23:12:39.23 is rounded to 23:12:40).
- MIDI to Real Time
Automatic triggers stay the same. *At Time* triggers are rounded to the nearest second.
- SMPTE to MIDI
No changes.
- MIDI to SMPTE
No changes.

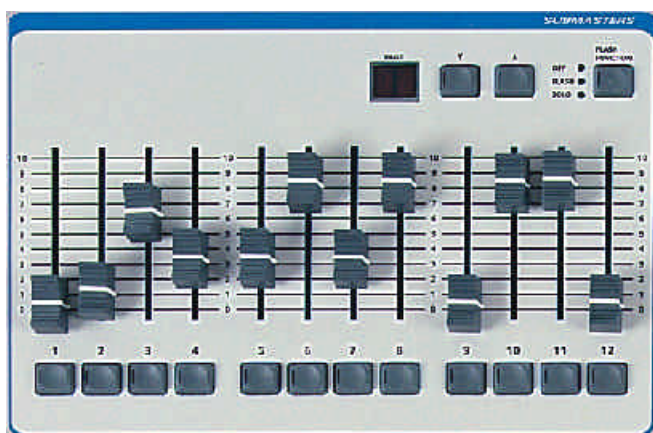


Figure 6 - 1: Submaster Controls

Introduction

The Illusion lighting desk provides 9 (20) pages of 12 submasters giving a total of 108 (240) submasters.

In the manual submasters are referenced by a page number followed by the submaster number (eg 1-1, 1-2, 1-3).

On the monitor screen submasters are shown as 1.1, 1.2, 1.3 etc.

The PAGE UP and PAGE DOWN buttons on the front panel are used to select the required submaster page. The soft buttons on the Submaster screen or the Page Up and Page Down keys on an external keyboard can also be used.

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

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

Each submaster has its own fade times, trigger points (if appropriate) and other parameters (depending on the type of memory transferred).

Submasters can also be used to trigger specified macros.

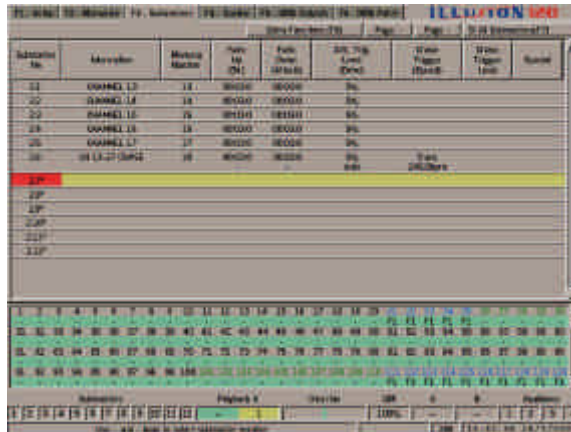


Figure 6 - 2: Submaster Screen - All Submasters Display

The Submaster Screen

The Submaster screen is used in the programming, editing and playback of submasters.

Press the SCREEN FUNCTION key F3 or select the Submaster screen selection button using the mouse to display the Submaster screen on the monitor.

The SCREEN FUNCTION key F7 or the soft button on the Submaster screen is used to toggle between the two display modes of **All Submasters** and **Active Submasters**.

The SCREEN FUNCTION key F8 or the soft button on the Submaster screen is used to display a drop down menu for items in the Special column of the Submaster screen.

The PAGE UP and PAGE DOWN buttons or the soft buttons on the Submaster Screen are used to change page. The current page is indicated by the seven segment display on the front panel.

The two display modes are described in the following sections.

All Submasters Display

This display mode is used primarily when 'programming' or editing the submasters.

A table containing the data for one of the nine (twenty) pages of submasters is displayed on the screen.

The page number is indicated by the seven segment display.

Both unprogrammed and programmed submasters are shown in the table.

A yellow highlight bar is displayed on the submaster which is currently selected on the monitor screen.

Active Submasters Display

This display mode is used primarily when 'running' the show and playing back data on the submasters.

The table indicates which of the 108 (240) submasters are currently active on the 12 physical submasters on the front panel.

It also shows which memories or channel data are loaded onto these submasters, if any.

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

Where page overlay is in operation (i.e. the output from a submaster is not from the current page), the submaster number field for the appropriate submaster(s) is highlighted in orange.

Example - Set the submaster page to page 1 and raise the first 4 submaster faders to full. Change to page 2. The submaster screen will show the following submasters:

1.1, 1.2, 1.3, 1.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12.

A yellow highlight bar is displayed on the submaster which is currently selected on the monitor screen.

Submaster No.	Memory	Memory Matrix	Fader	Fader Level	Fader Time	Trigger Matrix	Trigger Level	Speed
1.1	SH 1	1	00000	00000	20%			
1.2	SH 2	2	00000	00000	20%			
1.3	SH 3	3	00000	00000	20%			
1.4	SH 4	4	00000	00000	20%			
1.5	SH 5	5	00000	00000	20%			
1.6	SH 6	6	00000	00000	20%			
1.7	SH 7	7	00000	00000	20%			
1.8	SH 8	8	00000	00000	20%			
1.9	SH 9	9	00000	00000	20%			
1.10	SH 10	10	00000	00000	20%			
1.11	SH 11	11	00000	00000	20%			
1.12	SH 12	12	00000	00000	20%			

Figure 6 - 3: Submaster Screen - Active Submasters Display

Submaster Data

The following information is displayed for each submaster in both of the submaster display modes described earlier.

- SUBMASTER NUMBER

This is displayed as Page and Submaster (eg 1-1, 1-2, ... 9-12). Unprogrammed submasters have an asterisk (*) next to the submaster number.

- INFORMATION

A text string describes the data on the submaster. When a memory is transferred onto a submaster, its information text is copied automatically into this field.

- MEMORY NUMBER

This field shows the memory number, if a memory has been transferred onto the submaster, "CD" if there is channel data loaded onto the submaster, otherwise it is blank.

- FADE UP TIME

This field shows the time taken to fade up the channel data or memory as the submaster is moved from zero to full.

- FADE DOWN TIME

This field shows the time taken to fade down the channel data or memory as the submaster is moved from full to zero.

- ATTRIBUTE TRIGGER LEVEL

This field shows the value at which attribute and scroller channels are triggered when the submaster is raised.

- CHASE TRIGGER

This field shows the method of triggering the chase, if a Chase memory is loaded onto the submaster, otherwise it is blank.

- CHASE TRIGGER LEVEL

If a Chase memory is loaded onto the submaster and the Chase Trigger is set to Fader Level, this field shows the level at which the Chase will start running.

- SPECIAL

This column is used for extra functions which can be associated with submasters. Currently it is only used for Macro Triggers.

Modifiers

If a Chase, Sound to Light or Ripplesound memory has been transferred onto the submaster, a second line of data is displayed containing the following modifiers:

- DIRECTION

Forwards, Backwards or Ping-Pong (Chases only).

- ATTACK

Snap, Slow Attack, Slow Decay or Crossfade.

- DRIVE

Auto, Vari, Bass or Manual (Chases only)

- SPEED

The Chase Speed or the Speed (response) for a Sound to Light or Ripplesound memory.

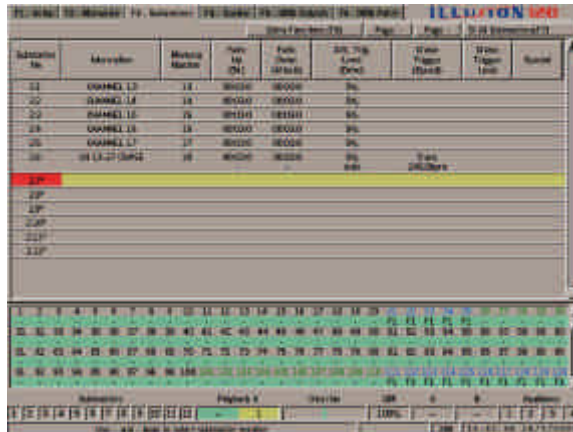


Figure 6 - 4: Submaster Screen

Programming Submasters

The following sections describe how to program submasters with channel data or memories, and how to adjust the various submaster parameters as required.

It also describes how to save channel data displayed in the Channel Data Window to a specified submaster, or to a scene memory.

Selecting a Submaster

1. Press the SCREEN FUNCTION BUTTON F3 to display the Submaster screen (if not currently displayed).
2. Use the SCREEN FUNCTION BUTTON F7 to select the required display mode (see earlier).
3. Use the PAGE UP or PAGE DOWN buttons, or the soft buttons in the Submaster screen to select the required page.
4. Use the up and down arrow keys on the front panel or external keyboard to scroll up or down the table
or
Press the SUBMASTER button on the front panel, enter the required submaster number (eg. 2.3 for page 2 submaster 3), then press the ENTER button on the front panel
or
Position the mouse pointer over the required submaster and press the left mouse button.
5. In each case the yellow highlight bar moves onto the selected submaster.

Loading Channel Data onto a Submaster

A single set of channel data may be loaded directly onto any submaster.

1. Select an unprogrammed submaster.
2. Press the EDIT LIVE or EDIT BLIND button, or right click and select the Edit Live or Edit Blind option from the menu. The Channel Data Window (CDW) is opened on the monitor screen.
3. Set the channel levels to the required values (see chapter 4).
4. Press the SAVE button on the front panel, or right click in the CDW and select the Save option from the menu. The Channel Data Window is closed.

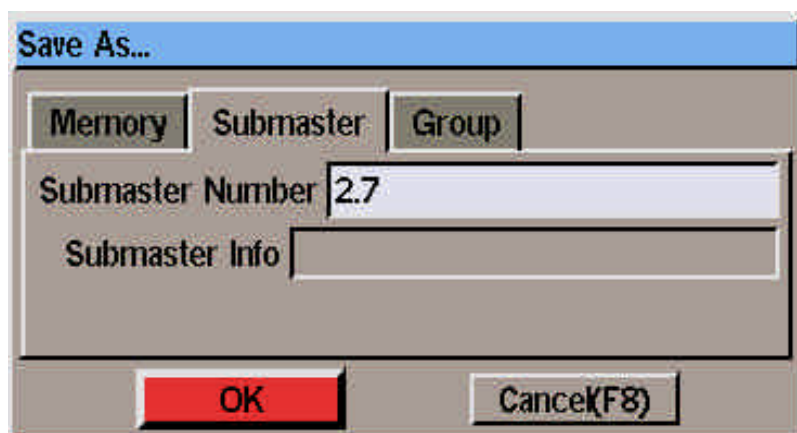


Figure 6 - 5: Save As Window (Submaster)

Saving Channel Data to a different Submaster

The channel data in the CDW may be saved to a different submaster, if required.

1. Set the channel levels to the required values (see chapter 4).
2. Press the SAVE AS button on the front panel, or right click in the CDW and select the Save As option from the menu. A popup window is opened on the screen.
3. Select the *Submaster* option, enter the destination submaster, then select the OK button in the popup window, or

Select the submaster page using the PAGE UP or PAGE DOWN buttons, then press the appropriate SUBMASTER FLASH button.

If the destination submaster is unprogrammed, the channel data is loaded onto the specified submaster, and the popup window closed.

If the specified submaster is already loaded with channel data or a memory, a warning message is displayed. Overwrite the submaster data or cancel as required.

Saving Channel Data to a Scene Memory

The channel data in the CDW may be saved to a specified memory as a scene, if required.

1. Set the channel levels to the required values (see chapter 4).
2. Press the SAVE AS button on the front panel, or right click in the CDW and select the Save As option from the menu. This opens a popup window on the screen.
3. Select the *Memory* option, enter the destination memory number, then select the OK button in the popup window.

If the specified memory is unprogrammed, the channel data is saved into the destination memory and the popup window closed.

If the specified memory is already programmed, a warning message is displayed. Select overwrite or cancel as required.

NOTES

Scrolling through Submaster Table

In Active Submaster Display Mode, the cursor keys will only scroll up and down the 12 submasters listed in the table. In All Submaster Display Mode, the cursor keys will scroll up and down the entire submaster table.

Selecting Submaster and Opening CDW

If the EDIT LIVE, EDIT BLIND or PREVIEW button is pressed, instead of the ENTER button, the highlight bar moves to the selected submaster and the Channel Data Window is opened ready for the user to edit or preview the channel data (or memory).

Automatic Display Mode Switching

If the submaster screen is displaying active submasters only, and a submaster number not currently active is entered, the display will switch automatically to all submasters display mode, before moving the highlight bar to the selected submaster.

Programming Submaster Parameters

The Submaster parameters (info, fade times, trigger levels etc) can only be accessed and edited after channel data or a memory has been loaded onto the submaster.

Abandoning Channel Edits

To close the Channel Data Window and abandon any channel data edits press the EDIT LIVE or EDIT BLIND button on the front panel, or right click in the CDW and select the Cancel option from the menu.



Figure 6 - 6: Transfer Window

Transferring Memories onto Submasters

Programmed memories can be transferred onto submasters and then output by raising the corresponding submaster fader.

Transferring a Memory

1. Select a submaster as described earlier.
2. Press the TRANSFER button on the front panel, or right click and select the Transfer option from the menu. The Transfer Window is displayed.
3. Enter the required memory number in the field provided, adjust any of the other submaster parameters, if required, then select the OK button in the Transfer Window.

If the submaster is unprogrammed, the specified memory is transferred onto the submaster and the Transfer Window is closed.

If the submaster has channel data loaded onto it, a warning message is displayed.

If the submaster already has a memory on it, the new memory is transferred onto the submaster, replacing the original one.

Chase Memories on Submasters

When a Chase memory has been transferred onto a submaster, the chase trigger, chase trigger level (if applicable) and the chase modifiers can all be set from the Submaster screen.

1. Select a submaster with a chase memory transferred onto it.
2. Move to the *Chase Trigger* field. Select the required trigger (Transfer, Fader Level, Flash Button). The differences in output for the different triggers are covered later in this chapter
3. Move to the *Chase Trigger Level* field (only applicable if the Chase Trigger is set to Fader Level). Set the required level
4. Move to the *Direction* field, and adjust as required.
5. Move to the *Attack* field, and adjust as required.
6. Move to the *Drive* field, and adjust as required.
7. Move to the *Speed* field, and adjust as required.

Sound to Light Memories on Submasters

When a Sound to Light or Ripplesound memory has been transferred onto a submaster, the modifiers can be set from the Submaster screen.

1. Select a submaster which has a sound to light or ripplesound memory transferred onto it.
2. Move to the *Attack* field, and adjust as required.
3. Move to the *Speed* field and adjust the value as required.

NOTES

Transferring Memories

Multi-Part Scene memories cannot be transferred onto submasters.

Adjusting Modifiers from the Submaster Screen

The modifiers for a Chase, Sound to Light or Ripplesound Memory transferred onto a submaster can also be adjusted using the DIRECTION, ATTACK and DRIVE buttons and the wheel on the front panel.

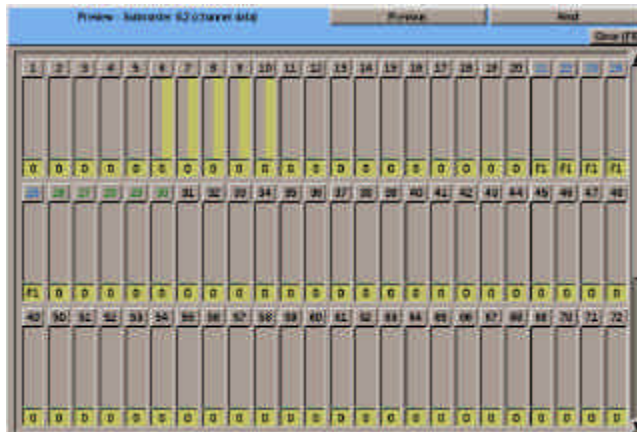


Figure 6 - 7: CDW - Previewing a Submaster

Editing Submasters

When a submaster has been loaded with channel data or a transferred memory, the submaster parameters (information, fade times, trigger levels etc.) can be edited from the Submaster screen.

Select a submaster, then use the cursor keys on the front panel or keyboard to move around the fields, or select the required field with the mouse. Adjust the values in the fields as required.

Editing Memories from the Submaster Screen.

If a memory has been transferred onto a submaster, editing the channel data for the memory can be initiated from the Submaster screen.

1. Select a submaster which has a memory transferred onto it.
2. Press the EDIT LIVE or EDIT BLIND button on the front panel, or right click and select the Edit Live or Edit Blind option from the menu. A confirmation window is displayed.
3. Select the YES option. The Channel Data Window is opened showing the channel data for the memory.

Previewing a Submaster

Previewing a submaster allows the channel data loaded onto the submaster, or the channel data for a memory transferred onto the submaster to be examined, without affecting the outputs.

When previewing a submaster the channel data cannot be edited.

Select a programmed submaster, then press the PREVIEW button on the front panel, or right click and select the *Preview* option from the menu. The light in the PREVIEW button is illuminated and the Channel Data Window is opened.

To preview other submasters, use the left and right arrow keys or click on the *Previous* or *Next* buttons in the CDW header.

To exit Preview mode, press the PREVIEW button on the front panel. The light in the PREVIEW button goes out and the Channel Data Window is closed.

Clearing a Submaster

Select a programmed submaster, then press the CLEAR button on the front panel, or right click and select the *Clear* option from the menu. A confirmation window is displayed.

Select the OK button in the window to confirm. The submaster is cleared. The channel data or transferred memory is removed from the submaster.

NOTES

Editing Submaster Data

Edits to submaster parameters take effect immediately. It is not necessary to 'save' the changes as with memory data.

Previewing Memories on Submasters

When previewing a memory on a submaster, the CDW header shows the submaster number followed by the transferred memory number in parentheses.

If a Chase, Sound to Light or Ripplesound memory on a submaster is previewed, it will 'run' according to the modifiers defined in the Submaster screen.

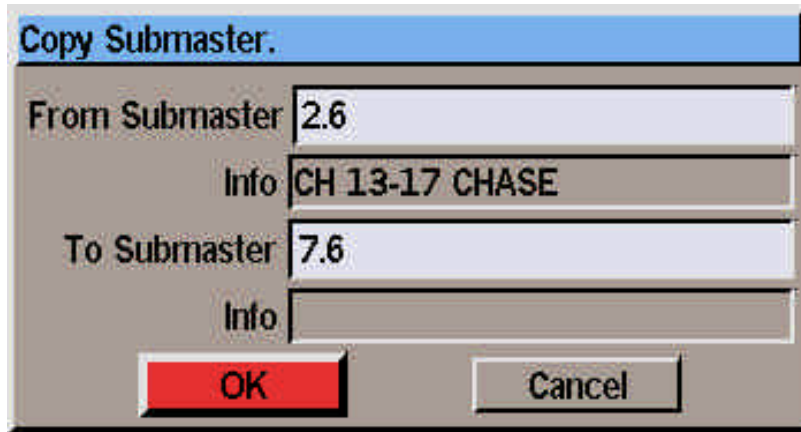


Figure 6 - 8: Copy Submaster Window

Copying Submaster Data

The copy function can be used to copy all the data associated with one submaster to another submaster (information text, fade times, trigger levels, memory number or channel data etc).

The actual function performed (Copy To or Copy From) is dependent on the status of the selected submaster as shown in the following sections:

Copying to a Submaster

1. Select an unprogrammed submaster.
2. Press the COPY button on the front panel, or right click and select the Copy option from the menu. The Copy Window is displayed.
3. Enter a submaster number to copy from in the field provided, then select the OK button in the Copy Window.

If a valid submaster is entered, the data associated with the source submaster is copied into the currently selected submaster and the Copy Window closed. Otherwise an error message is displayed.

Copying from a Submaster

1. Select a programmed submaster.
2. Press the COPY button on the front panel, or right click and select the Copy option from the menu. The Copy Window is displayed.
3. Enter the destination submaster number in the field provided, then select the OK button in the window.

If the destination submaster is unprogrammed, the submaster data is copied and the Copy Window closed.

If the destination submaster is already programmed, a warning is displayed. Select overwrite or cancel as required.



Figure 6 - 9: Edit Macro Trigger Window

Triggering Macros from Submasters

The Illusion desk provides the facility to trigger macros from submasters.

The specified macro will run when the submaster reaches the macro trigger level.

Display of Macro Triggers

Macro Triggers are displayed in the *Special* column of the Submaster screen in the form *Macro: n*.

Programming a Macro Trigger

1. Select the submaster which is to trigger the macro.
2. Press SCREEN FUNCTION key F8 and select the *Trigger Macro* option from the menu, or right click and select the *Trigger Macro* option. The Edit Macro Trigger Window is displayed.
3. Enter the required macro number in the field provided, enter the macro trigger level in the field provided, then select the *OK* button in the window.

If the data entered is valid the Edit Macro Trigger Window is closed and the macro trigger data appears in the *Special* column for the corresponding submaster. Otherwise an error message is displayed.

Editing a Macro Trigger

This is the same as programming a macro trigger except that the macro number and macro trigger level are already displayed in the Edit Macro Trigger Window.

Change the macro number and trigger level as required, then select the *OK* button in the window.

Deleting a Macro Trigger

1. Select the submaster which has the macro trigger.
2. Press SCREEN FUNCTION KEY F8 and select the *Trigger Macro* option from the menu, or right click and select the *Trigger Macro* option. The Edit Macro Trigger Window is displayed.
3. Select the *Clear* button in the window. The window is closed and the macro data is removed from the corresponding submaster in the Submaster screen.

Triggering the Macro

To trigger a macro on a submaster, raise the submaster fader above the macro trigger level programmed for the submaster.

Pressing the corresponding submaster flash button will also trigger the macro.

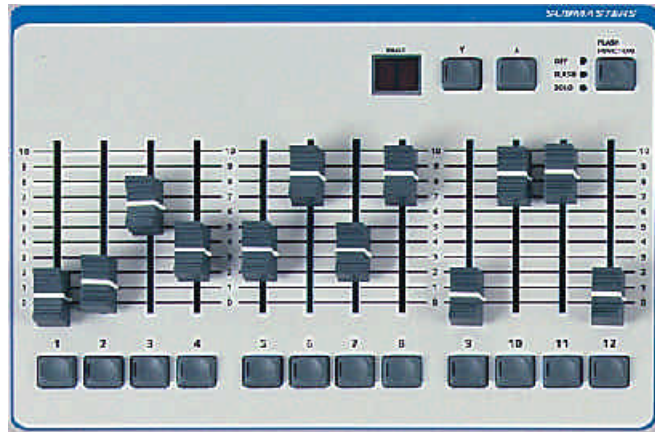


Figure 6 - 10 Front Panel Submaster Controls

Playback using Submasters

The submasters are used to playback channel data or memories which have been loaded onto them.

The data on up to 12 submasters can be output simultaneously. The data from submasters on different pages can be combined using the Page Overlay feature (see later).

The channel data or memories on the submasters are accessed using the PAGE UP and PAGE DOWN buttons and the SUBMASTER FADERS. The current active submaster page is indicated by the seven segment display on the front panel.

Chase memories on submasters can be triggered in different ways (Transfer, Fader Level or Flash Button). Chase memories which are triggered by Fader Level or Flash Button can be stopped and restarted. Chase memories which are triggered by Transfer are running permanently on the submaster.

Channel data or memories on submasters can be flashed or soloed using the SUBMASTER FLASH BUTTONS.

Outputting Data from Submasters

To output the channel data or memory previously loaded onto a submaster perform the following:

1. Select the required submaster page using the PAGE UP and PAGE DOWN buttons (if different to the current page).
2. Move the appropriate SUBMASTER FADER to the level required.

The output levels of the brightness channels in the channel data or memory on the submaster are determined by the level of the submaster.

The attribute and scroller channels in the channel data or memory are triggered when the submaster level reaches the attribute trigger level specified for the submaster.

The time taken to fade up/down the channel data or memory is governed by the Fade Up/Fade Down times specified for the individual submaster (shown on the Submaster screen).

If the fade times are zero, the fade is determined by the speed at which the SUBMASTER FADER is moved.

Outputting Data from a Different Page (Page Overlay)

It is possible to output the channel data or memory data on several submasters from different pages simultaneously, provided that they are not controlled by the same physical submaster fader.

For example - It is possible to output data from submasters 1-1, 2-2, 3-3, 4-4 at the same time, but not from submasters 1-1, 2-1 and 3-1 as they are all controlled by the same fader.

If the submaster page is changed while any of the submaster faders are up, or any of the SUBMASTER FLASH BUTTONS are being held down, the fader or button remains on the original page and the outputs for the previous submaster are held.

The new channel data or memory associated with the fader or button is not output until the fader is returned to zero, or the flash button is released. This feature is known as Page Overlay.

While data being output is not from the current page, the light in the corresponding SUBMASTER FLASH BUTTON flashes. The light in the SUBMASTER FLASH BUTTON stops flashing when the correct page is returned to, by using the PAGE UP or PAGE DOWN buttons.

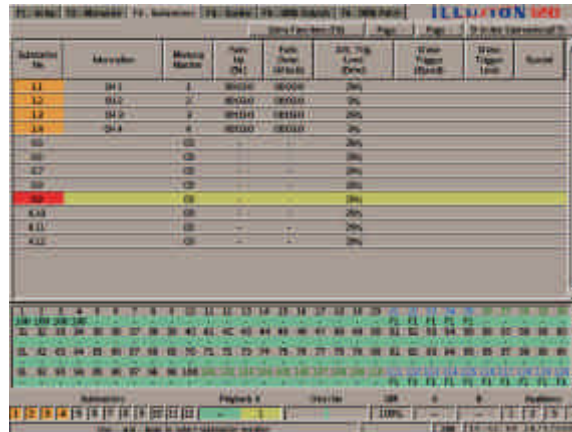


Figure 6 - 11: Submasters Screen showing Page Overlay

Page Overlay Example

1. Memories 1, 2, 21 and 22 have been programmed as scene memories and transferred onto submasters 1-1, 1-2, 2-1, and 2-2 respectively.
2. All the SUBMASTER FADERS are set to zero and the GRAND MASTER is set to full.
3. The PAGE UP or PAGE DOWN buttons are used to select Page 1.
4. SUBMASTER FADER 1 is moved to full. Memory 1 is output live.
5. The PAGE UP button is used to change to Page 2. The light in SUBMASTER FLASH BUTTON 1 flashes showing that the data output from submaster 1 is not from the current page. The outputs do not change.
6. SUBMASTER FADER 2 is moved to full. Memory 22 is added to the live output.
7. SUBMASTER FADER 1 is moved back to zero. Memory 1 is removed from the output. The light in SUBMASTER FLASH BUTTON 1 stops flashing.
8. SUBMASTER FADER 1 is moved to full. Memory 21 is added to the live output.
9. The PAGE DOWN button is used to change back to Page 1. The lights in SUBMASTER FLASH BUTTONS 1 and 2 will now flash showing that the data output from both submasters is not from the current page. The outputs do not change.

Triggering Chase Memories on Submasters

When a chase memory is transferred onto a submaster, it can be triggered (ie made to run) in a number of ways as described below:

- TRANSFER

The Chase memory transferred onto the submaster runs continuously. When the SUBMASTER FADER is raised, it is not possible to predict which step will appear on the outputs. The chase cannot be stopped.

- FADER LEVEL

The Chase memory transferred onto the submaster remains on step 1 while the SUBMASTER FADER level is below the Chase Trigger Level. When the SUBMASTER FADER level reaches the Chase Trigger Level the chase starts running. When the SUBMASTER FADER is brought down below the Chase Trigger Level the chase stops running. When the fader level reaches zero the chase returns to step 1.

- FLASH BUTTON

When the SUBMASTER FADER is first raised, the chase is not output until the corresponding SUBMASTER FLASH BUTTON is pressed. When the SUBMASTER FLASH BUTTON is pressed the chase is output starting from step 1. Subsequent presses of the SUBMASTER FLASH BUTTON will stop and start the chase. The SUBMASTER FLASH BUTTON essentially becomes a chase pause button.

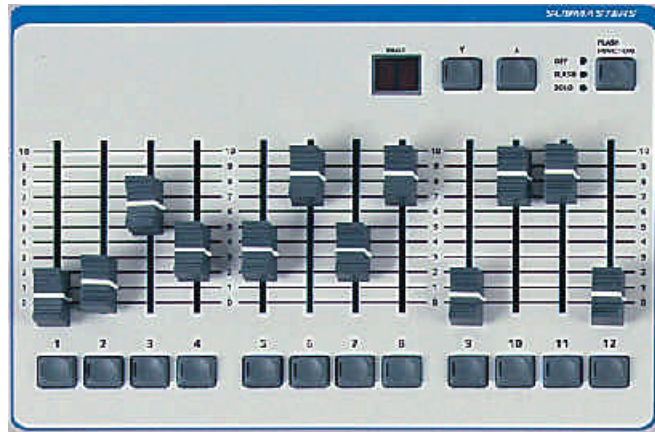


Figure 6 - 12: Submaster Controls

Submaster Flash Functions

The SUBMASTER FLASH BUTTONS can be used to flash, solo or 'Go' the channel data or memory data on the submaster.

The FLASH FUNCTION button is used to select the required function.

The red lights next to the FLASH FUNCTION button indicate the currently selected function (OFF, FLASH, SOLO). The 'Go' function is indicated by both the FLASH and SOLO lights being lit.

Flashing Submasters

1. Set the Flash Function to Flash using the FLASH FUNCTION BUTTON.
2. Press a SUBMASTER FLASH BUTTON. The brightness channels in the channel data or memory on the submaster are flashed to the level of the GRAND MASTER. The attribute channels in the channel data or memory on the submaster are automatically triggered to their programmed levels.

Soloing Submasters

1. Set the Flash Function to Solo using the FLASH FUNCTION BUTTON.
2. Press a SUBMASTER FLASH BUTTON. The brightness channels in the channel data or memory on the submaster are flashed to the level of the GRAND MASTER. The attribute channels in the channel data or memory on the submaster are automatically triggered to their programmed levels.

All other brightness channel data being output on submasters, Playback X and Playback A/B is reduced to zero, except for any 'excluded' channels being output from submasters.

Submaster Go Function

The Submaster 'Go' function is essentially a 'timed flash' and is equivalent to raising the physical SUBMASTER fader to full.

1. Set the Flash Function to Go using the FLASH FUNCTION BUTTON. The FLASH and SOLO lights next to the button are both on.
2. Press a SUBMASTER FLASH BUTTON. The brightness channels in the channel data or memory on the submaster fade up from their current level in the appropriate time.
3. Press the SUBMASTER FLASH BUTTON again. The brightness channels in the channel data or memory on the submaster fade down to the level of the submaster fader in the appropriate time.

NOTES

Flash, Solo and Go Functions

When a submaster contains a chase memory which is triggered by the Flash button, the normal flash, solo and Go functions are disabled for that submaster.

Submaster Fade Times

If the submaster has non-zero fade up and fade down times, the 'slugged' value of the submaster is used to trigger the chase, not the physical position of the SUBMASTER FADER.

Memory No.	Type	Type (Alt)	Information	Start Time (Sec)	End Time (Sec)	Delay (Sec)	Size (Words)	Special
1	SO	SO	CP1	0000	0000			
2	SO	SO	CP2	0000	0000			
3	SO	SO	CP3	0000	0000			
4	SO	SO	CP4	0000	0000			
5	SO	SO	CP5	0000	0000			
6	SO	SO	CP6	0000	0000			
7	SO	SO	CP7	0000	0000			
8	SO	SO	CP8	0000	0000			
9	SO	SO	CP9	0000	0000			
10	SO	SO	CP10	0000	0000			
11	SO	SO	CP11	0000	0000			
12	SO	SO	CP12	0000	0000			
13	SO	SO	CP13	0000	0000			
14	SO	SO	CP14	0000	0000			
15	SO	SO	CP15	0000	0000			
16	SO	SO	CP16	0000	0000			
17	SO	SO	CP17	0000	0000			
18	SO	SO	CP18	0000	0000			
19	SO	SO	CP19	0000	0000			
20	SO	SO	CP20	0000	0000			

Figure 7 - 1: Memories Screen

Introduction

The **Memory Stack** is defined as the list of programmed memories in increasing numerical order. Each programmed memory appears once in the Memory Stack.

The Memories screen and Cueline screen are two different representations of the same Memory Stack.

Programming and editing memory data is normally done from the Memories screen, but it can also be done from the Cueline screen.

Any changes made to memory data on the Memories screen is reflected on the Cueline screen and vice versa.

Jumps, Loops and Macro Triggers can be programmed into the Memory Stack, if required, from either the Memories or Cueline screens.

The Memory Stack is played back using the Playback X controls, from either the Memories screen or the Cueline screen, as preferred.

NOTE

Memories and Cues

This chapter of the manual refers to memories and cues. A cue on the Cueline screen is exactly the same as a memory on the Memories screen, ie the memory number, memory type, information, transition and dwell times, channel data and modifiers (if applicable).

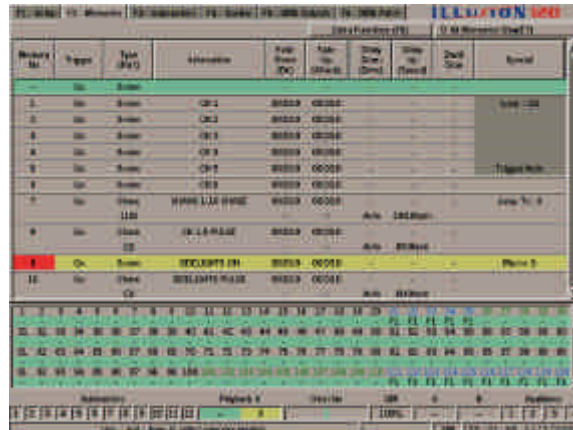


Figure 7 - 2: Memories Screen showing Jump, Loop and Macro Trigger

Jumps, Loops and Macro Triggers in the Memory Stack

Normally the Memory Stack is played back by going through each of the programmed memories in numerical order, each memory being triggered automatically or by a GO button press.

The Illusion desk provides additional functions to allow jumps, loops and macro triggers to be programmed into the Memory Stack.

The **Jump** function provides the facility to jump to a particular memory when the current one is complete. Jumps may be forwards or backwards in the Memory Stack.

The **Loop** function provides the facility to run through several memories a specified number of times before progressing onto the next memory in the Memory Stack.

The **Macro Trigger** function provides the facility to trigger a specified macro when the memory is triggered from the Memory Stack.

Display of Jumps and Loops

On the **Memories** screen - the jump and loop information is displayed in the *Special* column.

A jump is shown as *Jump To: n* where *n* is the memory number to jump to.

All memories contained in a loop are shown with a dark grey background in the *Special* column.

On the first memory in the loop the *Special* column shows *Loop x/y* where *x* indicates the current loop and *y* the total number of loops.

On the last memory in the loop the *Special* column shows *Trigger: t* where *t* is either *Go* or *Auto* as programmed in the loop.

On the **Cueline** screen - the jump and loop information is displayed in the *Special* track.

A jump is shown as *Jump To: n* where *n* is the cue number to jump to.

All the cues contained in a loop are indicated by a grey bar in the *Special* track

The text in the left hand side of the bar shows *Loop x/y* where *x* indicates the current loop and *y* the total number of loops. The text in the right hand side of the bar shows *Trigger: t* where *t* is either *Go* or *Auto* as programmed in the loop.

Display of Macro Triggers

On the **Memories** screen - a macro trigger is displayed in the *Special* column as *Macro: n*.

On the **Cueline** screen - a macro trigger is displayed in the *Special* track as *Macro: n*.

NOTES

Jumps and Loops in the Memory Stack

A memory in a loop can be jumped to, but it is not possible to program a jump from a memory inside a loop

A Loop must contain at least 2 memories. The last memory number in a loop must be greater than the first memory number in the loop.

All the programmed memories between the first and last memories in a loop are automatically included in the loop. It is not possible to specify overlapping loops.

It is not possible to jump from or start a loop from memory zero.

Macro Triggers in the Memory Stack

A macro trigger cannot be programmed onto a memory, if that memory has a jump, or is the first or last memory in a loop.

A macro trigger can be attached to a memory in the middle of a loop.

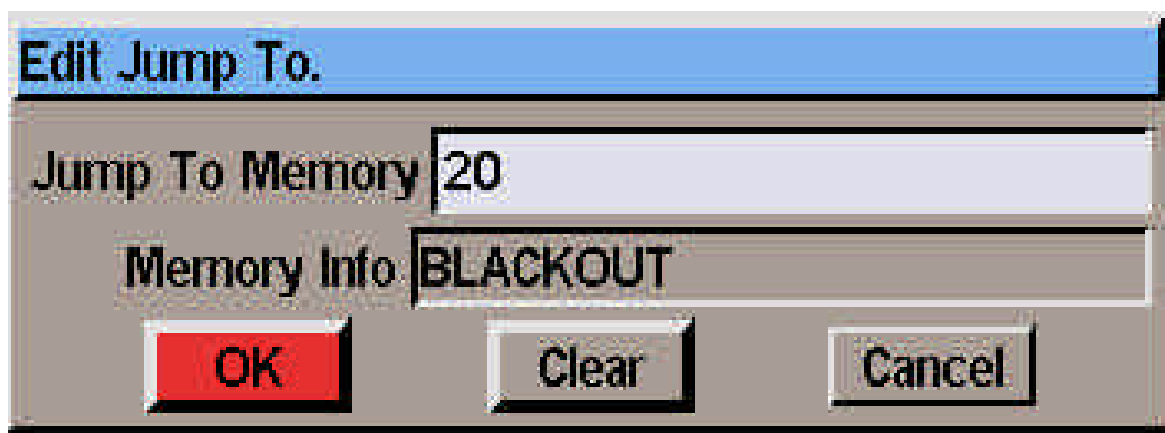


Figure 7 - 3: Edit Jump To Window

Programming Jumps

The following sections describe how to program, edit and delete jumps from the Memories or Cueline screens.

Programming a Jump from the Memories Screen

1. Select the memory which is the start of the jump.
2. Press SCREEN FUNCTION key F8 and select the *Jump To* option from the menu, or right click and select the *Jump To* option. A popup window is displayed.
3. Enter the memory number to jump to in the field provided and then select the *OK* button in the window.

If the memory number is valid the popup window is closed and the Jump data appears in the Memories screen against the memory which is being jumped from. Otherwise an error message is displayed.

Editing a Jump from the Memories Screen

This is the same as Programming a Jump except that the memory to jump to is already displayed in the popup window. Change the memory number to the new one required, then select the *OK* button in the window.

Deleting a Jump from the Memories Screen

1. Select the memory which is the start of the jump.
2. Press the SCREEN FUNCTION key F8 and select the *Jump To* option from the menu, or right click and select the *Jump To* option. A popup window is displayed.
3. Select the *Clear* button in the window. The popup window is closed and the jump data is removed from the Memories screen.

Programming a Jump from the Cueline Screen

1. Select the cue which is the start of the jump.
2. Right click in the Cue Track and select the *Jump To* option from the menu. A popup window is displayed.
3. Enter the cue number to jump to in the field provided and select the *OK* button in the window.

If the cue number is valid, the popup window is closed and the jump data is displayed in the 'Loop' Track on the Cueline screen. Otherwise an error message is displayed.

Editing a Jump from the Cueline Screen

This is the same as Programming a Jump except that the cue to jump to is already displayed in the popup window.

Change the cue number to the new one required, then select the *OK* button in the window.

Deleting a Jump from the Cueline Screen

1. Select the cue which is the start of the jump.
2. Right click in the Cue Track and select the *Jump To* option from the menu. A popup window is displayed.
3. Select the *Clear* button in the window. The popup window is closed, and the jump data is removed from the Cueline screen.

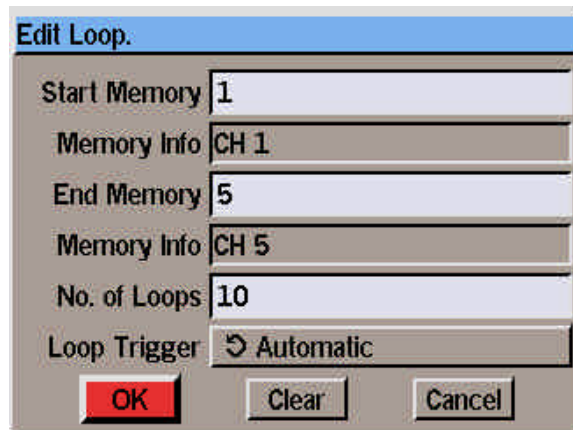


Figure 7 - 4: Edit Loop Window

Programming Loops

The following sections describe how to program, edit and delete loops from the Memories or Cueline screens.

Programming a Loop from the Memories Screen

1. Select the memory which is the first memory in the loop.
2. Press SCREEN FUNCTION key F8 and select the *Loop* option from the menu, or right click and select the *Loop* option. The Edit Loop Window is displayed.
3. Enter the last memory number in the loop, the number of loops and select the loop trigger in the fields provided. Then select the *OK* button in the window.

If the data entered is valid the Edit Loop Window is closed and the loop data appears in the Memories screen against the corresponding memories. Otherwise an error message is displayed.

Editing a Loop from the Memories Screen

This is the same as Programming a Loop except that the loop parameters are already displayed in the Edit Loop Window. Change the loop parameters as required, then select the *OK* button in the window.

Deleting a Loop from the Memories Screen

1. Select any memory which is in the loop.
2. Press SCREEN FUNCTION KEY F8 and select the *Loop* option from the menu, or right click and select the *Loop* option. The Edit Loop Window is displayed.
3. Select the *Clear* button in the window. The window is closed and the loop data is removed from the corresponding memories in the Memories screen.

Programming a Loop from the Cueline Screen

1. Select the cue which is the start of the loop.
2. Right click in the Cue Track and select the *Loop* option from the menu. The Edit Loop Window is displayed.
3. Enter the last cue number in the loop, the number of loops and the loop trigger in the fields provided. Then select the *OK* button in the window.

If the data entered is valid, the Edit Loop Window is closed and the loop data is displayed in the Special Track on the Cueline screen. Otherwise an error message is displayed.

Editing a Loop from the Cueline Screen

This is the same as Programming a Loop except that the loop parameters are already displayed in the Edit Loop Window.

Change the loop parameters as required, then select the *OK* button in the window.

Deleting a Loop from the Cueline Screen

1. Select a cue which is part of the loop.
2. Right click in the Cue Track and select the *Loop* option from the menu. The Edit Loop Window is displayed.
3. Select the *Clear* button in the Edit Loop Window. The window is closed and the loop data is cleared from the Cueline screen.

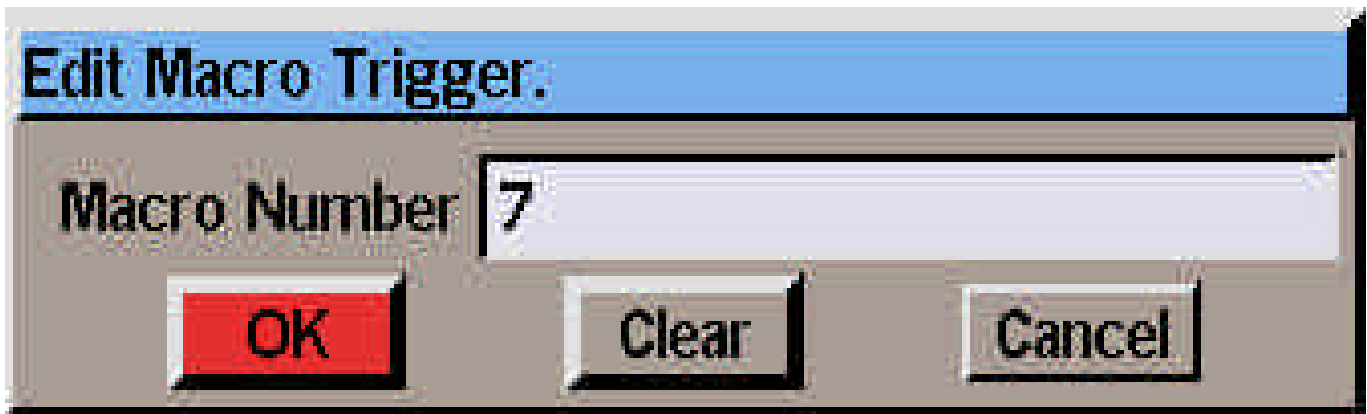


Figure 7 - 5: Edit Macro Trigger Window

Programming Macro Triggers

The following sections describe how to program, edit and delete macro triggers from the Memories or Cueline screens.

Programming a Macro Trigger from the Memories Screen

1. Select the memory which is to trigger the macro.
2. Press SCREEN FUNCTION key F8 and select the *Trigger Macro* option from the menu, or right click and select the *Trigger Macro* option. The Edit Macro Trigger Window is displayed.
3. Enter the required macro number in the field provided, then select the *OK* button in the window.
If the data entered is valid the Edit Macro Trigger Window is closed and the macro trigger data appears in the Memories screen against the corresponding memory. Otherwise an error message is displayed.

Editing a Macro Trigger from the Memories Screen

This is the same as Programming a macro trigger except that the macro number is already displayed in the Edit Macro Trigger Window. Change the macro number as required, then select the *OK* button in the window.

Deleting a Macro Trigger from the Memories Screen

1. Select the memory which has the macro trigger.
2. Press SCREEN FUNCTION KEY F8 and select the *Trigger Macro* option from the menu, or right click and select the *Trigger Macro* option. The Edit Macro Trigger Window is displayed.
3. Select the *Clear* button in the window. The window is closed and the macro data is removed from the corresponding memory in the Memories screen.

Programming a Macro Trigger from the Cueline Screen

1. Select the cue which is to have the macro trigger.
2. Right click in the Cue Track and select the *Trigger Macro* option from the menu. The Edit Macro Trigger Window is displayed.
3. Enter the macro number in the field provided, then select the *OK* button in the window.

If the data entered is valid, the Edit Macro Trigger Window is closed and the macro data is displayed in the Special Track on the Cueline screen. Otherwise an error message is displayed.

Editing a Macro Trigger from the Cueline Screen

This is the same as Programming a Macro Trigger except that the macro number is already displayed in the Edit Macro Trigger Window.

Change the macro number as required, then select the *OK* button in the window.

Deleting a Macro Trigger from the Cueline Screen

1. Select a cue which has the macro trigger.
2. Right click in the Cue Track and select the *Trigger Macro* option from the menu. The Edit Macro Trigger Window is displayed.
3. Select the *Clear* button in the Edit Macro Trigger Window. The window is closed and the macro data is cleared from the Cueline screen.



Figure 7 - 6: Playback X Controls

Playing Back the Memory Stack (Playback X)

The following sections describe how to play back the Memory Stack in *Real Time* mode. For details on running a show in SMPTE or MIDI Time mode see chapter 5.

The Playback X controls are used to output the programmed memories from the Memory Stack.

The Memory Stack can be run from either the Memories screen or the Cueline screen using the Playback X controls on the front panel, or from the Cueline screen using the soft buttons provided.

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

Jumps, Loops and Macro Triggers may also have been programmed into the Memory Stack.

Memory Triggers

If the trigger for the next memory is the GO button, when the CUELINE reaches the end of the dwell of the previous memory it will wait there until the GO button is pressed.

If the trigger for the next memory/cue is *Automatic*, when the CUELINE reaches the end of the dwell of the previous memory it will jump to the start of the memory and begin running through it immediately.

If the trigger for the next memory is *At Time*, the CUELINE will jump to the start of the memory and begin running through it, when the time (as shown by the clock in the Information Bar) equals the programmed start at time for the memory.

Jumps in the Memory Stack

When the CUELINE reaches the end of the dwell time for a memory which has a jump, it will jump to the start of the specified memory.

If the trigger for this memory is automatic, the CUELINE will continue progressing through the memory. If the trigger is the GO button, the CUELINE will wait at the start of the memory until the GO button is pressed.

Loops in the Memory Stack

If a loop is programmed in the Memory Stack, when the CUELINE reaches the end of the dwell time for the last memory in the loop, it will jump back to the start of the first memory in the loop.

If the Loop Trigger is automatic, the CUELINE will begin progressing through the first memory. If the Loop Trigger is the GO button, the CUELINE will wait at the start of the first memory until the GO button is pressed.

Macro Triggers in the Memory Stack

If a macro trigger is programmed in the Memory Stack, the specified macro will run when the memory is triggered (via the GO button, automatically or at a specified time).

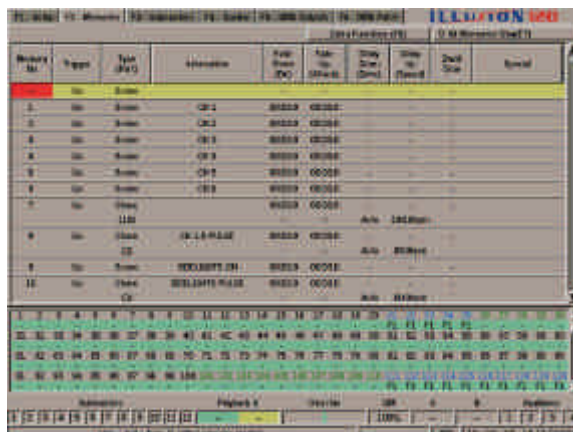


Figure 7 - 7: Memories Screen

Selecting the Next Memory

To select a memory from the Memories screen - see chapter 5.

To select a memory from the Cueline screen - see chapter 9.

Starting the Show

When playing back the Memory Stack it is recommended that the Memories or Cueline screen is displayed on the monitor.

1. Set the Playback X MASTER and GRAND MASTER faders to full (100%). Set the OVERRIDE control to its central position. Ensure that DBO is not active.
2. Select the first programmed memory and press the GO button on the front panel or select the Go button on the Cueline screen. The outputs will fade to the first memory using the programmed transition times.
If the Cueline screen is displayed, the CUELINE (red vertical bar) will be displayed at the start of the first cue and then begin moving across the screen from left to right.
3. As the CUELINE passes each event in the memory track(s) the DMX outputs are updated accordingly.

Using the Go Button

To output the next memory (indicated by the highlight bar on the Memories or Cueline screen) press the GO button on the front panel or select the GO button on the Cueline screen.

This initiates a crossfade to the next memory. The highlight bar moves automatically to the next programmed memory when the GO button is pressed. This is known as auto-increment.

The outputs fade to the next memory according to its programmed transition times.

If the next memory is a partial memory, only those channels programmed in the memory will be affected when the transition occurs. Any unprogrammed channels will remain at their current levels.

To prevent accidental multiple presses, the GO button or a remote switch assigned to the GO button does not have the auto-repeat facility.

Using the Go Previous Button

The GO PREVIOUS button is used to go from the current memory to the previously output memory using the transition times for the current memory in reverse.

Note that the previously output memory is not necessarily the one before the current one on the memory stack.

For example - if the memories output so far have been 1,2,3,4,5,10, and the current memory is number 10; pressing the GO PREVIOUS button will take you back to memory 5, using the transition times for memory 10 in reverse.

Press the GO PREVIOUS button on the front panel or select the Go Previous button on the Cueline screen.

This initiates a crossfade to the previously output memory. The highlight bar moves automatically to the next programmed memory when the GO PREVIOUS button is pressed.



Figure 7 - 8: Playback X Controls

Using the Override Control

Progress through the Memory Stack can be slowed down or speeded up using the Playback X OVERRIDE control on the front panel.

Turning the control anti-clockwise slows down the progress, turning it clockwise speeds it up.

An indication of the position of the OVERRIDE control is displayed in the Fade Status Bar at the bottom of the monitor screen.

Using the Pause Button

Progress through the Memory Stack can be halted at any point by pressing the PAUSE button on the front panel or selecting the Pause button on the Cueline screen.

When progress is halted, the light in the PAUSE button flashes.

Progress through the Memory Stack is restarted by pressing the PAUSE button again. The light in the PAUSE button goes out.

End of the Show

When the CUELINE reaches the end of the show (ie the end of the dwell time for the last programmed memory in the Memory Stack), it returns to the start of the first memory in the memory stack.

If the trigger for the first memory is the GO button, the CUELINE waits at the start of the first memory until the GO button is pressed. If the trigger is automatic the Cueline will start running through the first memory.

NOTES

Memories Screen Display Mode

*When playing back the Memory Stack with the Memories screen on display, it is recommended that the Display Mode is set to **Programmed Memories/Follow**. In this mode only the programmed memories will be displayed and the screen will follow the next memory as the show progresses.*

The cursor keys, direct memory number entry or mouse can be used to select the next memory out of sequence, if required. This may result in the current memory no longer being visible on the screen.

*If an attempt is made to select a field other than the memory number, edit or preview a memory, the display mode will automatically change to **All Memories/Stay**.*

Selecting an Unprogrammed Memory

If an unprogrammed memory is selected and then the GO button is pressed, an error message will be displayed on the screen, and the yellow highlight bar will move automatically to the next programmed memory in the Memory Stack.

Multi-Part Scenes

In normal mode - unprogrammed channels in the memory will fade to zero when the memory is output.

In tracking mode - unprogrammed channels in the memory are unaffected when the memory is output.



Figure 8 - 1: Playback A/B Controls

Introduction

The Playback A/B function allows any of the programmed memories (except multi-part scenes) to be loaded onto the A MASTER and B MASTER faders.

The A MASTER and B MASTER faders are used to control the output and crossfade between the loaded memories.

The A and B fade times can be controlled independently by the FADE TIME A and FADE TIME B controls on the front panel.

Memories can be manually loaded onto the A and B MASTERS, or loaded automatically each time either of the master faders reaches zero.

The Playback A/B Mode and the Attribute Trigger levels for the A and B MASTERS are defined in Desk Setup (see chapter 3 for details).

The Playback A/B section is independent of the Playback X section of the desk.

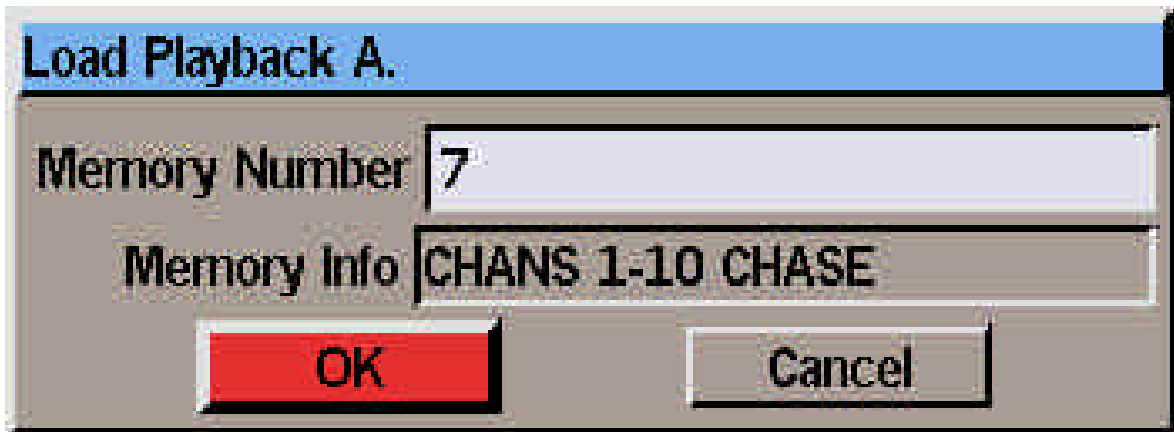


Figure 8 - 2: Load Playback A Window

Manual Load Operation

When Playback A/B is operating in Manual Mode, memories can be selected and loaded onto the A and B MASTERS as and when required.

Loading the A Master

1. Set the A MASTER fader to zero. Set the required fade time on the FADE TIME A control.
2. Press the LOAD A button on the front panel. The Load Playback A window is displayed.
3. Enter the required memory number in the field provided and select the OK button in the window.
4. To output the memory - raise the A MASTER fader to full. The brightness channels in the loaded memory will fade up in the indicated time. The attribute and scroller channels in the loaded memory will be triggered when the A MASTER reaches the attribute trigger level.

Loading the B Master

Loading and outputting a memory on the B MASTER is the same as for the A MASTER, except that the B MASTER, LOAD B and FADE TIME B controls are used instead.

Auto Load Operation

When Playback A/B is set to Auto Load, memories are loaded onto the A and B MASTERS automatically when they reach zero.

Loading A/B Automatically

1. Set the A MASTER to zero and the B MASTER to full.
2. Load the A MASTER with a memory as described earlier.
3. Move the A MASTER to full and B MASTER fader to zero. The memory loaded onto A will be output, and the next memory will be loaded onto the B MASTER automatically.
4. Move the A MASTER back to zero and the B MASTER to full. The outputs will crossfade between the two memories. The next memory will be loaded onto the A MASTER automatically.

Monitor Display

The Fade Status Bar at the bottom of the monitor screen indicates the memories currently loaded onto the A and B MASTERS (if any).

Clearing the A/B Masters

To clear the A MASTER or B MASTER (ie remove the memory loaded onto it) load memory zero onto the fader.

NOTES

Fade Time A/B

If the FADE TIME A or B control is set to zero, the fade time is determined by the speed at which the corresponding Master fader is moved.

Manual Loading of A/B

If an attempt is made to load an unprogrammed or multi-part scene memory onto the A or B MASTER, an error message is displayed.

If the A MASTER or B MASTER is not at zero when a memory is loaded, the memory will be output at the corresponding fader level.

Dipless Crossfades

Dipless crossfades can only be achieved providing that the memories loaded onto the A and B MASTERS are both scenes and the two master faders are moved in tandem.

Auto Load

If there are multi-part scene memories in the Memory Stack, these will be ignored when automatically loading the A and B MASTERS.

Moving a single fader (A MASTER or B MASTER) up and down will fade the loaded memory up and down, and automatically load the next memory when the fader is returned to zero.

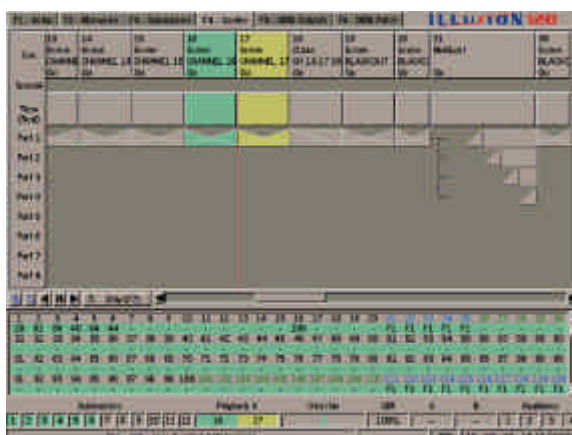


Figure 9 - 1: Cueline Screen

Introduction

The Cueline screen is a graphical representation of the Memory Stack, and therefore represents the same data which is displayed on the Memories screen.

Programming and editing memory data and running the Memory Stack can be done from the Cueline screen, if preferred.

Any changes made to memory data or the memory stack on the Cueline screen are reflected in the Memories screen and vice versa.

To use the functions available on the Cueline screen, the desk must have a mouse connected, and preferably a keyboard.

NOTE

Memories and Cues

This chapter of the manual refers to 'cues' on the Cueline screen. A cue is exactly the same as a memory on the Memories screen, ie the memory number, memory type, information, transition and dwell times, channel data and modifiers (if applicable).

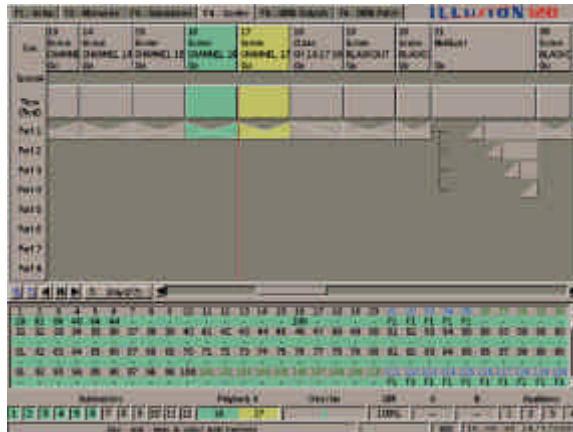


Figure 9 - 2 : The Cueline Screen

The Cueline Screen

The Cueline screen can be used for programming, editing and playback of the cues in the Memory Stack.

Press the SCREEN FUNCTION BUTTON F4 or select the *Cueline* screen selection button using the mouse to display the Cueline screen on the monitor.

The main area of the Cueline screen consists of a number of horizontal tracks, with the track name down the left hand side.

The first track is the **Cue Track** and shows the following data from the cue:

- MEMORY NUMBER
- MEMORY TYPE
- INFORMATION
- TRIGGER

The second track is the **Special Track** and is used to show the jump, loop and macro trigger information programmed in the Memory Stack. For further details see chapter 7.

The third track is the **Time Track** and shows the duration of each cue.

The 8 tracks labelled **Part 1 .. Part 8** are used to display the timing information for each cue in a graphical format (essentially the delay, fade and dwell times).

The timing information for all memory types (except multi-part scenes) is displayed in the **Part 1 Track**.

The timing data for each programmed part of a multi-part scene is shown in the corresponding track (Part 1 of the cue in displayed in the **Part 1 Track** etc.).

At the bottom of the Cueline screen are the following soft buttons and a scroll bar which can be selected using the mouse:

- ZOOM IN
- ZOOM OUT
- GO PREVIOUS
- PAUSE
- GO
- DISPLAY MODE

The Zoom In and Zoom Out buttons, in conjunction with the scroll bar, allow different parts of the Cueline screen to be viewed at various magnifications.

The Go, Pause and Go Previous soft buttons perform the same functions as those on the front panel.

The Display Mode Button (equivalent to SCREEN FUNCTION BUTTON F7), toggles between *Stay* and *Follow*.

When *Stay* is selected - the red Cueline will eventually move off the right hand side of the screen as the show progresses.

When *Follow* is selected - the red Cueline is displayed in the centre of the screen and the tracks move from right to left behind it. This mode is recommended when running the show as the current memory is always on display in the centre of the screen.

A green highlight bar (column) is displayed on the cue currently being output. The 'Cueline' itself (a vertical red line), indicates the progress through the current cue.

A yellow highlight bar (column) is displayed on the next cue to be output.

When the Display Mode button is set to *Stay*, the selected cue can be identified by the red boxes displayed in the memory track(s). These boxes are used as handles for adjusting transition times (see later).

All the programmed cues, including Memory Zero, are displayed on the Cueline screen.

It may be necessary to zoom in using the soft button to see all the cues on the screen at the same time.

Unprogrammed cues are not displayed on the Cueline screen.

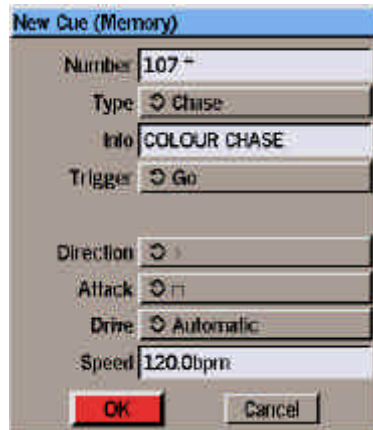


Figure 9 - 3 : New Cue Window

Programming Cues

The following sections describe how to add and program new cues from the Cueline screen.

When programming cues from the Cueline screen, it is recommended that *Stay Mode* is selected (see previous page). This prevents the Cueline screen from jumping back to the current memory.

Selecting a Cue

There are several ways to select a cue:

- Press the MEMORY button on the front panel. The *Select Memory* window is displayed. Enter the required cue (memory) number in the field provided, then select the OK button in the window.
- Use the < and > keys on the front panel or keyboard to scroll along the Cueline one cue at a time.
- Position the mouse pointer over the required cue in the **Cue Track** and click the left mouse button.

Adding New Cues

1. Right click in the **Cue Track** at the point where you wish to add or insert a new cue (see notes). A menu of options is displayed.
2. Select the *Insert* option from the menu. The *New Cue Window* is displayed.
3. The *Number* field contains the default cue number, based on where the new cue is being inserted. This can be modified if required (see notes).
4. Adjust the default values in the remaining fields, if required.
5. Select the OK button in the Window. The *New Cue Window* is closed and a warning window opened indicating that the channel data for the cue is currently at zero.
6. To edit the channel data for the new cue, select the *Edit Live* or *Edit Blind* button in the window. The CDW is opened. Set the channel levels as required, then save the data. To leave the channel data at zero, select the *Edit Later* button in the window.
7. When the new cue is added, its number, type, information and trigger data are displayed in the **Cue Track**. The graphical representation of the transition and dwell times are displayed in the **Part 1 Track**. The yellow highlight bar is displayed on the new cue.

NOTES

Memory X Go

Entering MEMORY X GO from the Cueline screen is the equivalent of selecting Memory x via the Select Memory window and then pressing GO to fade to the selected memory.

Adding and Inserting Cues

To add a new cue at the end of the Cueline, right click in the Cue Track in the area after the last cue.

To insert a cue between two existing cues right click near the join between the two cues. The default cue number can be modified if required but only in the range between the two existing cues.

New Cue Window

The modifier fields (Direction, Attack, Drive, Speed) are only available for the appropriate memory types.



Figure 9 - 4: Edit Cue Window

Editing Cues

The data of any programmed cue can be edited from the Cueline screen.

The following sections describe how the different data associated with a cue can be edited.

Key to Editing Handles

When a cue is selected in *Stay* mode, five red boxes and one orange box are displayed in the memory track(s).

Each of the red boxes relates directly to one of the transition times for the cue as follows:

Top left:	Delay Down
Bottom left:	Delay Up
Top right:	Fade Up
Bottom right:	Fade Down
Centre right:	Dwell

The orange box is used to adjust the crossfade time. This is equivalent to adjusting the fade up and fade down times simultaneously.

Editing Type, Information, Trigger and Modifiers

1. Move the mouse pointer onto the required cue in the **Cue Track** and press the right mouse button. A menu of available options is displayed.
2. Select the *Edit* option. The *Edit Cue Window* is displayed showing the current values of the cue parameters.
3. Modify the fields as required, then select the *OK* button in the window to confirm the edits and close the *Edit Cue Window*.

Editing Transition Times

The transition times of a cue, or part of a multi-part cue, can be adjusted from the Cueline screen as follows:

1. Select the cue to be edited. Five red handles, shown as squares, are displayed in the **Part 1 Track** (or appropriate tracks for programmed parts of a multi-part scene).
2. To adjust a delay or fade time left click on the appropriate red square, hold the mouse button down, and drag the handle forwards or backwards as required. The time is shown next to the handle.
3. Release the mouse button when the time is at the required value.

Editing Crossfade Time

The fade up and down times for a cue can be adjusted individually as described above, or together as follows:

1. Select the cue to be edited.
2. Select the orange handle (situated between the red fade up and fade down handles), hold the mouse button down, and drag the handle backwards or forwards as required.
3. Release the mouse button.

Editing Dwell Time

The dwell time of a cue, or part of a multi-part cue, can be edited from the Cueline screen as follows:

1. Select the cue to be edited. Five red handles, shown as squares are displayed in the **Part 1 Track** (and additional tracks for programmed parts of a multi-part scene).
2. The centre red square on the right hand edge is used to edit the dwell time. Left click on this red square, hold the mouse button down, and drag the handle forwards or backwards as required. The dwell time is shown next to the handle.
3. Release the mouse button when the dwell time is at the required value.

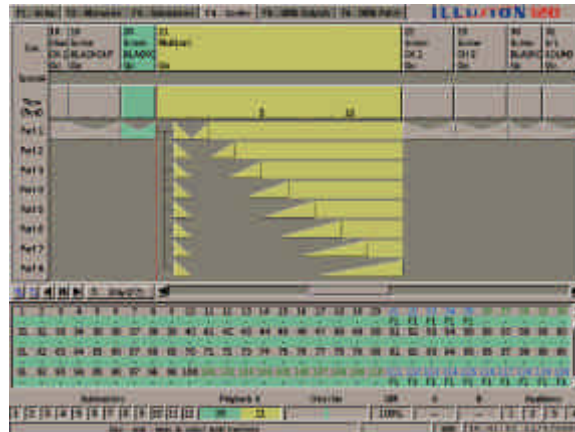


Figure 9 - 5: Cueline Screen showing Multi-Part Scene

Editing Channel Data

The channel data for a cue (or part of a multi-part cue) can be edited from the Cueline screen as follows:

1. Select the cue to be edited.
2. Position the mouse pointer on the **Part 1 Track** (or appropriate track for a multi-part scene).
3. Right click and select the *Edit Live* or *Edit Blind* option from the menu. The Channel Data Window is displayed on the screen.
4. Adjust the channel data levels, as required.

Editing Information (Multi-Part Scenes)

1. Select the required cue.
2. Right click in the track for the appropriate part of the cue, and select the *Edit Info* option from the menu. A popup window is displayed.
3. Edit the information text as required, then select the *OK* button in the window. The popup window is closed.

Previewing Cues

The channel data for a cue (or part of a multi-part cue) can be previewed from the Cueline screen as follows:

Select the required cue. Press the PREVIEW button or right click on the **Part 1 Track** (or appropriate track for a multi-part scene) and select the *Preview* option from the menu. The CDW is displayed.

To preview other cues, use the left and right arrow keys or click on the *Previous* or *Next* buttons in the CDW header.

To exit preview mode, press the PREVIEW button. The light in the PREVIEW button goes out and the CDW is closed.

Deleting Cues

Right click on the required cue in the **Cue Track** and select the *Delete* option from the menu. A confirmation window is displayed. Select the *Delete* button in the window to confirm the deletion.

If the deleted memory had previously been transferred to one or more submasters, the relevant submaster(s) are cleared.

Copying Cues

A complete cue can be copied to another cue from the Cueline screen as follows:

Right click in the **Cue Track** of the cue to be copied. Select the *Copy* option from the menu. The Copy Window is displayed.

Enter the destination cue number, then select the *OK* button in the window.

If the destination is unprogrammed, the selected cue is copied into the destination, and the Copy Window closed.

If the destination cue is already programmed, a warning is displayed. Select the *Overwrite* button to overwrite the destination cue.

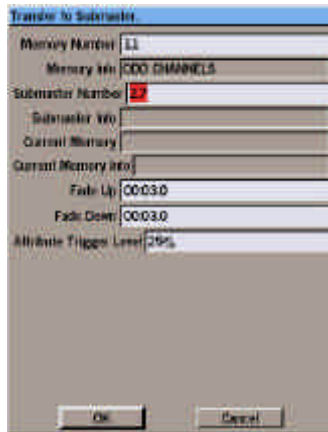


Figure 9 - 6: Transfer Window

Transferring Cues onto Submasters

Programmed cues can be transferred onto submasters and then output by raising the corresponding submaster fader.

Transferring a Memory

1. Right click on the cue (memory) to be transferred in the **Cue Track** and select the *Transfer* option from the menu. The Transfer Window is displayed.
2. Enter the submaster number in the field provided.
3. Adjust the submaster parameters, if required.
4. Select the **OK** button in the Transfer Window to complete the transfer.

If the specified submaster is unprogrammed, the cue (memory) is transferred onto the submaster, and the Transfer Window closed.

If the specified submaster has channel data loaded onto it, a warning message is displayed on the screen. Select the *Overwrite* button to replace the channel data with the selected cue.

If the specified submaster already has a cue transferred onto it, the selected cue is transferred onto the submaster, replacing the original one.

Zoom Buttons

The zoom buttons allow the Cueline, or part of the Cueline to be viewed at a range of magnifications.

The highest magnification displays approximately 12 seconds of Cueline, the lowest approximately 1 hour 40 minutes.

Scroll Bar

The scroll bar can be used in two different ways to adjust the section of Cueline displayed on the screen.

Left click on the Scroll Bar itself, and hold the mouse button down. Drag the scroll bar to the left or right as required then release the mouse button.

Left click on the space to the left or right of the scroll bar. The section of the Cueline displayed moves to the left or right as appropriate.

Playback Buttons

Selecting any of the three soft playback buttons on the Cueline screen is equivalent to pressing the **GO**, **PAUSE** and **GO PREVIOUS** buttons on the front panel.

See chapter 7 for details of playing back the Memory Stack (Playback X).

NOTES

Transferring Cues

Multi-Part Scenes cannot be transferred onto submasters. A warning message is displayed if this is attempted.

The information for a cue is copied automatically into the information parameter for the submaster when the cue is transferred.

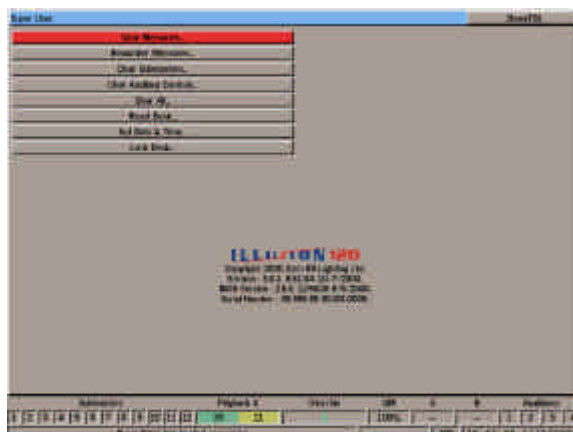


Figure 10 - 1: Super User Screen

Entering Super User

To enter Super User, press and hold the < and > buttons on the front panel together, and then press the F8 button.

The Super User screen is displayed on the monitor, containing the following options:

Clear Memories
Renumber Memories
Clear Submasters
Clear Auxiliary Controls
Clear All
Reset Desk
Set Date and Time
Lock Desk

The software version number and desk serial number are also displayed on the Super User screen.

Use the up and down cursor keys or the mouse to select the required option.

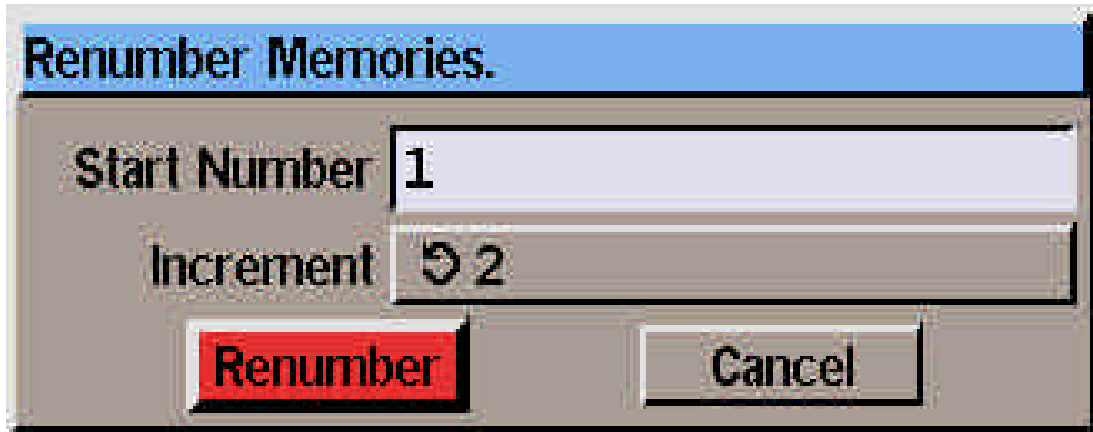


Figure 10 - 2: Renumber Memories Window

Clear Memories

This option clears all the programmed memories in the desk, leaving them unprogrammed.

If any memories have been transferred onto submasters or A/B masters, then the relevant submasters and A/B masters are also cleared automatically.

Select the *Clear Memories* option from the Super User screen. A confirmation window is displayed.

Select the *OK* button in the window to confirm the operation.

Renumber Memories

This option renumbers all the user programmed memories according to the parameters specified.

Example - If the programmed memories are renumbered by specifying a start number of 10 and increment 5, the new memory numbers will be 10, 15, 20 etc.

Select the *Renumber Memories* option from the Super User screen. A Renumber Memories Window is displayed.

Enter the start memory number in the field provided.

Select the required increment (0.1, 0.2, 0.5, 1, 2, 5 or 10).

Select the *Renumber* button in the window.

A popup window is displayed indicating that the renumbering was successful, or that the memories could not be renumbered with the parameters specified.

Memories transferred onto submasters are automatically renumbered.

Clear Submasters

This option clears the data from all the programmed submasters in the desk, leaving them unprogrammed.

Select the *Clear Submasters* option from the Super User screen. A confirmation window is displayed.

Select the *OK* button in the window to confirm the operation.

Clear Auxiliary Controls

This option clears all the auxiliary controls in the desk, leaving them unprogrammed.

Select the *Clear Auxiliary Controls* option from the Super User screen. A confirmation window is displayed.

Select the *OK* button in the window to confirm the operation.

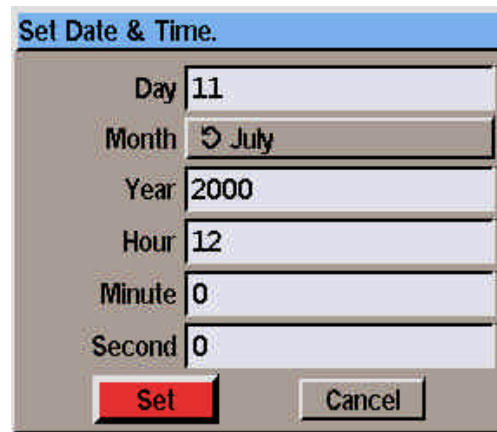


Figure 10 - 3: Set Date & Time Window

Clear All

This option clears all the memories, submasters, groups and auxiliary controls in the desk, leaving them unprogrammed.

Select the *Clear All* option from the Super User screen. A confirmation window is displayed.

Select the *OK* button in the window to confirm the operation.

Reset Desk

This option clears all the memories, submasters, groups and auxiliary controls in the desk, leaving them unprogrammed.

It also resets the desk defaults to their factory settings, loads the default setup, and sets Tracking to disabled.

Select the *Reset Desk* option from the Super User screen. A confirmation window is displayed.

Select the *OK* button in the window to confirm the operation.

Set Date and Time

This option allows the date and time to be set for the desk. The day, month, year, hour, minute and second fields can all be set individually.

Select the *Set Date and Time* option from the Super User screen. The Date and Time Window is displayed.

Use the cursor keys or mouse to select the required field, then adjust the value as necessary.

Select the *Set* button in the window to confirm the new setting. The Date and Time Window is closed. The clock in the Information Bar at the bottom of the screen is updated with the new date and time.

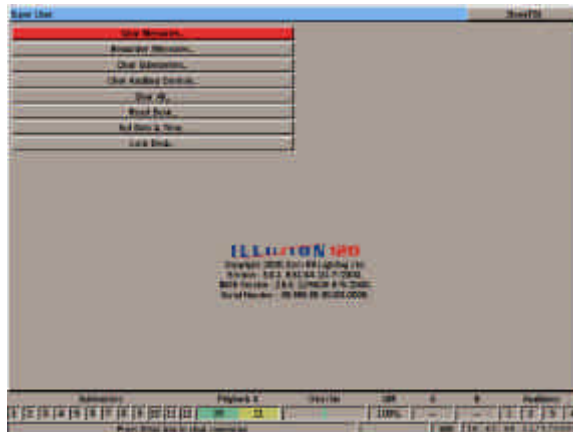


Figure 10 - 4: Super User Screen

Lock Desk Function

When the desk is locked, all the editing facilities are disabled (ie none of the setup, memory or submaster data can be changed) and an icon is displayed in the Information Bar at the bottom of the monitor screen.

The editing facilities can only be enabled by unlocking the desk from Super User mode.

Locking the Desk

1. Select the *Lock Desk* option from the Super User screen. The Lock Desk Window is displayed.
2. Enter a 4 digit code (numerics only) from the front panel or keyboard in the field provided, then select the *Lock* button in the window.

The window is closed and the 'Lock' icon is displayed in the Information Bar at the bottom of the screen.

Unlocking the Desk

1. Select the *Lock Desk* option from the Super User screen. The Lock Desk Window is displayed.
2. Enter the 4 digit code which was used to lock the desk, then select the *Unlock* button in the window. If the correct code is entered, the desk is unlocked, otherwise an error message is displayed.

Exiting Super User Mode

Select the *Close* button in the Super User screen, or press F8 on the front panel or external keyboard. The Super User Window is closed.

NOTES

Locked Desk

If an attempt is made to edit any data while the desk is locked, an error message is displayed on the monitor screen.

Special Unlock Code

Each desk has its own unique code which will unlock the desk, which is independent of the user entered 4 digit code. Contact your dealer or Zero 88 for further information.

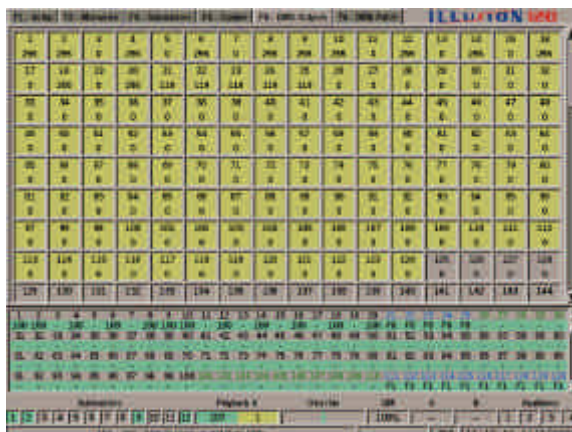


Figure 11 - 1: DMX Outputs Screen

Introduction

This chapter covers the following features and miscellaneous items which are available on the Illusion desk:

- DMX OUTPUT SCREEN
- DMX PATCH SCREEN
- AUXILIARY OUTPUTS
- TOPSET
- MACROS
- ENTERING CHANNEL VALUES
- ENTERING TEXT
- ENTERING TIMES
- DMX IN
- UPGRADING SOFTWARE

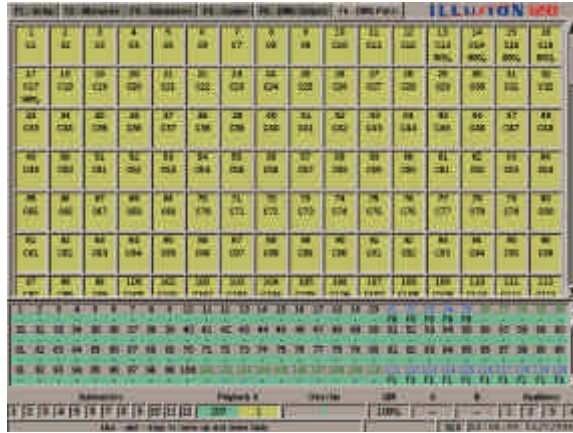


Figure 11 - 2: DMX Patch Screen

DMX Output Screen

The DMX Output screen shows the current DMX output value (0 - 255) of each DMX channel (1 - 512).

Press the SCREEN FUNCTION button F5 to display the DMX Output screen on the monitor.

The colour of each DMX channel indicates its state as follows:

Yellow - A Desk Channel or Auxiliary is patched to this DMX channel and the output is currently static.

Green - A Desk Channel or Auxiliary is patched to this DMX channel and the output is currently changing.

Grey - No Desk Channel or Auxiliary is patched to this DMX channel.

DMX Patch Screen

The DMX Patch screen shows which desk channels and auxiliary controls are patched to each of the 512 DMX channels.

It also shows the proportional patch values for channels which are not patched at 100%.

Press the SCREEN FUNCTION button F6 to display the DMX Patch screen on the monitor.

The text in each DMX channel box shows the desk channel and auxiliary control patching as follows:

Cn - Desk Channel n is patched to the DMX channel.

An - Auxiliary Control n is patched to the DMX channel

Blank - No Desk Channel or Auxiliary is patched to the DMX channel.

The colour of each DMX channel box indicates its state as follows:

Yellow - A Desk Channel or Auxiliary is patched to this DMX channel and the output is currently static.

Green - A Desk Channel or Auxiliary is patched to this DMX channel and the output is currently changing.

Grey - No Desk Channel or Auxiliary is patched to this DMX channel.

NOTES

DMX Output and DMX In

The DMX Output Screen only shows the DMX outputs generated by the Illusion desk.

Any DMX In data which is mixed with the Illusion outputs is not shown on the DMX Output screen.

DMX Output and Patch Screens

Use the up and down cursor keys or the scroll bar to scroll up and down the output and patch tables to see the higher numbered DMX channels.

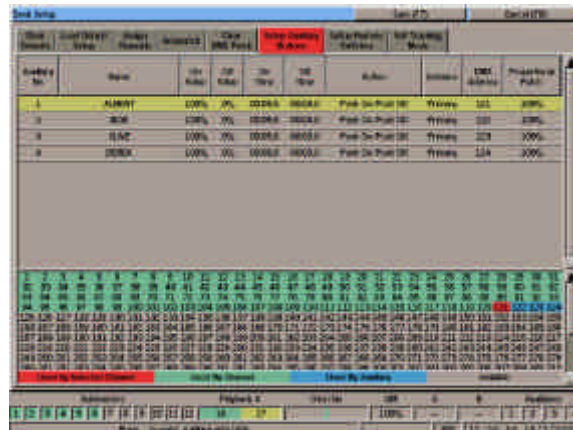


Figure 11 - 3: Setting Up Auxiliary Controls

Auxiliary Outputs

The DMX output from an auxiliary button is determined by its on/off values, on/off fade times and button action (momentary or push on/push off). These values are defined in Desk Setup (see chapter 3 for details).

When the DMX output is at the on value, the light in the AUX CONTROL button is illuminated.

When the DMX output is at the off value, the light in the AUX CONTROL button is off.

While the DMX output from an auxiliary is fading up or down the light in the AUX CONTROL button flashes.

The auxiliary section in the Fade Status Bar on the monitor screen also indicates if the Auxiliaries are on (green), off (grey) or fading (red).

Remote Triggering of Auxiliaries

Pressing a remote switch which is assigned to an auxiliary control has exactly the same effect as pressing the corresponding AUX CONTROL button on the front panel.

The lights in the AUX CONTROL buttons show the current state of the auxiliary outputs regardless of which physical button is pressed.

Momentary Action

1. Press and hold down the required AUX CONTROL button on the front panel. The output on the corresponding DMX channel fades from the 'off' value to the 'on' value in the fade on time and then remains at the 'on' value while the button is held down.
2. Release the AUX CONTROL button. The output on the corresponding DMX channel fades down from the 'on' value to the 'off' value in the fade off time, and then remains at the 'off' value.

If the AUX CONTROL button is held down for a period which is less than the fade on time, then the DMX output will only reach a proportion of the 'on' value.

Push On/Push Off Action

1. Press the required AUX CONTROL button on the front panel. The output on the corresponding DMX channel fades from the 'off' value to the 'on' value in the fade on time, and then remains at the 'on' value.
2. Press the AUX CONTROL button again. The output on the corresponding DMX channel fades down from the 'on' value to the 'off' value in the fade off time, and then remains at the 'off' value.

If the AUX CONTROL button is pressed twice in a period which is less than the fade on time, then the DMX output will only reach a proportion of the 'on' value before fading back down again.



Figure 11 - 4: Topset Window

Topset

Topset is a method of limiting the output values of selected desk channels to compensate for any problems with the actual fixtures in the lighting rig, without the need to change any of the programmed memory or submaster data.

For example - if a light is accidentally moved and points directly at the audience instead of onto the stage, adjusting the topset value of the corresponding channel can effectively turn the light off, without having to edit any of the memory data. When the light is put back into its correct position, all that needs to be done is to reset the topset value for the channel.

The topset value can be adjusted between 0 - 100% for brightness channels. The topset value for attribute channels is fixed at 100%.

If the topset value of any channel is changed from its default (100%), "TOP" is displayed in the Information Bar at the bottom of the monitor screen.

Topsetted channels are indicated in the CDW by a red line across the output bar graph and the output value in red text rather than the normal black.

Topsetted channels are indicated in the CDD by displaying their output values in red text.

Adjusting Topset Values

1. Press the TOPSET button on the front panel. The Topset Window is displayed on the monitor screen. This window shows the current output value and the topset value of all the desk channels.
2. Selecting channels and adjusting their topset values is done in the same way as programming channel data in the CDW (see examples below).
3. To close the Topset Window, press the TOPSET button or F8 on the front panel, or select the *Close* button in the Topset window.

Topset Examples

1 @ 50 ENTER

Sets the topset value of channel 1 to 50%.

11 THRU 20 @ 75 ENTER

Sets the topset values of channels 11 to 20 to 75%.

86 AND 87 @ 0 ENTER

Sets the topset values of channels 86 and 87 to 0%, effectively turning them off.

Resetting Topset Values

1. Press the TOPSET button on the front panel. The Topset Window is displayed on the monitor screen.
2. Press the SCREEN FUNCTION BUTTON F7 or select the *Reset* button in the Topset Window. The Topset values are reset to 100% for every Brightness channel. The Topset indicator (TOP) is removed from the Information Bar at the bottom of the monitor screen.
3. To close the Topset Window, press the TOPSET or F8 button on the front panel, or select the *Close* button in the Topset window.

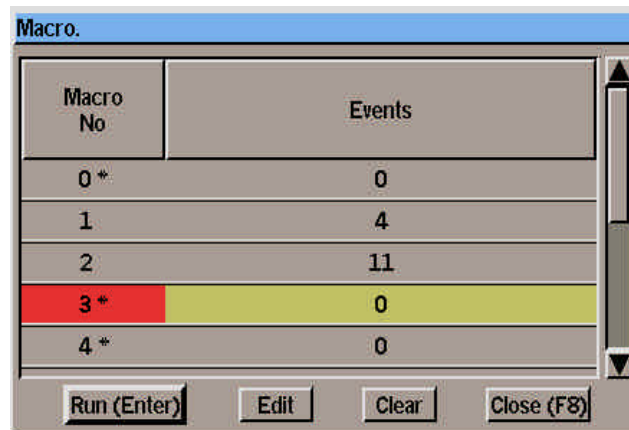


Figure 11 - 5: Macro Window

Macros

A macro is a recorded series of front panel button presses which can be played back when required, or triggered from the Memory Stack or submasters. The Illusion desk provides 10 (50) macros numbered 0 - 9 (0-49).

Macro 0 is defined as the power-on macro, and if programmed, will run automatically when the desk is powered up.

The Macro Window

To display the Macro Window on the monitor, press the MACRO button on the front panel.

The Macro Window shows the macros in the form of a table.

Unprogrammed macros have an asterisk (*) displayed next to their number.

The right hand column of the table shows the number of steps programmed into each macro.

A yellow highlight bar is displayed on the currently selected macro.

The Macro Window contains soft buttons to run, edit and clear macros and one to close the Macro Window.

To close the Macro Window select the *Close* button in the window or press the F8 button on the front panel.

Programming a Macro

1. Press the MACRO button. Select a macro using the cursor keys or mouse, or by entering the macro number directly.
2. Select the *Edit* button in the Macro Window, or press the EDIT LIVE or EDIT BLIND button on the front panel. This opens the Edit Macro Window listing the contents of the selected macro (if programmed).
3. Enter the button sequence for the macro by pressing the front panel buttons in the required order.
As each front panel button is pressed, its name is added to the end of the list in the Edit Macro Window.
4. To end the button sequence press the MACRO button on the front panel or select the *OK* button in the Edit Macro Window. The button sequence is saved into the selected macro and the Edit Macro Window is closed.
5. Select the *Close* button in the window or press the F8 button on the front panel to close the Macro Window.

Editing a Macro

1. Press the MACRO button. Select a macro using the cursor keys or mouse, or by entering the macro number directly.
2. Select the *Edit* button in the Macro Window, or press the EDIT LIVE or EDIT BLIND button on the front panel. This opens the Edit Macro Window listing the contents of the selected macro (if programmed).

The Edit Macro Window contains three soft buttons (<, > and Del) which are used to move the cursor left and right along the list of commands, and delete commands from the macro respectively.

To insert a key press into a macro - move the cursor to the required insertion point, then press the required front panel key.

To delete a key press from a macro - move the cursor to the required point, then press the soft *Del* key. The command to the left of the cursor is deleted.

When editing is complete, press the MACRO button on the front panel or click on the *OK* button in the Edit Macro Window.

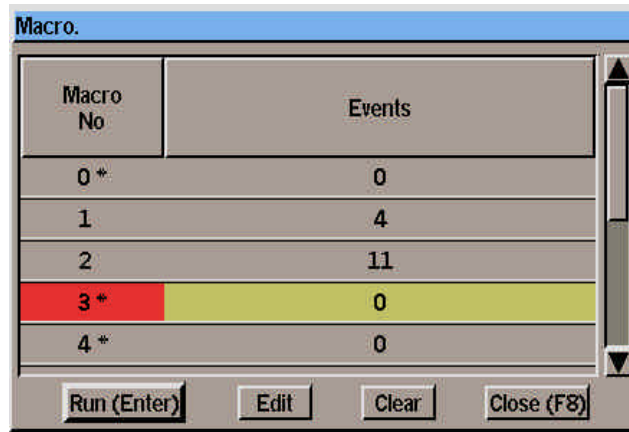


Figure 11 - 6: Macro Window

Clearing a Macro

1. Press the MACRO button. Select a macro using the cursor keys, mouse or by entering the number directly.
2. Select the *Clear* button in the Macro Window or press the CLEAR button on the front panel. A confirmation window is displayed. Select the *Clear* button in the window.
3. Select the *Close* button in the window or press the F8 button on the front panel to close the Macro Window.

Running a Macro

1. Press the MACRO button. Select a macro using the cursor keys, mouse or by entering the number directly.
2. Select the *Run* button in the Macro Window or press the ENTER button on the front panel. The Macro Window is closed and the selected macro is run.

Triggering Macros

Macros can be triggered from the Memory Stack when a memory is triggered (see chapter 7 for further details).

Macros can also be triggered by raising submasters (see chapter 6 for further details).

NOTES

Programming Macros

The MACRO button cannot be programmed into a macro.

When a macro is being programmed, the front panel buttons are not live, ie they do not perform their normal functions.

Editing Macros - External Keyboard

If an external keyboard is connected to the desk, the following keys can be used to edit a macro in the Edit Macro Window:

'<' moves the cursor to left.

'>' moves the cursor to right.

'Backspace' deletes the command to the left of the cursor.

'Delete' deletes the command to the right of the cursor.

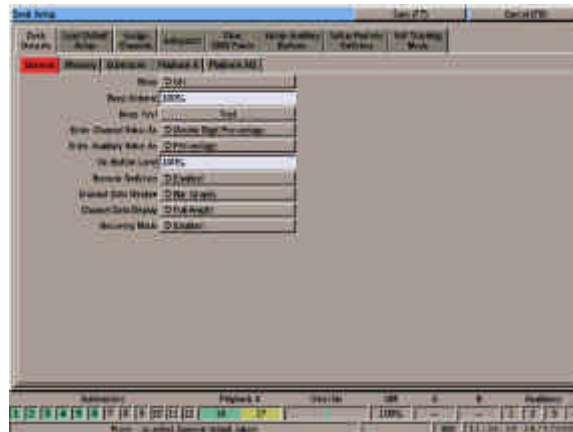


Figure 11- 7: Desk Defaults - General

Entering Channel Values

In Desk Setup there are various options for entering channel data values in the CDW. These formats are described below.

Single Digit Percentage

Enter a tenth of the required percentage value followed by ENTER. The values are displayed as a percentage. Examples:

CHANNEL 1 @ 0 ENTER = 0%
CHANNEL 1 @ 2 ENTER = 20%
CHANNEL 1 @ 5.5 ENTER = 55%
CHANNEL 1 @ 10 ENTER = 100%

Double Digit Percentage

Enter the required percentage value followed by ENTER. The values are displayed as a percentage. Examples:

CHANNEL 1 @ 0 ENTER = 0%
CHANNEL 1 @ 20 ENTER = 20%
CHANNEL 1 @ 55 ENTER = 55%
CHANNEL 1 @ 100 ENTER = 100%

DMX

Enter the required DMX value followed by ENTER. The values are displayed as DMX values (0 - 255). Examples:

CHANNEL 1 @ 0 ENTER = 0
CHANNEL 1 @ 5 ENTER = 5
CHANNEL 1 @ 128 ENTER = 128
CHANNEL 1 @ 255 ENTER = 255

Single Digit Direct Action

Enter a tenth of the required percentage value as a single digit. The command is processed after the digit is entered. The values are displayed as a percentage. Examples:

CHANNEL 1 @ 0 = 0%
CHANNEL 1 @ 0.5 = 5%
CHANNEL 1 @ 2 = 20%
CHANNEL 1 @ 5.5 = 55%

In this mode it is not possible to set the selected channel(s) to 100% using the numeric keys. Use any of the following commands to set a channel to 100%:

CHANNEL 1 ON
CHANNEL 1 @ ON
CHANNEL 1 @@

Double Digit Direct Action

Enter the required percentage value as a double digit. The command is processed after the second digit is entered. The values are displayed as a percentage. Examples:

CHANNEL 1 @ 00 = 0%
CHANNEL 1 @ 05 = 5%
CHANNEL 1 @ 20 = 20%
CHANNEL 1 @ 55 = 55%

In this mode it is not possible to set the selected channel(s) to 100% using the numeric keys. Use any of the following commands to set a channel to 100%:

CHANNEL 1 ON
CHANNEL 1 @ ON
CHANNEL 1 @@



Figure 11 - 8: Front Panel Numeric Keypad

Entering Text using Front Panel Keys

The numeric keypad on the front panel can be used to enter alphanumeric text where appropriate (eg information fields for channels, memories, submasters etc.)

Each numeric key on the front panel is labelled with its associated characters (eg 7 - ABC, 8 - DEF, 9 - GHI etc).

To enter alphanumeric characters, press the corresponding key the appropriate number of times.

Examples:

To enter 'A' press the 7 key once
To enter 'B' press the 7 key twice
To enter 'C' press the 7 key 3 times
To enter '7' press the 7 key 4 times

A cursor shows the current character in the text field on the monitor screen.

If a pause is left between key presses, the cursor automatically advances to the next character.

Entering Real Times from Numeric Keypad

When real times are entered from the numeric keypad or external keyboard, the values may be entered as seconds only, seconds and tenths, or minutes seconds and tenths.

The range is from 00:00.0 to 99:59.9. The resolution is 0.1 seconds. Times are displayed on the monitor screen in the format mm:ss.t.

Examples:

0.5 ENTER = 0.5 seconds
3 ENTER = 3.0 seconds
12.4 ENTER = 12.4 seconds
1.30.0 ENTER = 1 minute 30.0 secs
2.34.5 ENTER = 2 minutes 34.5 secs

DMX In

If a cable containing a DMX signal is connected to the DMX In socket on the back panel of the Illusion desk, the desk will read the DMX data and process it as described below.

The DMX In function will only work if enabled in Desk Setup, and some or all of the DMX Input channels (1 - 48) are patched to Illusion desk channels. See chapter 3 for further details.

Only channel data from DMX channels 1 - 48 will be read and processed by the Illusion desk. Data on DMX channels 49 - 512 will be ignored.

Illusion desk channels which have a DMX input channel patched to them will output their normal channel levels (from Playback X, Playback A/B or submasters), HTP mixed with the corresponding DMX Input channel.

The DMX Output Screen shows the DMX output generated by the Illusion desk (ie. the combined DMX signals).

Upgrading Software

Upgrades to the operating system software will be provided on floppy disk. Full instructions on how to upgrade the software in the desk will be provided with the upgrade disk.

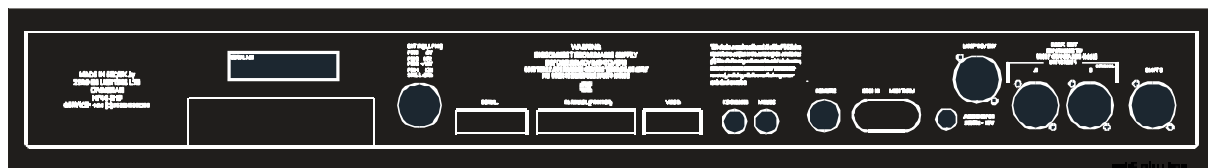


Figure 12 - 1: Back Panel of Desk

Desk Power Supply

An inline external power supply unit is used to power the desk.

Mains Voltage:

230V +10%, -17% (190V - 253V)
120V +10%, -17% (100V - 132V)

Supply 5V @ 5A and 12V @ 1A

Audio Input

Stereo Input >10 k , 100mV to 10V

Connections:

Tip Left Channel
Ring Right Channel
Sleeve 0V Signal Ground

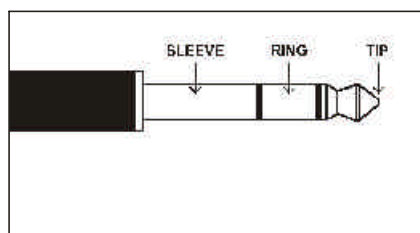


Figure 12 - 2: Stereo Jack Plug

Remote Switches

8 pin DIN connector providing 6 remote switches (common ground).

Connections:

Pin 1 +5V
Pin 2 Remote Switch 1
Pin 3 Remote Switch 2
Pin 4 Remote Switch 3
Pin 5 Remote Switch 4
Pin 6 Remote Switch 5
Pin 7 Remote Switch 6
Pin 8 0V Common Ground

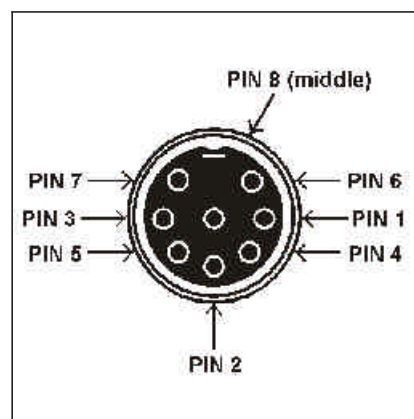


Figure 12 - 3: Remote Switches

Technical Specification

DMX Output

5 pin XLR, not isolated, with voltage protection and data output indicator
Data on channels 1 - 512 only.

Connections:

- Pin 1 Signal Ground (0V)
- Pin 2 DMX Drive Complement (1-)
- Pin 3 DMX Drive True (1+)
- Pin 4 Not Connected
- Pin 5 Not Connected

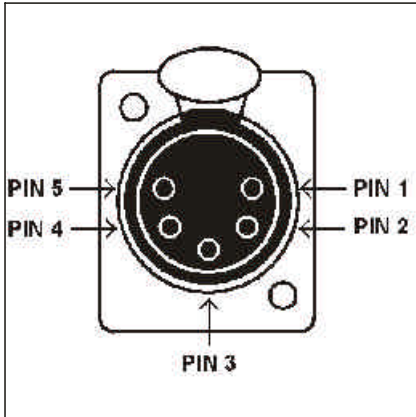


Figure 12 - 4: DMX Connector

Backup Data Storage

Floppy Disk drive 3.5" PC compatible
formatted to 1.44Mb (HD DS)

Printer

PC compatible parallel port

Serial Port

15 pin D (non-standard)

Mouse

mini DIN connector (PS/2)

Keyboard

mini DIN connector (PS/2)

Video Output

15 pin D

Desk Light

12V dimmable under processor control
3 pin XLR socket.

MIDI

2 x 5 pin DIN, MIDI input and MIDI thru.

SMPTE

3 pin XLR input and output.
Output 0dBm
Input 0dBm +/- 10dBm;
47 kOhm input impedance; maximum
50V RMS



Figure 13 - 1: Illusion Lighting Desk



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