

DMX-LINK 1024 Channel Back-up Console



THEATRELIGHT NZ

DMX-LINK QUICK OPERATION

RESETTING THE CURRENT PATCH TO A ONE-TO-ONE OR ZERO PATCH

The current Patch List may be initialised as a One-to-One or Zero patch as follows:

1. Ensure the Record LED is on. If necessary enter the Record Code (see page 15).
2. To initialise the current patch One-to One, hold [DM] and [AT], then press [F].
3. To initialise the current patch to Zero, hold [DM] and [AT], then press [0].

PATCH LIST ENTRY

You can enter any dimmer/level combination for a channel. The following example patches dimmer 10 to DMX Channel 1

1. Ensure Record in On, and the Channel display is clear: press [SC] if necessary.
2. Press [CH] [1] [DM] [1] [0] [AT] [7] [5] [DM] [1] [1] [AT] [F]. This patches Dimmers 10/75 and 11/F on Channel 1.
3. Repeat instruction 2 to patch other channel/dimmer levels.

PATCH EDITING IN TEST MODE

You can test the dimmers one at a time, and patch them to a channel at the same time as follows (Record must On):

1. To start from a Zero patch in the current patch list (no dimmers patched), hold [DM] and [AT], then press [0].
2. Press [SC] to clear the Channel display, then press [DM] [1] [TS]: the lamp on Dimmer 1 will light at Full.
3. To patch Dimmer 1 for example to Channel 27, press [CH] [2] [7].
4. Press [TS] to record the patch and test Dimmer 2. Repeat from instruction 3 to test and patch all the dimmers.

DMX SNAPSHOTS AND EDITING BACKUP SCENE LEVELS

You can record a Scene of up to 1024 Channel levels from the DMX inputs—a DMX “snapshot”— and store it under a Backup Master on the current page, then edit the levels if required (Record must be On):

1. Set up the cue state you wish to back up on the external desk, then press [RECORD]: the Record LED starts flashing.
2. To assign the recording to Master 1, hold [RECORD] and press Backup Master Flash key 1: the LED stops flashing.
3. Press [SC] [1] to address Scene 1 backup levels, the levels you have just recorded.
4. To edit the level of say Channel 5, press [CH] [5] [AT] [F] to set Channel 5 at Full.
5. To edit Channels 1 through 4 and 6 to level 50%, press [CH] [1] [TO] [4] [+] [6] [AT] [5] etc.

§ For further instruction, please refer to the table of contents overpage.

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DMX-LINK INTRODUCTION

The Theatrelight DMX-Link is a Patch and Backup panel suitable for use either as a standalone controller, or as a backup and patch controller for a primary DMX controller.

The DMX-Link incorporates a DMX mixer for mixing the output of two DMX lines, and patching the channels to 1024 dimmers. The DMX 1 input can be programmed to accept from 12 up to 512 input Channels, while the remainder of the channels become available for the second input. Input master faders are provided for each of the two inputs to allow a smooth crossfade to a Backup Scene in the event of failure of either of the two input DMX signals.

Backup Scenes of up to 1024 channels can be recorded as snapshots from the two DMX inputs. The 10 Backup Master faders are arranged in 10 pages for a total of 100 Backup Scenes with 5 year memory retention during power off. In addition to recording Backup Scenes directly from either or both of the DMX inputs, Backup Scenes may be edited or set up entirely from the keypad.

During playback, page overlay memory keeps the last page active until the previous Backup Master is returned to zero, thus allowing access to any page without change to the current lighting state. A Fade Timer allows accurate dipless cross-fades from 0.5 second up to 1 hour from all Backup Scenes. Backup Scenes may also be cross-faded manually with the Fade Time set at Instant, or flashed from the Backup Master Flash keys. Apart from their primary use as a secure backup of the main control panel cue states, the Backup Masters can be used independently for controlling special effects lighting, colour scrollers etc.

Four independent Patch Lists may be stored in memory, each listing any of up to 1024 dimmers at any level to any of the 1024 channels. Before editing, the Patch List may be set to either a One-to-One patch (Channel 1 drives Dimmer 1 at Full etc.), or a Zero patch, in which no dimmers are connected to the channels.

A set of independent Houselight faders are included in the DMX-LINK for operator convenience. The faders may be used to control analogue Houselight dimmers of any polarity, and have no electrical connection to the DMX-Link electronics for added security. Additionally, both channel and dimmer test facilities are provided to assist the operator in pre-show checks of the lighting installation.

The DMX-Link can drive a LCD display with key help functions, has a memory card storage system for backup or library purposes, and a printer socket for printing a hard copy of all recorded Backup Scene and Patch List levels on a standard PC printer.

DMX-LINK ADVANTAGES

The DMX Link has several features normally found in more expensive lighting desks. These advantages are detailed below.

MIXING DMX INPUTS

Often a lighting design goes beyond the capability of the desk in hand, either in number of channels to be controlled, or in the type of control required. The DMX-Link allows the input of a second desk to be mixed in, patched, backed up, and output down a single DMX line. The second desk can be either a standard DMX desk, or a desk dedicated to the control of Moving Lights or other special effects. The channel levels input from the second desk are tagged on to the end of the channels from the first desk. This start point or split is programmable for maximum usefulness with all types of external desks.

SOFT-PATCHING

A soft-patch greatly enhances the capability and usefulness of any lighting desk. As well as the ability to plan the control channel layout of the desk to suit the operator rather than the hard-wired dimmer numbers, the DMX-Link soft-patch enables more than one dimmer to be operated from a channel fader—of particular use for example when each colour of a Cyclorama requires a number of dimmers. Since each dimmer patched to a channel may be set to a different level (proportional patching), the lighting across the Cyclorama may be evenly balanced. A multi-dimmer proportional soft-patch in effect turns each channel into a Scene of dimmers.

BACKUP SCENES

The DMX-Link can store 100 Scenes of 1024 Channel levels each. While the major use is to record and backup the output of a main desk, the Backup Scenes facility may also be used for standalone playback of special effects, colour scrollers, or for orchestra or work lights.

DMX-LINK FEATURES

- § DMX-512 inputs and outputs.
- § Mixing of two DMX universes for a total of 1024 input channel levels.
- § Output of two DMX universes for a total of 1024 dimmer levels.
- § 10 pages of 10 Backup Scenes with page overlay memory, with 5 year memory retention during power off.
- § Backup Scenes of 1024 channels each can be recorded as snapshots from the two DMX inputs, or set up from the keypad.
- § Timed dipless cross fades of up to 1 hour from all Backup Scenes.
- § Four independent Patch Lists.
- § Each softpatch enables allocation of any of up to 1024 dimmers at any level to any of the 1024 input channels.
- § Dedicated keyboard for fast set-up of Patch Lists and Backup Scenes.
- § Patch List editing can start from either a One-to-One patch (Chn 1 drives Dimmer 1 at Full etc.), or a Zero patch.
- § Easily visible LED displays for Scene number, Channel number, Dimmer number, and Level.
- § Fast read-back of all Patch List channel numbers with their dimmers and levels.
- § Read-back of all live channel and dimmer levels.
- § Fast auto-step Test of both channels and dimmers for pre-show checks.
- § Flash On/Off over-ride of any channel or dimmer for instant spot checks, focusing, and lamp/dimmer identification.
- § Six independent Houselight faders with Master for convenient local control, electrically independent of the DMX-Link electronics.
- § Operator's instruction summary printed on the front panel.
- § Dust guard protection on all faders for extended life.
- § LCD screen output for live monitoring of channel and dimmer levels, and on-screen help.
- § Printer output for memory dump to standard PC parallel printer.
- § Memory card for memory extension, backup or library purposes.

DMX-LINK PANEL LAYOUT

- A INSTRUCTION SUMMARY** lists commands for most DMX-Link functions as a memory aid for the operator.
- B DESK LIGHT SOCKET** is provided for a plug-in goose-neck working light.
- C HOUSELIGHT FADERS** enable convenient local control of house lights. They are independent of the DMX-Link electronics.
- D DMX INPUT FADERS** control the input levels of the two DMX inputs. An input is disabled if the fader is set at zero.
DMX INPUT STATUS LEDs mimic the input DMX state: Green for valid DMX, Red for DMX error, Off for no input or disconnect.
- E CHANNEL DISPLAY** shows the current channel number for patch editing, flash, level, and test modes. When Scenes are edited this display shows **S.** to indicate an addressed Backup Scene number.
DIMMER DISPLAY shows the currently selected dimmer number for patch editing, dimmer flash, level read, and test modes. When Scenes are edited this shows an addressed Backup Scene channel number.
DIMMER END POINT indicates the last dimmer patched to the current channel when reading Patch List levels.
LEVEL DISPLAY shows levels as a percentage, from 0 to F (Full). When entering levels, the first number key pressed sets the tens digits, and the second number if required, sets the units. This allows a level to be set to the nearest 10% with one keystroke to save time when plotting. If both Channel and Dimmer displays are showing a valid number, then the level shown is the recorded Patch List level. If an **S.** is showing with a number from 1 to 10 in the Channel display, and a number in the Dimmer display, then the level shown is the recorded **Scene** channel level. The Level display also shows channel or dimmer output levels, Backup Scene channel levels, and the test level in both Channel and Dimmer Test modes.
DMX 1 LED if on, indicates the displayed channel is numbered from 1 in the DMX 1 input range during Scene or Patch editing.
DMX 2 LED if on, indicates the displayed channel is numbered from 1 in the DMX 2 input range during Scene or Patch editing. If both these LEDs are off, the channel numbering starts at 1 regardless of the split of channels between DMX inputs 1 and 2.
EDIT LED indicates a valid Patch or Scene edit state. This LED is a warning that any level changes to channel levels (in Scene Edit mode) or dimmer levels (in Patch Edit mode) will be immediately written to memory.
FLASH LED shows when the Backup Scenes Flash keys have been enabled.
TEST LED shows that a channel or dimmer level has been modified by a Test operation.

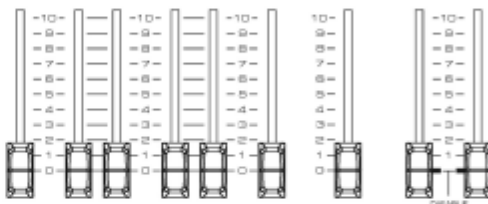
THEATRELIGHT NZ

DMX-LINK

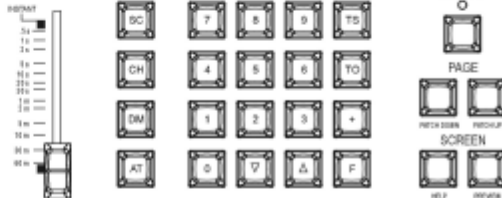
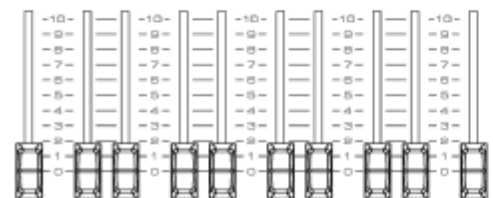
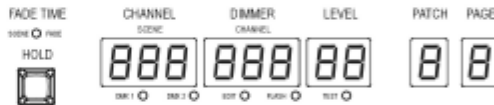
INSTRUCTION SUMMARY

INSTRUCTION SUMMARY	BACK UP SCENES SETUP AND EDITING
RECALL CLEAR	READ SCENE LEVELS
RECALL FUNCTION	EDIT SCENE LEVELS
RECALL ENABLE	POST PROCESSOR BANK
DRIVE MODE KEY	SET UP BY CHANNELS
RECALL DISABLE	LEVELS DISPLAY
RECALL CLEAR	READ LIG CHANNEL LEVELS
WASH TO DARK	READ LIG DIMMER LEVELS
LOAD PROGRAM	TEXT AND FLASHWORDS
DMX INPUTS SETUP	TEXT ALLOWABLES
SET DMX INPUT SOURCE	LET'S TEST ALL CHANNELS
ADDRESS DMX 1 CHANNEL	CHANNEL TEST AND CLEAR
ADDRESS DMX 2 CHANNEL	TEXT ALLOWABLES
ADDRESS ALL CHANNELS	LET'S TEST ALL CHANNELS
PATCH/LIST SETUP	DIMMER TEST AND FLASH
SELECT PATCH LIST	SET DIM TEST LEVEL
READ PATCH LIST LEVELS	SAVE TEST PAGE
SET DIM TO USE PATCH	HARD COPY PRINTOUT
EDIT PATCH LIST	PRINT SCENES PATCH LIST
TEST AND EDIT PATCH	PRINT CHANNELS
BACKUP SCENES/RECORDING AND PLAYBACK	HELP AND DISPLAY SCREENS
RECALL CURRENT SCENE	SCENES KEY HELP
ADDRESS RECALL SCENE	SET SCENE PAGE
QUICK RECALL SCENE	SCREEN LEVEL PAGE 1
HOLD MODE	SCREEN LEVEL PAGE 2
PREVIEW SCENE	SCREEN LEVEL PAGE 3
CHANNEL SCENE PAGE	SCREEN LEVEL PAGE 4
SCENE FLASHWORD OFF	SCREEN LEVEL PAGE 5

HOUSELIGHT FADERS



BACKUP MASTERS



G

I

H

F

F SC KEY (Scene Key) is used to enter Backup Scene numbers during Scene editing. It is also used with the **F** key to enable or disable the Backup Flash keys, to clear the Channel number display and Test mode, and to reset the screen display to page 1.

CH KEY (Channel Key) is used to enter channel numbers up to 1024.

DM KEY is used to enter dimmer numbers during Patch editing, and to set the DMX 1 and DMX 2 LEDs.

AT KEY sets Patch and Backup Scene levels, and interrogates channel and dimmer levels, and Patch List dimmer levels.

NUMBER KEYS are used for entry of Scene, Channel and Dimmer numbers, and levels.

+ KEY (And Key) is used during Backup Scene editing as a channel And function.

TO KEY is used during Backup Scene editing as a channel To (Through) function.

0 KEY (Zero Key) sets levels off, and with the DIM and AT keys sets dimmers of the current Patch List to zero.

F KEY (Full Key) sets levels to full, and with the DIM and AT keys sets all dimmers of the current Patch List as a One to One patch. With the SC key (Scenes key) it is used to enable or disable Flash keys above the Backup Masters.

5 / 6 KEYS (Up and Down Keys) are used for editing Scene levels. Levels may be faded, or stepped up or down by 5 or 10%.

TS KEY allows testing of channels or dimmers. Test direction may be changed using the Up and Down Keys

G PATCH DISPLAY shows the current Patch List, 1, 2, 3, or 4.

PAGE DISPLAY show the current Backup Scenes Page. The point flashes if any Last Page Backup Masters are up.

RECORD KEY is used for recording the current channel levels into the Backup Scenes, and as a shift key for other functions.

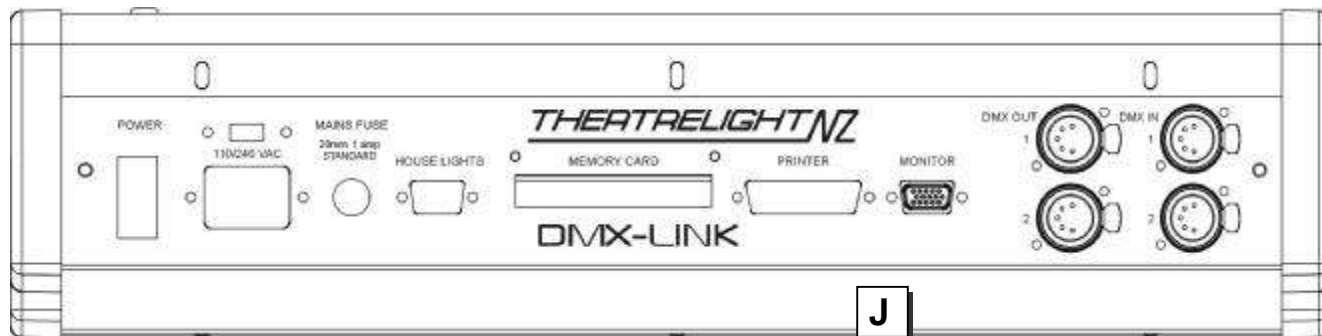
RECORD ENABLE LED must be on to edit Scenes and Patch Lists.

PAGE UP KEY (and Patch Up) increments the current Backup Scenes page. With Record, this key increments the current Patch List.

PAGE DOWN KEY (and Patch Down) decrements the current Backup Scenes page. With Record, this key decrements the current Patch List.

SCREEN UP KEY (and Preview) increments the current Screen page on the LCD display. With the Backup Flash keys, this key previews Backup Scenes on screen, and with Screen Down, gives either on-screen Help, or a hard-copy printout.

SCREEN DOWN (and Help) decrements the current Screen page on the LCD display. With Screen Up, this key provides a number of on-screen Help messages for all control key functions.



- H FADE TIME MASTER** sets the playback fade time of all Backup Scenes. The time scale extends from 0.5 second to 60 minutes, and includes an Instant setting. DMX input channels are not affected by the fade timer.
- HOLD KEY** (and Record Off) freezes the current Backup Scenes fade while pressed. With the Record key, Hold disables Record, and with a code entry, allows for loading from Memory Card, or a complete erase of memory contents.
- SCENE FADE LED** flashes while a timed Backup Scene cross-fade is in progress.
- I BACKUP MASTER FADERS** each store a single Scene of 1024 Channels. There are 10 pages of 10 Backup Scenes for a total of 100 scenes, with 5 year memory retention during power off. Playback fade time is controlled by the Fade Time Master.
- FLASH KEYS** give an instant flash of any Backup Scene. The Flash function may be disabled to prevent accidental flashes of light on stage. These keys are also used to assign recorded scenes, and for previewing Backup Scene levels.
- BACKUP SCENES MIMIC DISPLAY** uses Green LEDs to show if a Backup Scene other than a Blackout has been recorded.
- J POWER SUPPLY** socket may be switched for 120 or 230 volts AC, 50/60 Hertz supplies.
- FUSES** are provided for DMX-Link electronics and work lights power.
- HOUSELIGHTS** socket for connection of external Houselight dimmers.
- DMX OUTPUTS** each transmit 512 multiplexed dimmer levels in DMX-512 USITT (1990) format to the remote dimmers.
- DMX 1 INPUT** socket may be used to input an external desk when using the DMX-Link as a standalone Backup and Patch controller. This input can be programmed to accept from 12 to 512 input channels.
- DMX 2 INPUT** socket may be used to input a second external desk of up to 512 channels.
- MEMORY CARD** socket takes a standard 5 year life lithium battery powered 256KB Memory Cards for secure backup.
- MONITOR AND PRINTER PORTS** provide outputs to a LCD Monitor, and to a PC printer for hard-copy print-out of all Backup Scenes and the current Patch List.

DMX-LINK OVERVIEW

DMX INPUTS

The DMX 1 input can accept from 12 to 512 channels, with the remainder of up to 1024 input channels accepted from the DMX 2 input. This split between the two inputs can be set for each of the four Patch Lists. The level of each DMX input is controlled by its input master fader. In normal operation DMX 1 input would be left at Full, and DMX 2 input set at Disable unless a second desk is connected to it. Both inputs should be disabled (DMX faders at zero) when the DMX-Link is used solely for Backup Scenes playback.

PATCH LISTS

The DMX-Link has four Patch Lists in memory. Any number (to the capacities indicated on the LCD screen) of the 1024 dimmers may be patched to the channels from the DMX input lines and the Backup Scenes. The Patch Lists have the following capacities:

Patch List 1	8 dimmers per channel average, total 2087 dimmer listings
Patch List 2	4 dimmers per channel average, total 960 dimmer listings
Patch List 3	3 dimmers per channel average, total 720 dimmer listings
Patch List 4	2 dimmers per channel average, total 480 dimmer listings

PATCH LIST EDITING

Each Patch List may be initialised to a One-to-one patch (Channel 1 drives Dimmer at Full etc) or a Zero patch. Starting from either initial state, you can set dimmers at any level on any channel. The same dimmer may be listed (at different levels if required) under any number of channels. The channels may be addressed as 1 to 1024, as DMX 1 Channels, or as DMX 2 Channels depending on the setting of the DMX 1 and 2 LEDs below the Channel Display.

PATCH LIST PAGES

The current Patch may be changed by pressing Record and Patch Up or Patch Down keys. Since dimmer levels change instantaneously to the new patch settings, this operation would normally be carried out with all channels at blackout. Record does not need to be enabled to change Patch Lists.

BACKUP SCENES

The DMX-Link has 10 pages of 10 memory playback masters, the Backup Masters, giving a total of 100 Backup Scenes. Each scene can store a single record of 1024 channel levels, which may be sourced from either or both of the two DMX inputs, and from any combination of the Backup Masters themselves.

BACKUP SCENES MIMIC LEDS

For easy identification of which Backup Masters have been recorded, the contents of each Master is indicated as follows:

OFF Scene has no levels recorded (blackout)

GREEN Valid Scene levels

BACKUP SCENES FLASH KEYS

The Backup Master flash keys can be used for an instant flash to Full of any scene. To decrease the possibility of mistakes, all flash functions may be disabled. The flash keys are also used to assign recordings, and for previewing Scenes on the LCD display.

BACKUP MASTER FADERS

The Backup Master faders are used to fade up and down all Backup Scenes. You can have any number (up to ten) up at once. Backup Master playback is subject to the Fade Time setting, which may be set at Instant for manually timed, highest level takes precedence fades, or at any time from 0.5 second to 1 hour for auto-timed dipless cross-fades. The fade time affects only channels played back from the Backup Masters, not channels from the two DMX inputs.

BACKUP SCENES PAGES

You can change the current Page of 10 Backup Masters by pressing the Page Up or Page Down keys. The Page memory feature ensures that the playback of any Masters which are up remain unaffected, but the Page number point flashes to show that Backup Masters are still live on the previous page. New Backup Masters may be faded up on the new page to add to those from the previous page. When all the previous page Masters are returned to zero, the Page number point stops flashing.

RECORDING BACKUP SCENES

Each time the Record Key is pressed, the current output channel levels from the two DMX inputs and the Backup Master outputs are stored in spare memory. Pressing Record again and pressing a Backup Master Flash key assigns the recording to the Backup Master on the current page for playback. Recording is possible only if the Record LED is lit.

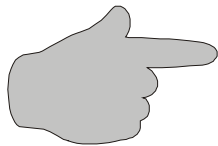
BACKUP SCENE EDITING

Any Backup Scene on the current page may be edited or set up entirely from the keypad. Keys for And and To functions, and fade up/down, and point or half- point step up/down editing allow fast set-up. The channels may be addressed as 1 to 1024, as DMX 1 Channels, or as DMX 2 Channels depending on the setting of the DMX 1 and DMX 2 LEDs below the Channel Display.

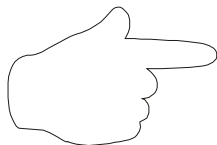
TEST AND LEVEL READ FUNCTIONS

Both Channels and Dimmers may be tested and flashed on or off as an aid for a pre-show check, or for identification.

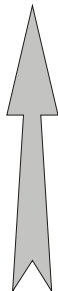
SYMBOLS



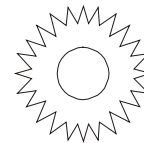
Hold down the indicated key and keep it held down for the following operation



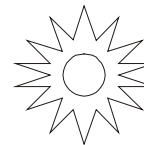
Press the indicated key once and then release it



Move the indicated fader in the direction of the arrow



LED **MUST** be On before starting the operation



LED is on

DMX-LINK INITIAL SET-UP

Before powering up your DMX-Link, please follow these instructions

1. Ensure that the 110/240 volt select switch on the back panel is correctly set for your mains supply before powering on.
2. If the DMX-Link is being used as a patch or back-up desk, connect 5 pin DMX-512 cables between the DMX-Link and the external desk(s).
3. Plug up one or two DMX-512 cables between the DMX-Link and the dimmers.
4. Plug in an LCD display (if used) to the Monitor socket.
5. Power up the DMX-Link, the LCD display, the external desks(s), and the dimmers.

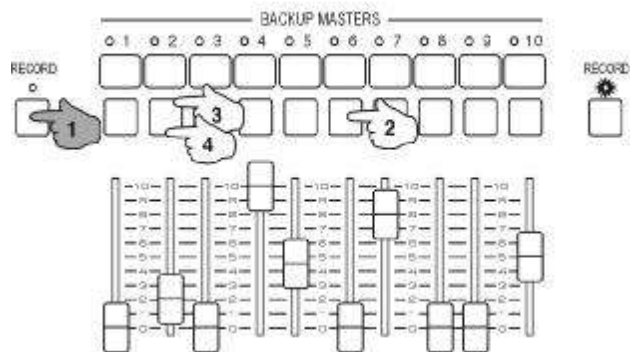
The DMX-Link powers up in the state in which it was last turned off—for a clean start to the instructions in this manual, set the following:

6. If the DMX-Link is used as a standalone desk, set the DMX inputs faders at zero.
7. If the DMX-Link is used with an external desk, set the DMX input fader for that input at Full
8. Set all the Backup Scene faders at zero.
9. Set the Fade Time Master at Instant.
10. Press Page Up or Page Down to select Page 1 in the Page display.
11. Hold Record and press Page Up or Page Down to select Patch 1 in the Patch display.

THIS PROCEDURE IS NECESSARY FOR CORRECT OPERATION OF THE EXAMPLES ON THE FOLLOWING PAGES

§ The symbols opposite are used to describe operation on the the following pages.

RECORD ENABLE



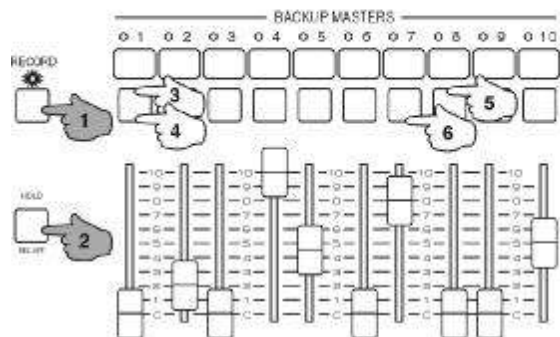
RECORD DISABLE



RECORD CLEAR



ERASE MEMORY



BACKUP SCENE FLASH DISABLE



RECORD, ERASE AND FLASH ENABLE

Before you can record Backup Scenes or edit the Patch Lists, the Record Enable LED must be set on using a key code. The Record and Erase codes will be found on a removable sticker on the back of the DMX-Link when you first take delivery.

RECORD ENABLE

To turn on the Record Enable LED (if it is off), enter the code as follows: (if for example Record Code is 622):

1. **Hold [RECORD], then press 6, then 2, then 2 in succession on the Backup Masters Flash keys: after a short Mimic flash, the Record LED will light.**

RECORD CLEAR

If you have pushed Record accidentally, you can clear the previous recording in the Record buffer as follows:

1. **Hold [RECORD] then press [0] (the Zero key): after a Mimic flash the Record LED will stop flashing.**

RECORD DISABLE

To prevent modification of your Patch Lists or Backup Scenes recordings, you can disable Record (if it is on) as follows:

1. **Hold [RECORD] then press [HOLD]: after a Mimic flash the Record LED will be turned off.**

ERASE MEMORY

Every DMX-Link has a 4 digit code for erasing all Backup Scenes, and resetting all Patch Lists to a One-to-One patch. This is only necessary if you are planning to record a completely new show. If your Erase code is for example, 1187:

1. **Ensure that the Record LED is lit by correct entry of the Record code (see above).**
2. **Hold [RECORD] and [HOLD], then press 1, 1, 8, and 7 in succession on the Backup Master Flash keys.**
3. **Release [RECORD] and [HOLD]: a long Mimic flash indicates that all previous recordings have been erased.**

As with the Record code, the Erase code can only be entered on the Backup Master Flash keys, 1 through 9. Entering the wrong Erase code affords extra protection by cancelling the Record LED, which must be enabled again before attempting an erase.

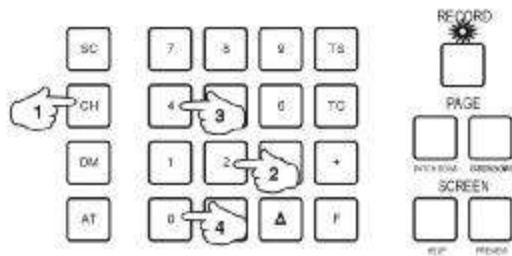
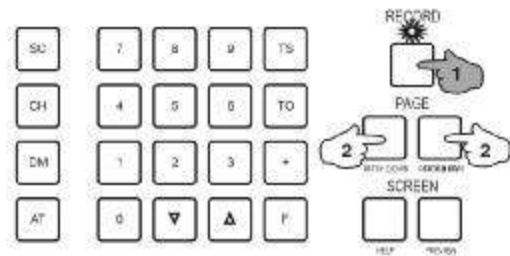
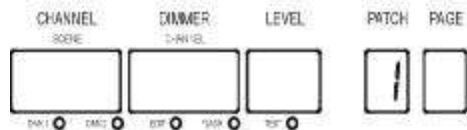
BACKUP SCENE FLASH DISABLE

To decrease the possibility of accidental flashes when using the desk, you can disable the Backup Master Flash keys:

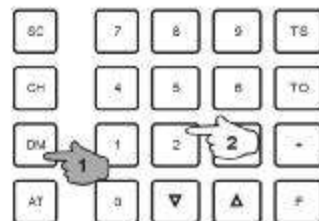
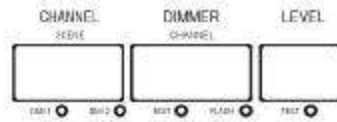
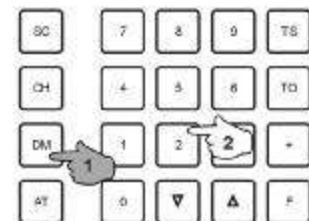
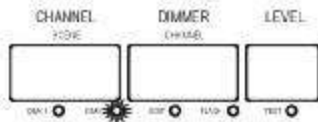
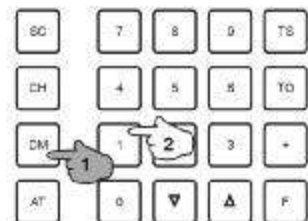
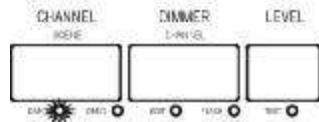
1. **Hold [SC] and press [F] on the numeric keypad. The Flash LED under the Dimmer display will go off.**

Repeating the instruction will toggle the LED on again, and enable the Flash keys. Record does not need to be enabled.

SETTING THE DMX INPUT SPLIT



ADDRESSING CHANNELS



DMX INPUTS

SETTING THE DMX INPUT SPLIT

The DMX 1 input can be set to accept from 12 up to 512 input Channels, while the remainder of the channels becomes available for the second input. Valid split numbers are from 12 to 512. The following example sets DMX 1 to 240 Channels as may be required if the DMX-Link is used as a stand alone patch unit for a 240 Channel external desk plugged into the DMX 1 Input.

1. **Ensure the Record LED is on, and the Channel display is clear: press [SC] if necessary.**
2. **Hold [RECORD] and press [PAGE UP] or [PAGE DOWN] to select the required Patch List.**
3. **Press in order [CH] [2] [4] [0] to enter 240 in the Channel Display.**
4. **Hold [RECORD] and press [CH]. A brief Mimic flash indicates correct recording of the split on the current Patch.**

The input split on each of the four Patch Lists is set to a default value of 240 after erasing the memory.

ADDRESSING CHANNELS

When editing a Patch List or Backup Scene, or when reading Channel levels, you can address the channels directly, as DMX 1 Channels or as DMX 2 Channels. This addressing mode may be used where it is easier to remember channels as numbered from 1 on an external second desk, and to prevent mistakes when setting up the Patch lists, or editing Backup Scenes. You can set the mode as follows:

1. **Hold [DM] and press [1] to set on the DMX 1 LED. Channel number entry can address only DMX 1 input channels.**
2. **Hold [DM] and press [2] to set on the DMX 2 LED. Channel number entry can address only DMX 2 input channels.**
3. **Hold [DM] and press [2] again to set both LEDs off. Channel number entry is direct.**

After an Erase, when changing Patch Lists, or in Test mode, the numbering defaults to direct addressing (both LEDs off).

CROSSFADING TO A BACKUP SCENE

In the event of failure of either DMX input, you can use the Input faders to cross-fade from the faulty input to a Backup Scene for a smooth transition to the Backup Scene lighting. If a DMX line is disconnected, the DMX-Link will keep the last DMX data received.

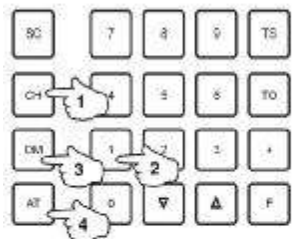
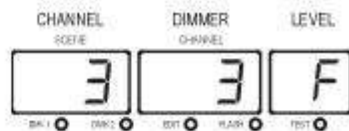
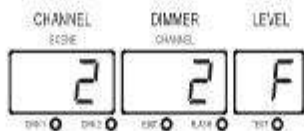
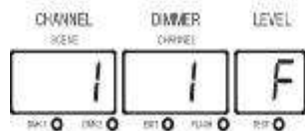
DMX INPUT STATUS

The LED above each Input fader gives an indication of the DMX input status:

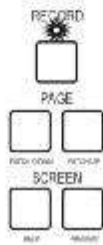
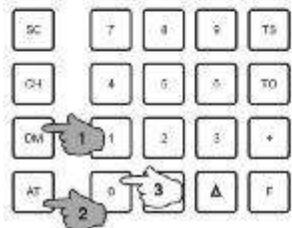
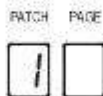
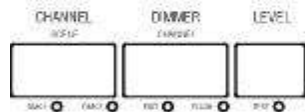
- OFF** DMX disconnected, or Input Fader set to Disable.
- GREEN** DMX input valid, Input Fader up.
- RED** DMX errors, Input Fader up.

You can use the desk to check any DMX device or cable—the DMX status LEDs indicate errors, and with an LCD attached, the DMX-Link shows the channel levels on any DMX line.

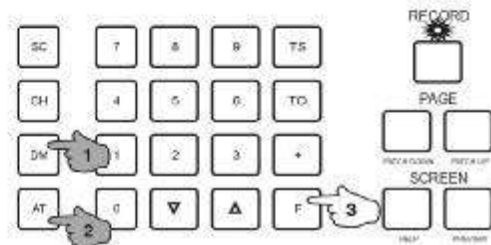
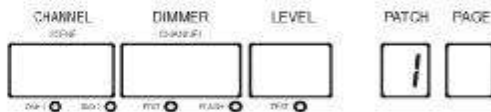
PATCH LIST LEVELS



RESETTING A ZERO PATCH



RESETTING A ONE-TO-ONE PATCH



PATCH LIST EDITING

Patch set-up must be entered into memory before plotting levels on a show. Once the DMX-Link is erased, the Patch List is reset to a One-to-One patch by default. This may either be used directly, or used as a convenient start point and edited to suit. You also have the option of starting from a Zero patch (no dimmers assigned to any of the channels). This may allow faster setup.

§ Note that before you can edit the Patch List, the Record Enable LED must be set on as described previously.

PATCH LIST LEVELS

After an Erase, the current Patch List can be viewed to verify that the One-to-One setting has been installed as follows:

1. **Ensure the Channel display is clear: press [SC] if necessary.**
2. **Press [CH], then [1], then [DM], then [AT]: the Dimmer display will show `1.' and the Level display will show `F', showing that Channel 1 is driving Dimmer 1 at Full.**
3. **Press [AT] again to show Channel 2, Dimmer 2, Level Full.**

The point after the last digit of the Dimmer display shows that the dimmer is the last Dimmer/ Level listed for that channel. If you continue to press the At key, the display will step through the patch list to the last channel.

RESETTING TO A ZERO PATCH

The current Patch List may be initialise as a Zero patch as follows:

1. **Ensure the Record LED is on. If necessary enter the Record Code.**
2. **Hold [DM] and [AT], then press [0]. After a brief Mimic flash, the Patch List will be set to a One-to-One lookup list.**

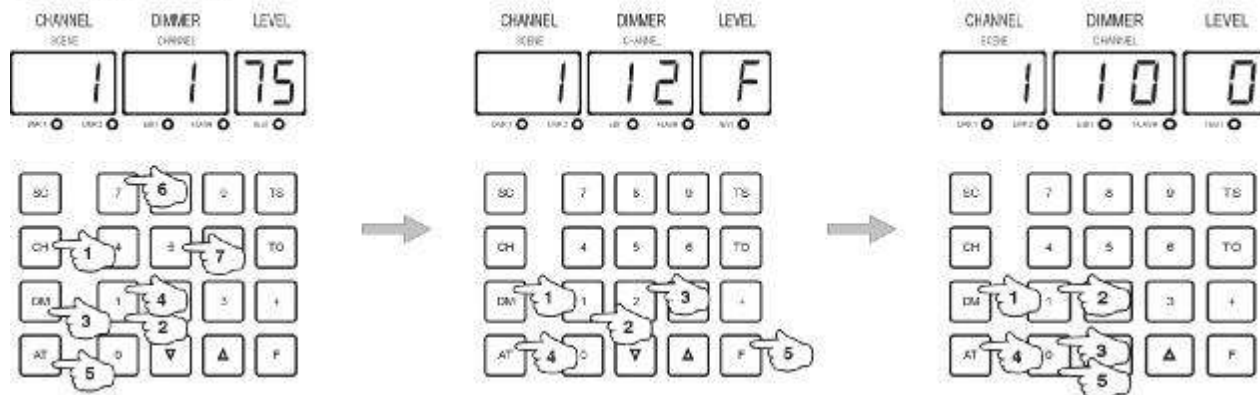
Since this can have a catastrophic effect on a well worked out patch list, the instruction is made purposely difficult— all three keys must be pressed at the same time for correct operation. A Zero patch list may be edited in the same fashion as a One-to-One list, but in this case no dimmers will show on any channel until the dimmers and levels have been set up by key entry for each channel.

RESETTING TO A ONE-TO-ONE PATCH

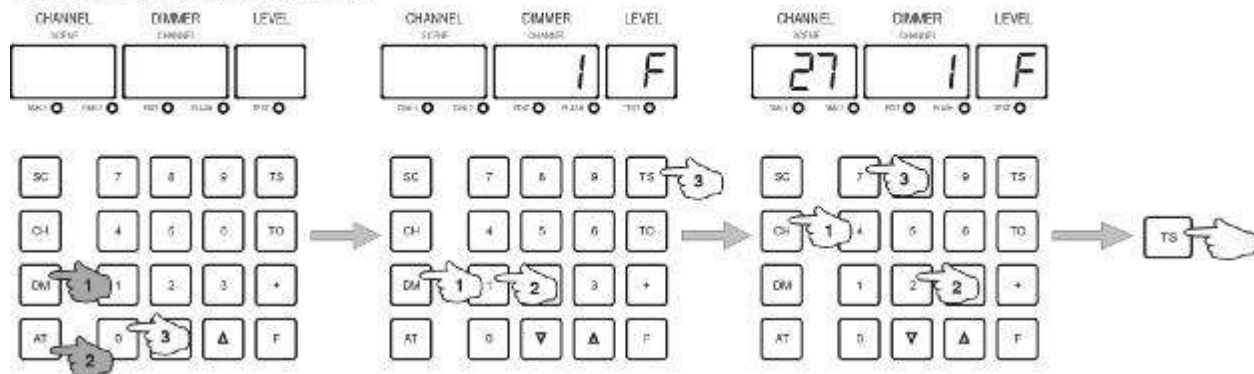
The current Patch List may be initialised as a One-to-One patch as follows:

3. **Ensure the Record LED is on. If necessary enter the Record Code.**
4. **Hold [DM] and [AT], then press [F]. After a brief Mimic flash, the Patch List will be set to a One-to-One lookup list.**

PATCH LIST ENTRY



PATCH EDITING IN TEST MODE



PATCH LIST ENTRY

While the Record LED is lit, you can enter any patch dimmer/level combination for a channel. The Edit LED will light to warn you that levels entered will immediately modify the current Patch List. The following example sets both dimmers 10 and 12 at different levels on Channel 1, and sets Dimmer 1 off:

1. **Ensure the Channel display is clear: press [SC] if necessary.**
2. **Press in order [CH] [1] [DM] [1] [0] [AT] [7] [5]. This sets Dimmer 10 at level 75 on Channel 1.**
3. **Press [DM] [1] [2] [AT] [F]. This sets Dimmer 12 at level Full on Channel 1.**
4. **Press [DM] [1] [AT] [0]. This sets Dimmer 1 at level 0 on Channel 1.**

If you now raise Channel 1 to Full on a live preset of the DMX-Link, Dimmer 1 will not show, but Dimmer 10 will come up to level 75 and Dimmer 12 to Full. The process may be repeated for any combination of Channels, Dimmers, and Levels. A dimmer may be driven from any number of channels; in this case the final dimmer level is the highest level of any combination. Patched Dimmers and their levels must be entered one at a time.

PATCH EDITING IN TEST MODE

As often happens in an 'Off the Cuff' show, little time is left to plot levels, let alone plan a patch list. As an aid to fast patching, you can test the dimmers or channels one at a time, and allocate them to a channel quickly and simply. This method is particularly useful if you are presented with an unknown connection of circuits to dimmers.

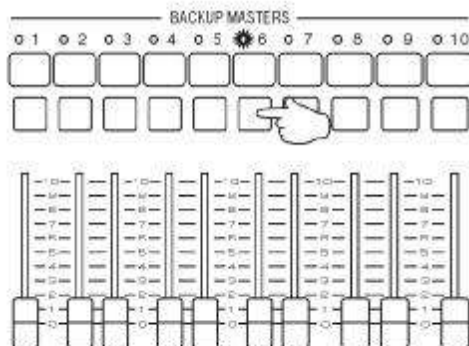
1. **Hold [DM] and [AT], then press [0]. This sets up a Zero patch on the current Patch List.**
2. **Press [SC] to clear the Channel display. Press [DM] [1] [TS]: the circuit on Dimmer 1 will light at Full.**
3. **To patch Dimmer 1 to Channel 27, press [CH] [2] [7]. Press [TS] to test the next dimmer.**

Repeating the last instruction will enable you to quickly identify the dimmers and patch them to the channels at the same time. Alternatively you can test channels and edit their patched dimmers live as follows:

1. **Press [SC] to clear the Channel display. Press [CH] [1] [TS]: any dimmers patched to Channel 1 will light up.**
2. **Press [DM] [AT] to read the first dimmer patched to Channel 1: enter a new level if required.**
3. **Press [AT] to read (and edit if required) the next dimmer level, or to test the next channel and edit its dimmers.**

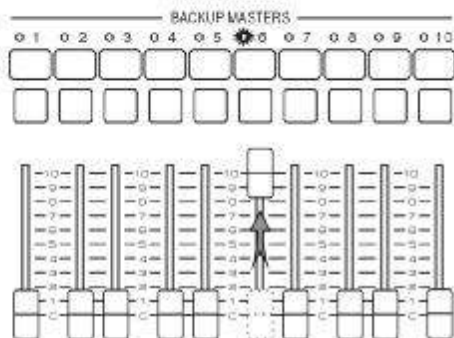
RECORDING AND ASSIGNING A SCENE

PATCH PAGE



TIMED CROSS-FADING

FADE TIME



HOLDING A TIMED FADE

FADE TIME



BACKUP SCENES RECORDING AND PLAY BACK

RECORDING AND ASSIGNING A SCENE

You can record a Scene of up to 1024 Channel levels from the DMX inputs—a DMX “snapshot”— and store it under a Backup Master on the current page. After an Erase, the current Backup Scene Page is set to 1. To record a snapshot to any Master on any Page:

1. **Set all Backup Masters down and press [PAGE UP] or [PAGE DN] to select the page.**
2. **Set up the cue state you wish to back up on the external desk(s).**
3. **Press and release [RECORD] to record the scene in spare memory: the Record LED starts flashing.**
4. **To assign the recording, hold [RECORD] and press a Backup Master Flash key: the Record LED stops flashing.**
5. **To overwrite a previous recording, keep [RECORD] held during a long Mimic flash, then press the Flash key again.**

After a short Mimic flash the Backup Master Mimic LED lights to indicate a recording other than a blackout.

BACKUP SCENE PLAYBACK

If the DMX-Link Fade time is set at Instant, raising the fader level of a Backup Master brings up the levels of that scene at the same speed as you move the fader. The page overlay memory feature of the DMX-Link allows you to change a page with no change to the current lighting. If Flash is enabled, you can press any Backup Master Flash key to instantly recall the levels of that scene.

TIMED CROSS-FADING

You can also play back Backup Scenes using an auto-timed dipless cross-fade as follows:

1. **Set a suitable fade time, say 10 seconds.**
2. **Set a Backup Master to Full: the Scene Fade LED (above the Fade Time Master) flashes to show a fade in progress, and at the end of 10 seconds, goes off to indicate the fade is complete.**

The Fade time may be changed during the fade—the fade will continue at the latest fade rate selected. Scenes may be crossfaded by first pre-setting the time, then raising the new master quickly to full, and then taking the last master quickly to zero.

HOLDING A TIMED FADE

While the Hold key remains down, the action of the fade timer is halted, and the current output lighting state will be held until the key is released. You can use the Hold key to stop a fade in progress, or to cue fades (particularly snap crossfades) of scenes:

1. **Set the Fade Time Master at Instant.**
2. **While keeping [HOLD] down, set a new Backup Scene at Full, and set the last one off.**
3. **On cue, release [HOLD]: the lighting will snap instantly to the new scene.**

BACKUP SCENE EDITING

You can read, edit, or set up entirely from the keypad the levels of any Backup Scene on the current page. Remember that the channel number addressed depends on the state of the DMX 1 and DMX 2 LEDs.

READING BACKUP SCENE LEVELS

To find the playback level of any particular channel, for example Channel 1 in Scene 5 on the current page:

1. Press [SC] [5] [CH] [1] [AT]. The Level display will show the current level of Channel 1.
2. Press [AT] again to show all live channels of the scene in order. At the end of the list both displays are blanked out.

EDITING BACKUP SCENE LEVELS

You can edit, clear, or set Channel levels in any Backup Scene on the current page using any combination of the And and To keys including reversed channel number direction. Remember that all editing of Backup Scenes modifies the memorised levels directly.

1. Press [SC] [5] to address for example Scene 5 for all channel edit commands
2. Press [CH] [1] [TO] [1] [0] [2] [4] [AT] [0] to clear all 1024 channels in the Scene to zero.
3. Press [CH] [5] [AT] [F] to set Channel 5 at Full.
4. Press [CH] [1] [TO] [4] [+] [6] [AT] [5] to set Channels 1 through 4 and 6 at 50%. Note the 0 of 50% is not necessary.

SETTING THE UP AND DOWN KEY MODE

You can set the mode of the 5 / 6 keys (levels UP/DN), to *fade* Scene levels up and down at the rate set by the Fade Time Master, or *step* them up or down in either 5% or 10% increments. Record may be on or off:

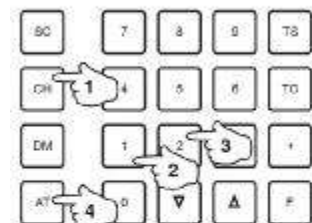
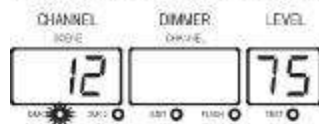
1. Hold [5] and press [F] to set a FADE up or down (Levels Fade Mode).
2. Hold [5] and press [5] to set a 5% STEP up or down (Levels 5% Step Mode).
3. Hold [5] and press [1] to set a 10% STEP up or down (Levels 10% Mode).

EDITING LEVELS USING UP AND DOWN KEYS

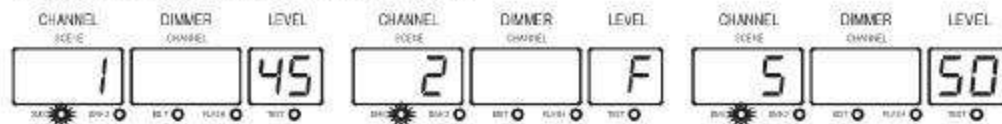
You can use the 5 / 6 keys to fade or step Scene Channel levels up and down. Fades move at the rate set by the Fade Time Master, except if the Fade Time is set to Instant, a default time of 4 seconds is imposed. Following on from step 4 above:

1. If you are using Levels Fade Mode, set the Fade Time Master to a suitable fade time, say 10 seconds.
2. Press [CH] [5], and hold [6] to fade Channel 5 level down (or press to step down by 5 or 10% in Levels Step Mode).
3. Press [CH] [1] [TO] [4] [+] [6], and hold [5] to fade up (or press to step up) Channels 1 through 4 and 6.

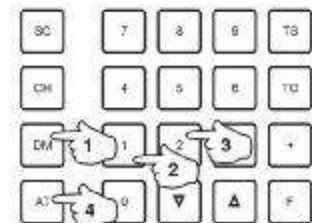
READING A CHANNEL LEVEL



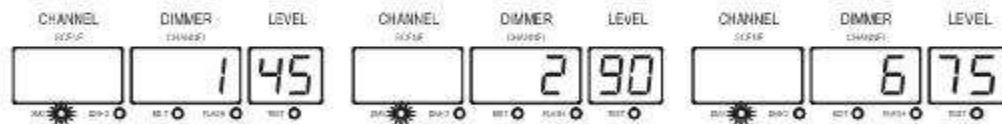
READING ALL LIVE CHANNEL LEVELS



READING A DIMMER LEVEL



READING ALL DIMMER LEVELS



READING LIVE CHANNEL AND DIMMER LEVELS

READING A CHANNEL LEVEL

You can find the playback level of any particular channel (before the patched dimmers output), for example Channel 12:

1. **Ensure the Channel display is clear: press [SC] if necessary.**
2. **Press [CH] [1] [2] [AT]. The Level display will show the current level of Channel 12.**

READING ALL LIVE CHANNEL LEVELS

You can find the playback levels of all live channels (before the patched dimmers output) as follows:

1. **Ensure the Channel display is clear: press [SC] if necessary.**
2. **Press [CH] [AT]. The Channel display will show the first channel up, and its current level.**
3. **Press [AT] again. The Channel display will show the next channel up, and its current level.**
4. **Press [AT] again to show all live channels in order.**

At the end of the list both displays are blanked out. If you want a continuous read-out of a fading channel level, keep your finger on the AT key.

§ Valid Channel numbering is dependent on the state of the DMX 1 and DMX 2 LEDs in this mode.

READING A DIMMER LEVEL

You can find the playback level of any particular dimmer, for example Dimmer 12:

1. **Ensure the Channel display is clear: press [SC] if necessary.**
2. **Press [DM], then [1] [2], then [AT]. The Level display will show the current level of Dimmer 12**

READING LIVE DIMMER LEVELS

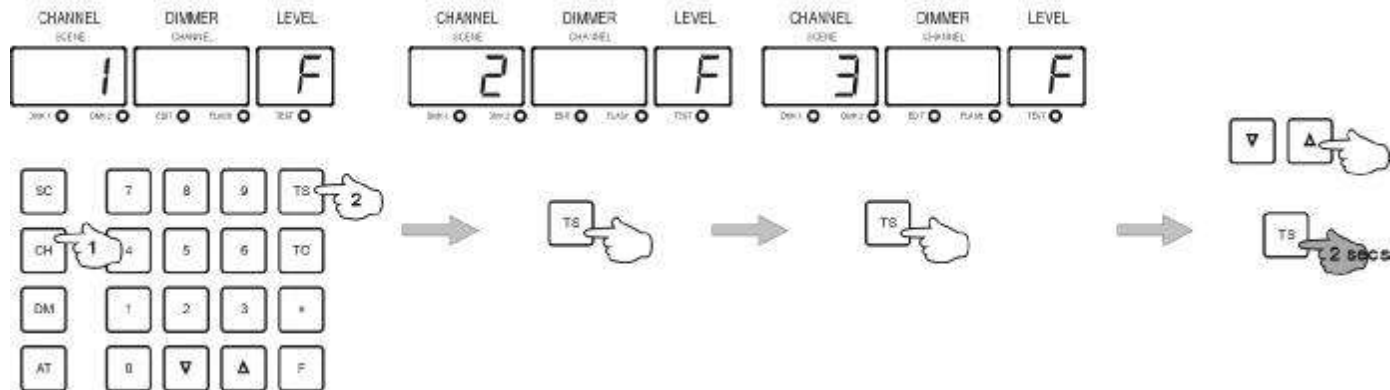
You can find the current levels of all live dimmers as follows:

1. **Ensure the Channel display is clear: press [SC] if necessary.**
2. **Press [DM] [AT]. The Dimmer display will show the first dimmer up, and its current level.**
3. **Press [AT] again to show all live dimmers in order.**

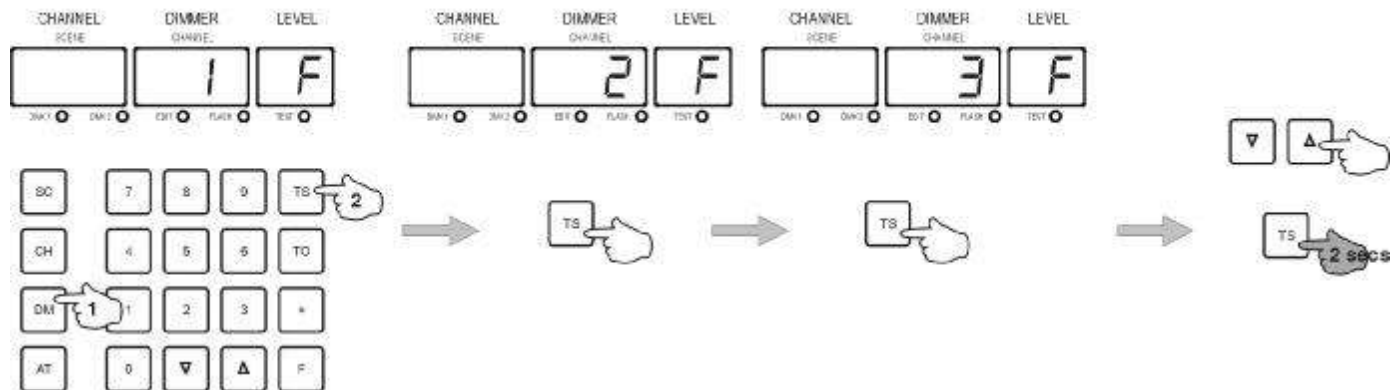
At the end of the list both displays are blanked out. If you want a continuous dimmer level read-out, keep your finger on the AT key.

§ Note that if a dimmer number is entered when a channel number is in the Channel display, all levels shown will refer to patch listings, NOT the live dimmer levels.

CHANNEL TEST AND FLASH MODES



DIMMER TEST AND FLASH MODES



TEST AND FLASH MODES

CHANNEL TEST AND FLASH MODES

You can test and flash on or off each channel (and its patched dimmers) to check for correct operation. The Test LED lights as a warning that a channel level may have been over-ridden, and the DMX 1 and DMX 2 LEDs are cancelled. To test all Channels in succession:

1. Press [CH], then [TS] repeatedly. Each channel is turned on at Full in order live on stage.
2. Press the [6] key to go back a channel, press the [5] key to go forward again.
3. Press [TS] for 2 seconds then release for an auto test forward at 1 second intervals. Press any key to stop the test.

To test or flash any particular channel for example Channel 12:

4. Press [CH] [1] [2], then [TS]. Then press [0], then [F] repeatedly: Channel 12 will flash off and on.

DIMMER TEST AND FLASH MODES

You can test and flash on or off each dimmer for correct operation. The Test LED lights as a warning that a dimmer level may have been over-ridden using this mode. To test all Dimmers in succession:

1. Press [DM], then [TS] repeatedly. Each dimmer is turned on at Full in order live on stage.
2. Press the [6] key to go back a dimmer, press the [5] key (or the [TS] key) to go forward again.
3. Press [TS] for 2 seconds then release for an auto test forward at 1 second intervals. Press any key to stop the test.

To test or flash any particular dimmer for example Dimmer 12:

4. Press [DM] [1] [2], then [TS]. Then press [0], then [F] repeatedly: Dimmer 12 will flash off and on.

CHANGING TEST LEVEL

You can set the Test level to any 10% value including Off and Full as follows:

1. Press [SC] to clear the Channel display, then hold [TS] and [AT] and press a number: 0, 1 through F.

This test level is reset to Full if the desk is turned off or if the memory is erased.

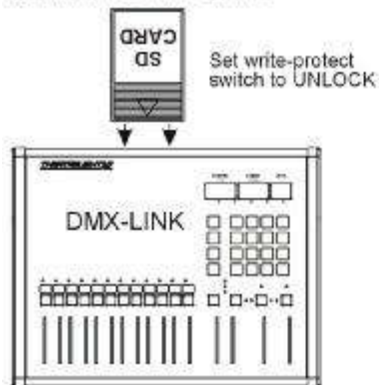
CANCELLING TEST MODE

Since Test mode over-rides all other channel or dimmer levels, you must cancel Test mode to avoid leaving lights up on stage:

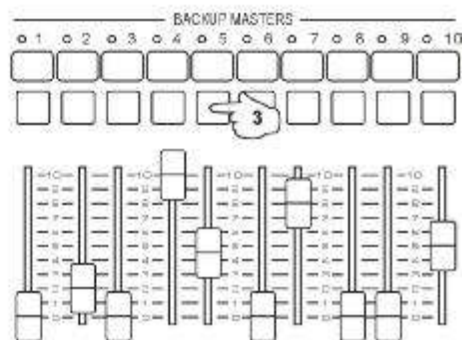
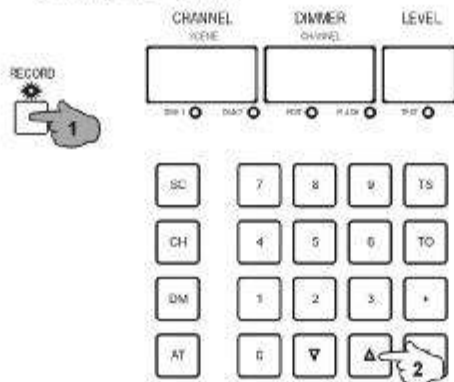
1. Press the [SC] key.

§ You can also edit the Patch list while live testing either channels or dimmers—see page 21.

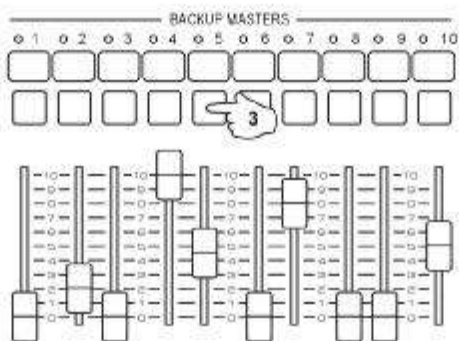
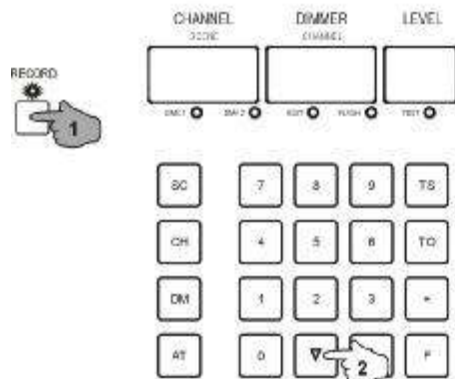
INSERTING THE CARD



SAVING TO CARD



LOADING FROM CARD



DMX-LINK SD CARD BACKUP

The DMX-Link can save the entire memory (all the scenes and patches on all pages) to an SD Card for backup or library purposes, and restored later. Moreover each SD card can save 10 different copies (“volumes”) of the memory to the one card

SAVING TO SD CARD

You can save the entire DMX-Link memory to an SD card volume as follows (Record must be on):

1. **Set the write protect switch on the SD card to Unlock (towards the contact end of the card)**
2. **Push the SD card, label uppermost, into the socket at the back of the DMX-Link**
3. **With the Record LED ON, hold [RECORD] and [**5**], then press any Scenes Master Flash key from 1-10**

After a short Mimic flash, the screen shows “Saving to card”. If you pressed flash key 1, the memory is saved to volume 1 in the card, while pressing flash key 5 saves to volume 5 in the same card etc. You can then remove the SD card (push to remove). To prevent accidental overwrites, set the write protect switch on the card to the Lock position. As each card can store up to 10 volumes in the same card, it is advisable to *make a written note of the card and the volume numbers used.*

RESTORING FROM SD CARD

You can restore the entire DMX-Link memory from a SD card volume:

1. **Push the SD card, label uppermost, into the socket at the back of the DMX-Link**
2. **With the Record LED ON, hold [RECORD] and [**6**], then press the Scenes Master Flash key previously saved**

After a short Mimic flash, the memory starts restoring from the card. If you pressed flash key 1, the memory is restored from volume 1 of the card. If you pressed flash key 5, the memory is restored from volume 5 of the same card etc.

- § A long flash of the Mimic display indicates an error. Error codes are shown in the screen display at the top of the page.
- § Saved volumes can only be restored to the same model and channel size.
- § As save and restore take a few seconds to complete, avoid SD card operations with lights live on stage.
- § Each SD card volume may be written 100,000 times without degradation. Read operations are unlimited.
- § SD card size for the DMX-Link can be from 32MB to 1GB. The DMX-Link saves its data to SD card addresses starting at 600000H (6MB) so that if the card is no longer required for backup purposes, it may be re-used in a PC (after re-formatting).

PRINTING THE CUE-LIST

PATCH PAGE



RECORD

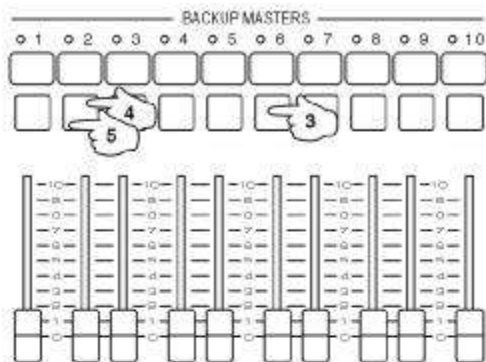


PAGE



PATCH/SCREEN PAGE/FADER

SCREEN



PRINT CANCEL

FADE TIME

FROM 0 MIN

HOLD



REC OFF



HARD COPY PRINTOUT

The DMX-Link can provide a full printout of all recorded levels, fade times, and the patch status on a PC compatible parallel printer.

CONNECTING THE PRINTER

The DMX-Link is designed to print on cut-sheet or fan-fold paper on PC compatible printers:

1. **Plug the printer cable into the 25D printer socket at the back of the DMX-Link.**
2. **Load a sufficient supply of fan-fold or cut-sheet paper in the printer and switch the printer on.**
3. **Set the printer to draft mode if available for faster printout.**
4. **If using fan-fold paper, press the printer Load key to set the first page in correct position.**
5. **Set the printer On-line.**

PRINTING THE CUE-LIST

You can now print the levels of all Backup Scenes, and the *current* Patch list:

6. **Hold [PREVIEW] and [HELP] (the Screen Up then the Screen Dn key), then enter the Record Code on the Backup Master flash keys.**

A space is left at the top of the printout to fill in the production name and date if required. Only valid Backup Scene recordings and the current Patch list are printed. The printout ends with a Memory Status summary of current Patch list, and the DMX split

§ Command key operation is disabled during printing, but all DMX output is maintained without interruption.

§ If there is a printer fault, the Mimic LEDs will give a long flash before the desk restores normal key operation.

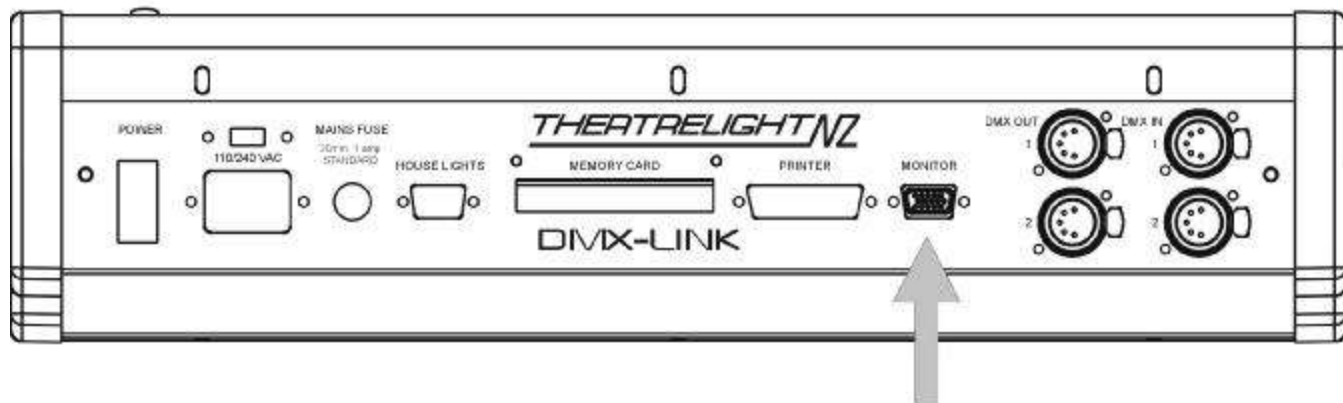
PRINT CANCEL

You can cancel a long printout at any time during the printing:

1. **Press the [HOLD] key.**

The DMX-Link will return to the keyboard command mode after a long Mimic flash.

CONNECTING THE DISPLAY



CHANGING SCREEN PAGES

PATCH PAGE



RECORD



PAGE



PATCH DOWN PATCH UP

SCREEN



Screen 2
Channels
1-288

Screen 3
Dimmers
1-400

Screen 1
Normal



Screen 4
Dimmers
401-800

Screen 6
Dark
Screen

Screen 5
Dimmers
801-1024

DMX-LINK SCREEN DISPLAY

While the DMX-Link can be operated satisfactorily without any other visual assistance, you will find that busy shows are easier to operate using an LCD Screen display.

CONNECTING THE LCD DISPLAY

The DMX-Link is fitted with a video display output for use with an LCD monitor. A minimum suitable size of screen is a 15 inches diagonal. Note that some LCD screens may not be able to display the 142 column by 30 line text format used by the DMX-Link to display the 1024 channels.

1. **Plug the monitor video cable into the 15 pin D connector at the back of the DMX-Link.**
2. **Connect power to the monitor, and adjust the screen size, contrast and brilliance for correct display.**

Several pages of information provide data on output channel levels, master state, fade state, and output dimmer levels.

CHANGING SCREEN PAGES

You can move between the various screen pages at any time as follows:

1. **Press [SCREEN UP] to move up a page.**
2. **Press [SCREEN DN] to move down a page.**

Other pages available using the Screen Up and Down keys change only the centre title and the type of levels displayed.

OUTPUT CHANNELS PAGE 1

At power up, or after a memory erase, the DMX-Link is reset to display Page 1, the default Output Channel Levels page.

TOP STATUS BAR

EDIT	Patch or Scene live edit warning.
TEST	Test key status.
CENTRE TITLE	Normally OUTPUT CHANNEL LEVELS, the sum of both DMX 1 and 2 mastered inputs and the Backup Scenes output. The title changes with Screen Up/Dn keys, during Scene edit, or when displaying errors.
RECORD/ASSIGN	Record status. Flashes ASSIGN if a Backup Scene has been recorded and is yet to be assigned.

CHANNEL LEVELS

LEVELS Channel or Dimmer levels display. The levels displayed change with the centre title above.

DMX-LINK STATUS

CURRENT PATCH	The current Patch List, 1, 2, 3, or 4.
DIMMERS LISTED	Total number of dimmers patched to the DMX-Link output channels in the current Patch List.
DIMMERS SPARE	Available space in the current Patch List.
DMX 1 CHANNELS	Number of channels input from the DMX 1 Input. Set by the split between DMX 1 and 2 inputs.
DMX 2 CHANNELS	Number of channels input from the DMX 2 Input. Set by the split between DMX 1 and 2 inputs.
DMX 1 INPUT	Status of the DMX 1 input signal.
DMX 2 INPUT	Status of the DMX 2 input signal.

BACKUP MASTERS LEVELS

PAGE NUMBER	Current Backup Scenes Page number, 1-10.
MASTER NUMBERS	Recorded Backup Scenes are shown in bold numbers.
MASTER LEVELS	Displays levels of Backup Master faders in both percentage level and bargraph form. Levels flash if any Backup Masters are up on a previous page.

DMX & FADE STATUS

DMX 1	Displays the level of the DMX 1 Input fader in both percentage level and bargraph form.
DMX 2	Displays the level of the DMX 2 Input fader in both percentage level and bargraph form.
TIME	Displays the time setting of the Fade Time Master fader.
FADE	Progress state of the Backup Scenes auto cross-fader.

SECONDARY SCREEN DISPLAYS

Other screen pages display the levels of the two DMX inputs and the patched output dimmer levels. You can use the screen to display levels from either DMX input as a monitor, or to test the output from any DMX device.

CHANNELS 512-1024

This page shows channel levels from 501 to 1024.

DMX 1 INPUT LEVELS

The levels shown are the channels received into the DMX 1 input buffer from the DMX 1 input line, unmodified by the DMX 1 Input fader. This buffer is not updated if the DMX 1 Input Fader is set to Disable, or if there is no DMX input signal.

DMX 2 INPUT LEVELS

The levels shown are the channels received into the DMX 2 input buffer from the DMX 1 input line, unmodified by the DMX 2 Input fader. This buffer is not updated if the DMX 2 Input Fader is set to Disable, or if there is no DMX input signal.

DIMMERS OUT

This page shows live dimmer levels from the DMX-Link. Dimmer levels shown on this screen are dependent on the channel levels, the Patch List selected, and the patched dimmer levels.

CHANNELS 1-1024

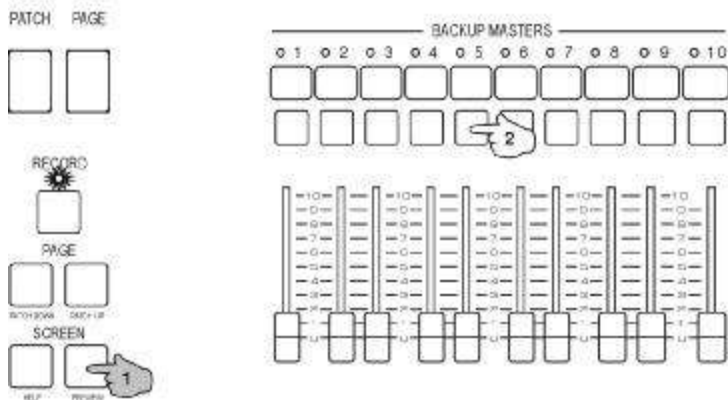
This page shows all channel levels 1 to 1024.

SCENE CHANNEL LEVELS

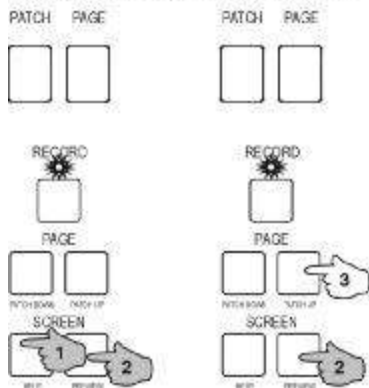
When you edit any Backup Scene, all recorded channel levels in memory are displayed on the screen. Channels being edited are shown in red bold face. You can restore the screen to the default page (Output Channel Levels) by pressing the Scene key at the end of editing.

- § Since the Screen Page display cycles from the first page to the last page, you can reach the Dimmers Out Levels page from the default Channels page with a single press of the Screen Down key. You can also restore the screen to the default page (Output Channel Levels) from any other page by pressing the Scene key.

PREVIEWING BACKUP SCENES



DMX-LINK ON-SCREEN HELP



SCREEN PREVIEW AND HELP MODES

The Preview key allows you to view the contents of the Backup Scenes on the LCD Display Screen.

PREVIEWING BACKUP SCENES

You can view the contents of any Backup Scene on the current page without affecting the lighting onstage. The Screen Up key is also used as a Preview key for this function. You can preview the contents of Backup Scene 5 for example:

1. **Hold down [PREVIEW], and press the Flash key above Backup Master 5.**

The screen title bar shows the heading SCENE 5 CHANNEL LEVELS, and the channel levels area changes to display the levels of the scene.

2. **To preview other Backup Scenes, keep [PREVIEW] held, and then press the Flash keys one after the other.**

When you release the Preview key, the display reverts to the original page.

DMX-LINK ON-SCREEN HELP

On-screen Help is available for every control key on the DMX-Link panel. You can access Help for any key as follows:

1. **Hold down [PREVIEW], press [HELP], and then release [PREVIEW]. Keep your finger on the Help Key. Help on the Screen Down Key shows on the screen.**
2. **For Help on other control keys, keep [HELP] held and press the control keys one after the other.**

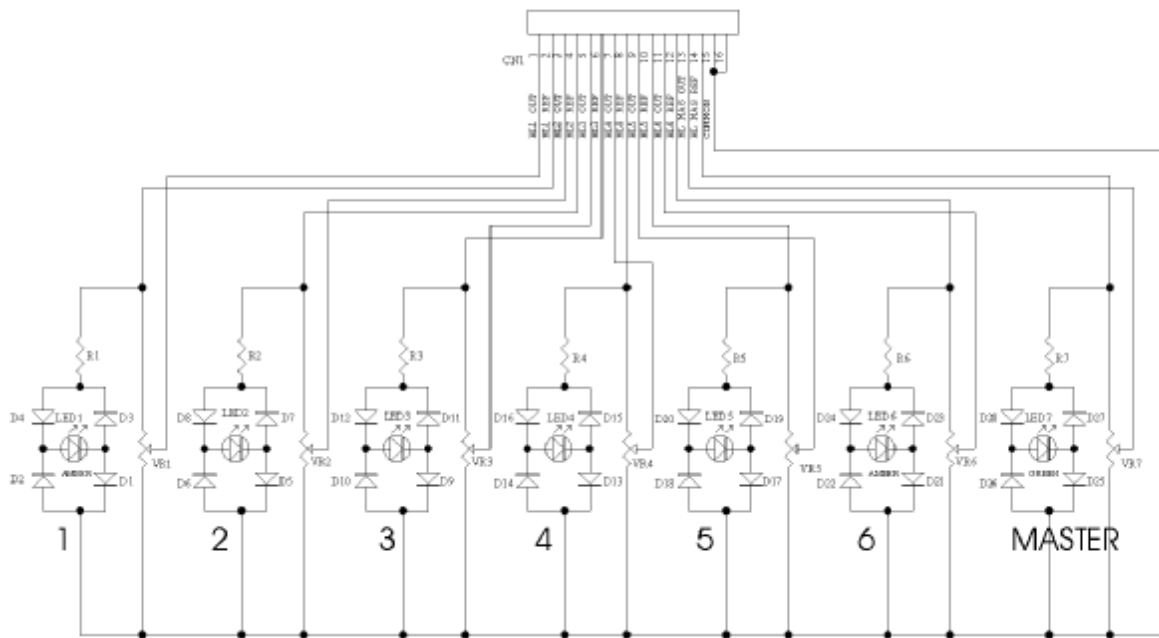
You can also use the Cuemaster Help command for an alternate On-screen Help:

3. **Hold down [RECORD], press [HELP], and then release [RECORD]. Keep your finger on the Help Key. Help on the Screen Down Key shows on the screen.**
4. **For Help on other control keys, keep [HELP] held and press the control keys one after the other.**

§ DMX-Link operation and outputs are not affected by either Preview or Help commands.

HOUSELIGHT FADERS

Independent Houselight faders are mounted at the top right of the DMX-Link panel. The faders may be used to control Houselight dimmers of any ELV voltage or polarity provided by the user. The Houselight fader system is isolated from the DMX-LINK electronics. Connection for the faders is provided on the back panel of the DMX-Link via a DB15 connector. The circuit diagram and pin connections are detailed below.



MAINTENANCE

To keep your DMX-Link looking and working well take note of these points:

- § Keep the dust cover on when you are not using the desk: dust is detrimental to fader life.
- § Do not drink, eat or smoke over the desk.
- § Do not use excessive pressure on fader knobs or keys, or lean your elbows on active area of the desk.
- § Never use contact cleaner or other solvents on the panel. Touring desks should travel in a sturdy road case with adequate protection from dust and vibration.
- § Take care that all connections are firmly in place when operating the desk.
- § If your local power supply is subject to low voltage or electrical noise, power the desk from a UPS.
- § After plotting, always save to card and make a printed backup of the DMX-Link and patch states.
- § If liquids are spilt on the front panel, the desk must be turned off immediately, disassembled, the wetted parts rinsed in clean warm water, air blasted, and dried thoroughly in hot air before reassembly.
- § Note that if the CPU card is wet, the Lithium battery must be disconnected before washing. Contact Theatrelight or your agent if necessary.

If you have any questions or suggestions about the DMX-Link or this operation manual, please contact Theatrelight or your Theatrelight agent.

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SPECIFICATIONS

CONSTRUCTION

Zinc plated steel, epoxy powder coated, molded plastic ends. Front panel is silk-screened in abrasion resistant two pot epoxy ink.

FADERS

60mm stroke long life linear faders with custom moulded ABS knobs. All faders are protected by a dust shield.

FLASH KEYS

Gold contact long life computer keys with custom moulded keycaps.

ELECTRONICS

CMOS microprocessor with 5 year lithium battery backed CMOS internal memory.

Plug in external memory card with replaceable 5 year lithium battery and write protect switch. Eight bit record and playback levels.

POWER SUPPLY

The DMX-Link is switchable 110/240 VAC, 50-60Hz. Power consumption is less than 10 watts.

DMX INPUTS AND OUTPUTS

USITT DMX-512 1990 Digital multiplex system requiring twin twisted shielded cable approved for RS-422/485 of up to 600 metres for transmission to remote dimmers via XLR 5 pin connectors.

DMX SPLITTERS

DMX-512 splitters and isolators can be supplied by Theatrelight to drive multiple DMX lines for larger installations. The splitter re-shapes and buffers the received DMX signal. Theatrelight DMX Splitters are available in either 19 inch, 1 U rack mounting configurations, or as a standalone portable versions.

EXTERNAL CONNECTIONS

POWER	Switchable 110/240 VAC 50/60 Hz, 10 watts, via IEC 630 male sockets.
DMX CONNECTIONS	EIA-485 250 K Baud to DMX-512 via 5 pin XLR male/female connectors.
PRINTER	25D female socket for PC compatible parallel printers.
VIDEO	DB15 pin female connector.
HOUSELIGHTS	DB15 pin male connector.
DESK LIGHT	BNC socket for Littlite model 12G or equivalent gooseneck fitting using 24 volt, 2.8 watt Lucas LLB865 or equivalent bulbs.

MEMORY CARD 256 KByte write-protectable card. Replaceable long life Lithium battery.

DIMENSIONS	Length	Depth	Height	Weight	Weight Packed
DMX-Link Dimensions	475mm	335mm	95mm	6.3kg	8Kg

DESK LIGHTS

The DMX-Link is fitted with sockets for BNC goose-neck working lights. Please note the bulbs specified for use in the fittings are 24 Volt, 2.8 Watts, Lucas LLB 865 or equivalent, obtainable at any automotive electrical supply house.

§ If you attempt to use bulbs of a lower voltage, or higher wattage than that specified, the desk light fuse on the back panel may blow.

GLOSSARY

ADD MODE	Mode in which pressing a channel Flash key adds the channel to the other lighting.
ANALOGUE	A smooth changing voltage (as opposed to digital)
ASSIGN	Allocate a recording to a Scenemaster or Submaster.
AUTO-FADE	Applied to Scenes or Cues which fade at a pre-recorded fade time.
AUTO-SPEED	Applied to Chases which step at a pre-recorded rate.
BACKUP SCENE	Memory lighting scenes used primarily as backup lighting.
BLACKOUT	All lights out on stage.
BLIND	Not showing on stage.
BO	Blackout; all lights out on stage.
BPM	Beats per minute: applied to music rhythms.
CHANNEL	One of the controlled output lines from a lighting desk; or a dimmer channel.
CHASE	A repetitive pattern of lighting changes.
CROSS-FADE	A smooth change from one lighting state to another.
CUE	An action or time event which results in new lighting on stage; the lighting state following the cue
DBO	Dead Black-out: no light on stage.
DIMMER	A power controller which changes the brilliance of lights connected to it.
DIPLESS	Applied to a cross-fade where a dimmer up at the same level on both the new and the old lighting states does not change level during the cross-fade.
DMX-512	A method of transmitting dimmer levels digitally over a two wire cable. (Digital MultipleX, 512 dimmers)
EEPROM	Electrically Erasable Programmable Read Only Memory: otherwise know as Flash Memory.
EMI	Electro-Magnetic Interference. Electrical noise.
ERASE	To clear and reset the memory.
FADER	A slider control.
FADE- SCENE	In the DMX-Link, a set of recorded levels and a fade time which may be automatically faded.

FADE TIME	The time taken to complete a fade from full off to full on.
FLASH KEY	Any key which flashes a channel or scene to Full. Sometimes called Bump keys (USA).
GRAND MASTER	A master fader which controls the final output levels of a lighting desk.
HTP	Highest Takes Precedence: the highest command level is used as the controlling level
KILL	Turn off a light.
KILL MODE	Mode in which pressing a Flash key turns off all other lighting. Sometimes called Solo or Swap mode.
LATCH MODE	In the DMX-Link, a push-on, push-off function of the Scene flash keys.
LCD	Liquid Crystal Display
LED	Light Emitting Diode.
LEVEL	The brightness of a channel or dimmer as a number from 0 (off), to 10 (full on), or from 0% to 100%.
LINK	In the DMX-Link, a Submaster on the same page operated by a Show cue.
LTP	Latest Takes Precedence: the latest command level is used as the controlling level
MANUAL SCENE	In the DMX-Link, a set of recorded levels which must be manually faded.
MASTER	A fader which has overall control of a number of levels or some other major function.
MCB	Miniature Circuit Breaker- a re-settable current protection device.
MIMIC DISPLAY	A display often using Light Emitting Diodes (LEDs).
NON-DIM	A dimmer set to Non-dim acts like a switch: on or off
ONE TO ONE PATCH	A Patch look-up list where Channel 1 drives Dimmer 1 at Full and so on for all channels.
PAGE	A set of Scenemasters.
PARK STORE	A single memory store of all channel levels in the DMX-Link. Sometimes called Grab.
PATCH	To connect a number of dimmers at differing levels to a channel.
PATCH LIST	A look-up list enabling each channel to drive a number of selected dimmers at differing levels.
PRESET	A row of faders representing all the channels in a scene; to set up faders in advance of a cue.
PREVIEW	To view a set of recorded levels without showing on stage.
RECORD BUFFER	In the DMX-Link, spare memory used for recording levels before assigning them to a Scenemaster.
SCENE	A recording which stores a single set of all channel levels.

SCENEMASTER	A master fader which controls the playback of a scene of recorded levels.
SCR	Silicon Controlled Rectifier. A unidirectional power switch used in dimmers
SEQUENCE	A repetitive pattern of lighting changes.
SHOW	A performance. In Theatrelight control panels, a Scenemaster which stores a sequence of cues.
SOFTSTART	A minimum fade up time programmed into a dimmer to enhance lamp life.
SOLO MODE	Another name for Kill mode.
SNAP FADE	An instant change from one lighting state to another.
STEP	To change from one scene or cue to another. Also, one scene of a Show or Chase.
SUBMASTER	A master fader which controls the playback of a scene of recorded levels.
TRIAC	A bidirectional power switch. Dimmers using triacs should be used with care on inductive loads.
USITT	United States Institute of Theatre Technicians. Arbiters of the DMX-512 standard.
ZERO PATCH	A Patch look-up list where each channel drives no dimmers.

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