matisse
Light-Switch II
&
Switch-Edit

Artistic Licence Engineering Ltd

Firmware v4.0 User Guide v2.0

USER GUIDE

C O N T E N T S

MATISSE **1**

LIGHT-SWITCH II **1**

& SWITCH-EDIT **1**

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INTRODUCTION

QUICK START

Welcome to the matisse Light-Switch II user guide. Throughout this document the product is referred to as “Light-Switch”. Light-Switch is a wall panel controller for DMX512 that is programmed by Switch-Edit.

Light-Switch controls all 512 channels of the DMX512 universe. It provides static playback scenes with crossfade along with a selection of fully programmable sequences.

The product mounts into a standard 2-gang UK back box in portrait format. The product depth is 30mm and so should be mounted into a back box of at least 40mm depth.

Programming of Light-Switch is achieved by two methods:

1. Using the front panel keys to snap-shot DMX into the memories.

2. Using a Windows software package called Switch-Edit. Switch-Edit is available free of charge and can be downloaded from the Artistic Licence web site. You will require an USB A to B cable.

In a multiple panel system only the master panel needs to be programmed. All panels will need zones set if not the default of zone one.

The software fully supports both generic single channel lights as well as moving lamps. The moving lamp personality library is fully user editable and is also compatible with the sister product Micro-Scope 3a.

LIGHT-SWITCH FEATURES

Light-Switch provides the following features:

- Controls 512 DMX512 channels
- 100 memories
- 3 pages of 8 memories with fade times
- 6 sequences
- 100 sequence steps per sequence
- Programmable sequence step or fade times
- Remote PC programming
- Live programming
- Moving lamp library
- Numerous ‘Run’ modes
- Multiple zone control
- Master & Slave operation, multiple panel solutions
- Individual channel selection for G-M
- Snapshot recording
- RDM Disable

SWITCH-EDIT FEATURES

Switch-Edit provides the following features:

- Fader based visual user interface
- Hard disc storage of multiple shows
- Moving lamp personality library
- Lamp personality editor
- Edit all memories, sequences and times
- Enter alphanumeric channel names
- Live programming via Light-Switch
- Grand-Master selection for individual channels
- Zone selection for individual channels
- User button enable/disable function

THE CONTROL SURFACE

OVERVIEW

The product is operated via 14 illuminated switches. The switches function as three logical groups:

- Grand-Master
- Page Select
- Memory Select

GRAND-MASTER

The Grand-Master is controlled by two buttons labelled with up and down arrows.

The Grand-Master is used to dim the overall output of Light-Switch. Switch-Edit allows any channels to be excluded from Grand-Master control. This is useful when controlling moving lamps and other devices that contain non-intensity channels.

The Grand-Master buttons auto-repeat. Holding down either button will gradually fade up or down the overall level. When the Grand-Master is at full, the UP button is illuminated. When the Grand-Master is at zero the DOWN button is illuminated. At intermediate levels, neither button is illuminated.

PAGE SELECT

The four Page Select buttons control the function of the Memory Select. They are labelled A, B, C, D.

The active page is indicated by the illuminated Page Select button.

Pages A, B & C are used to access memories. Each page containing 8 memories with associated fade times.

Page D is used to access the six sequences.

MEMORY SELECT

The eight Memory Select buttons are labelled 1 to 8. The active memory is denoted by the illuminated button.

When Page A, B or C is active, the Memory Select buttons playback a specific memory. Pressing the button starts a cross-fade from the current state to the new memory.

SEQUENCE CONTROL

Sequences are controlled by selecting Page D. Memory Select buttons 1 to 6 are used to start one of the six sequences.

Memory Select 7 operates as a Stop / Start control. When the button is continuously illuminated, the sequence is stopped. When the sequence is running, the button illuminates momentarily to indicate playback speed. Memory Select 8 operates as a Forward / Reverse control. When the sequence is running forward, the button is not illuminated, when running in reverse, the button is illuminated.

SEQUENCE MIMIC

It is possible to view which memories are currently playing back as part of a sequence.

To do this, press Page Select A, B or C. The Memory Select buttons flash to show which memory is active.

SEQUENCE LINKING

Sequences contain up to 100 steps, each with individual fade or wait times. The steps are made up from the library of 100 memories.

There are many more sequence steps than available memories. This is useful because each sequence step has its own fade or wait time. It is therefore possible to reuse memories in a sequence with different times.

Please note that the fade time associated with a memory is ignored when playing back as part of a sequence.

Sequences can be linked together if more than 100 steps are required. Please note that sequence links are inhibited when playing back in reverse direction.

POWER ON

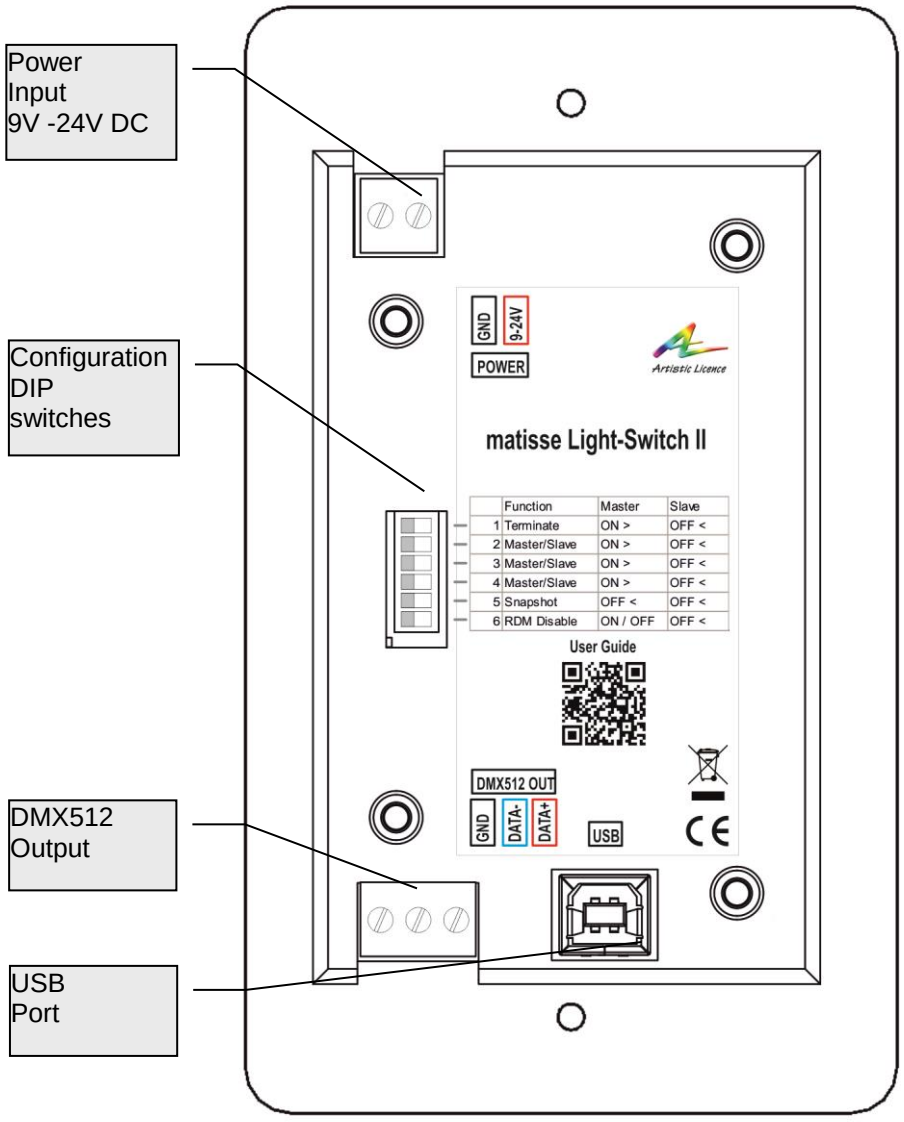
The master Light-Switch powers on in the last selected state. The Grand-Master level is also memorised.

All programming is stored in flash memory. This means that the product will not lose its setting when power is removed.

EXTERNAL CONNECTIONS

REAR PANEL

All connections are made to the rear panel as shown in the following diagram:



POWER SUPPLY

Light-Switch is powered by an external 9 to 24VDC source. The power connection is via Ferrules. A suitable power supply is PSU-9-1.5-FER.

The table below shows the wiring details.

The low voltage power lead can be extended up to 5m.

PIN	FUNCTION
+VDC	+9 to 24VDC @ 110 mA
GND	GROUND

DMX512 CONNECTION

The DMX512 input (snapshot) /output is available at the 3-pin screw terminal connector on the bottom left of the panel.

Pin 1 is marked in black on the rear panel diagram. Wiring is as follows:

PIN	FUNCTION	DMX Connector	Colour
1	Screen Ground	1	Black / Screen
2	Data -	2	Blue
3	Data +	3	Red

PROGRAMMING PORT

To programme Light-Switch, connect a “USB A to B cable” to your laptop.

WIRING TOPOLOGY

Please refer to the Example Application section of this user guide for wiring recommendations.

Terminology (used in DMX wiring):

- Master: This is the actual DMX controller. There can only be one master Light-Switch panel and it must be at the start of the DMX cable.
- Slave: There can be up to 30 slave Light-Switch panels on a DMX line.

These terms are used when wiring a system using multiple Light-Switch panels. They do not relate to the operation / zone settings of the system.

WIRING RULES

- Only one Master on a DMX line, positioned at the start of the DMX line
- Maximum of 32 DMX fixtures (including Light-Switch Slave panels). You can increase this number by using a RDM splitter such as versaSplit, rackSplit octo or Rail-Split RDM
- Maximum of 30 Slave panels
- Light-Switch wiring is independent of the zones being used.
- The DMX line **must** be terminated as specified by the DMX512 protocol
- If splitters are to be used, they must be RDM compatible

P R O G R A M M I N G

OVERVIEW

Before using a Light-Switch panel it must be configured as a Master or Slave panel. Please read the section, 'Wiring Topology' for information on master and slave panels

There are two methods of programming memories and sequences.
Note: Only the master panel needs to be programmed.

PANEL SETUP

Located on the back of a Light-Switch is a bank of five DIP switches that are used to configure and record on a Light-Switch.

Dip-Switch	Function	Master	Slave
1	Terminating	ON	OFF *
2	Master/Slave	ON	OFF
3	Master/Slave	ON	OFF
4	Master/Slave	ON	OFF
5	Snapshot	OFF	OFF
6	RDM Disable	ON / OFF	OFF

Note: The factory default of a Light-Switch panel is Master.
** Can be used to replace normal terminating devices*

DIP-SW 1 This switch is used to connect the DMX512 terminating resistor. In master mode it has to be 'ON', while in slave mode it should only be 'ON' if the Light-Switch panel is at the end of the DMX cable.

DIP-SW 2-4 Used to select master or slave operation.

DIP-SW 5 Used for configuration and recording.

DIP-SW 6 Used to disable RDM communications

SETTING THE ZONE

Light-Switch has the capability of controlling 15 individual zones utilising Slave panels to control the different zones. Switch-Edit is used to program zone information. Before programming it is recommended to plan what zones are required and list the DMX channels assigned to each zone.

PROGRAMMING

Each panel (Master or Slave) must be assigned a zone. By default, they are set to zone 1. To assign the panel to a different zone follow the procedure below:

- Set Dip-Switch 5 to ON
- Power on Light-Switch
- Press the G-M Down Arrow
- Select either page A or B
- Press the relevant number
- Set Dip-Switch 5 to OFF

Page A1 to 8	Zone 1 to 8
Page B1 to 7	Zone 9 to 15

Note: When a slave panel has changed zones the Master panel must be re-booted

SNAP-SHOT

Memories: To program a memory follow the procedure below:

- Connect the Master Light-Switch to a DMX source
- Set Dip-Switch 5 to ON position
- Power on the Light-Switch (both arrow keys will flash)
- Press the 'Up Arrow' button
- Press a Memory Page (A to D*)
- Press a Memory Number (1 to 8)
    - DMX record occurs when a number button is pressed
    - When a memory is recorded the corresponding LED will remain lit
- Once finished turn the unit off and remove the DMX source
- Set Dip-Switch 5 to OFF and reconnect to the DMX fixtures
- Power the unit on

* Sequences: In Snap-Shot mode a sequence is considered the same as a memory, i.e. it will playback the single snapshot when selected. There are six sequences that can be programmed.

To program sequences using multiple memories Switch-Edit is used to define the sequence structure.

Note: The slave Light-Switches do not need to be programmed with memories or sequences.

EXAMPLE APPLICATIONS

OVERVIEW

Light-Switch can be used from a simple single controller operating all channels to a 15 zone, 30 panel system with independent channel assignment.
Here are five examples to illustrate the main systems achievable.

SINGLE ZONE, SINGLE PANEL

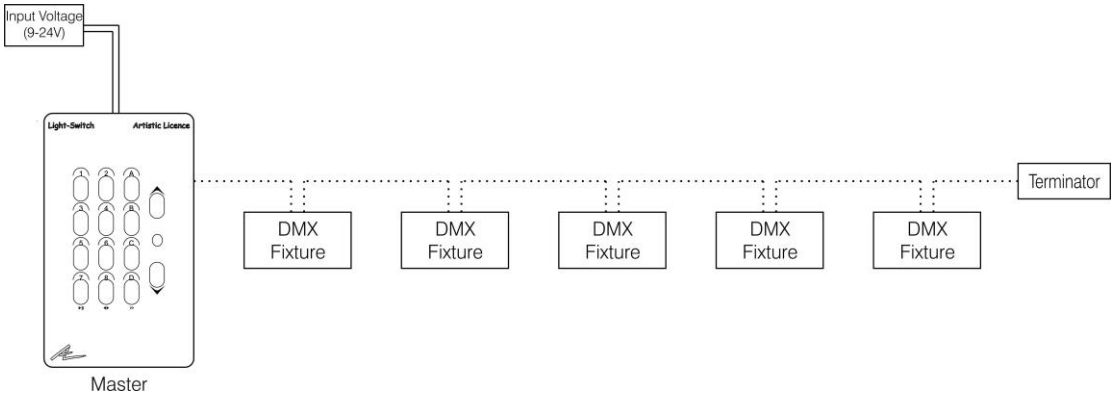
This is the simplest system that can be achieved. It contains a single Light-Switch panel that can control all 512 channels.

- Single DMX controller
- Simple Architectural controller

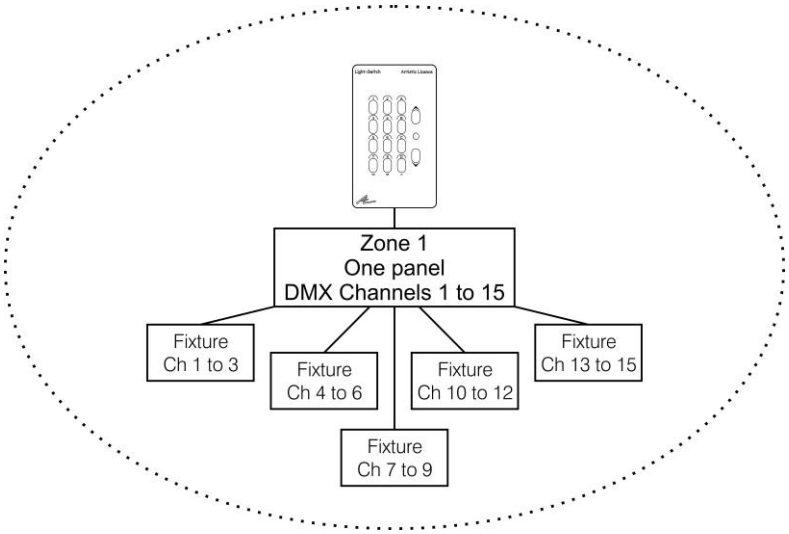
WIRING

The wiring of this system is as follows:

- A master panel at the start of the DMX cable
- DMX512 fixtures located anywhere on the DMX cable
- DMX line is terminated

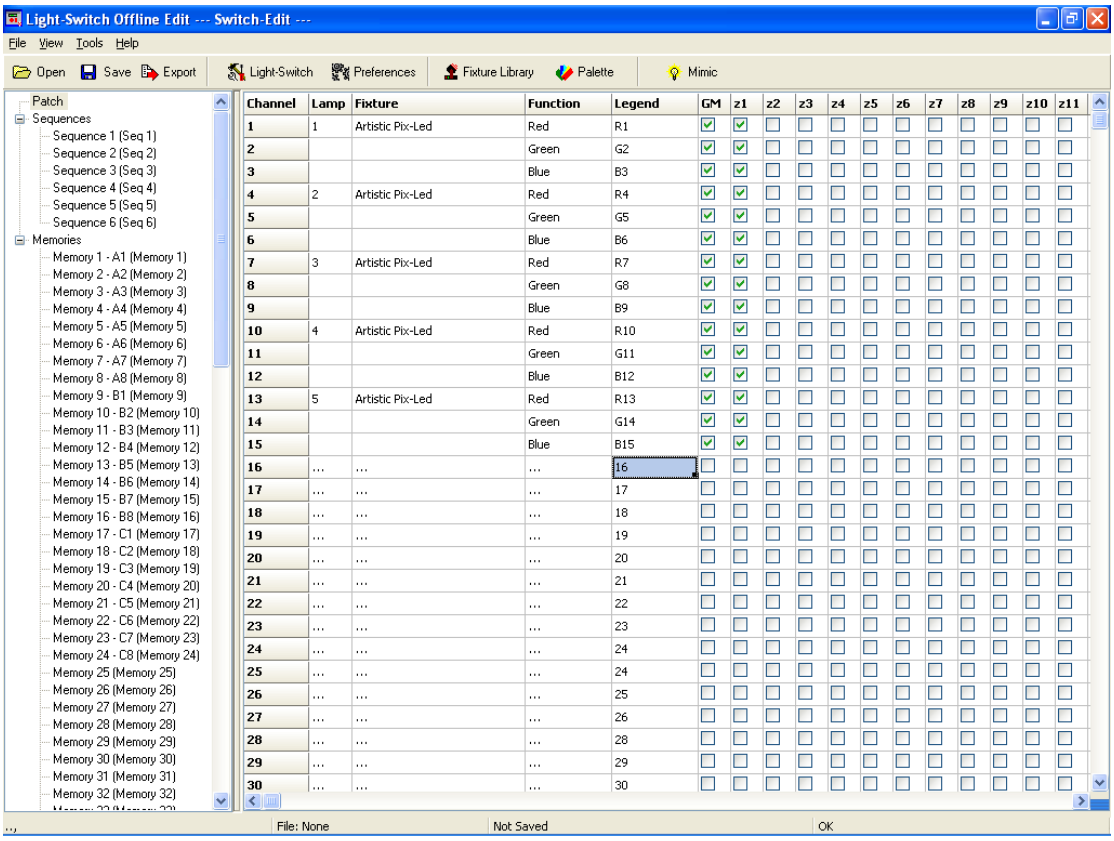


SYSTEM LAYOUT



SWITCH-EDIT Below is an example of Switch-Edit programming.

- All used channels are set to zone 1
- 3 channel fixtures have been used
- Each channel is controlled by the Grand-Master



SINGLE ZONE, MULTIPLE PANELS

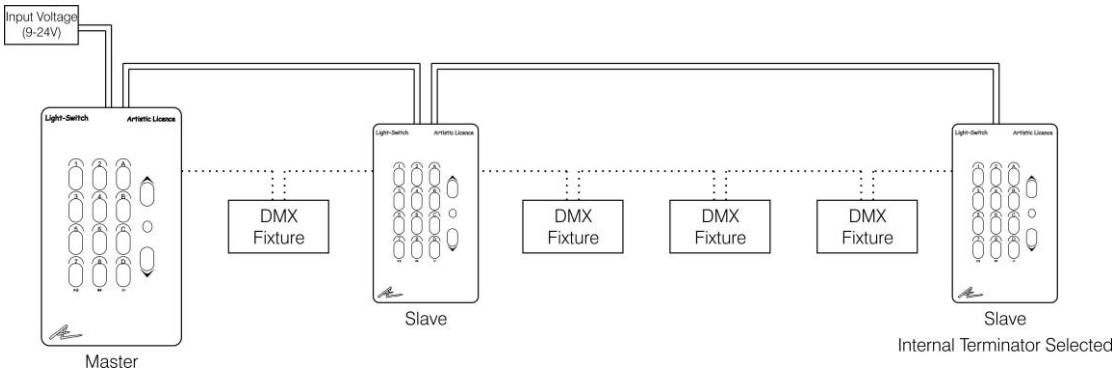
A single zone, multiple panel system allows the user to control all channels from multiple locations, while the panels mimic the latest commands. All channels and panels are assigned to the same zone.

- Large room controller
- Night-Club / Bar

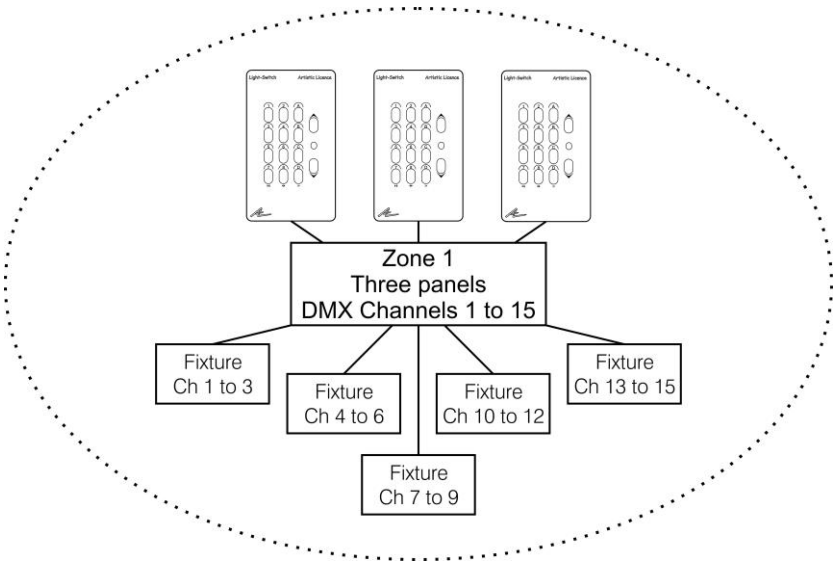
WIRING

The wiring of this system is as follows:

- A Master panel at the start of the DMX cable
- Remaining panels set as Slaves and are located anywhere on the DMX cable
- DMX512 fixtures located anywhere on the DMX cable
- DMX line is terminated (If a slave panel is last in line then the internal resistor can be used)



SYSTEM LAYOUT



SWITCH-EDIT

The channel and zone assignment will be the same as the previous example.

MULTIPLE ZONES, SINGLE PANELS

Using multiple zones allows Light-Switch to give the appearance of having separate control systems for each location while actually being connected as one system.

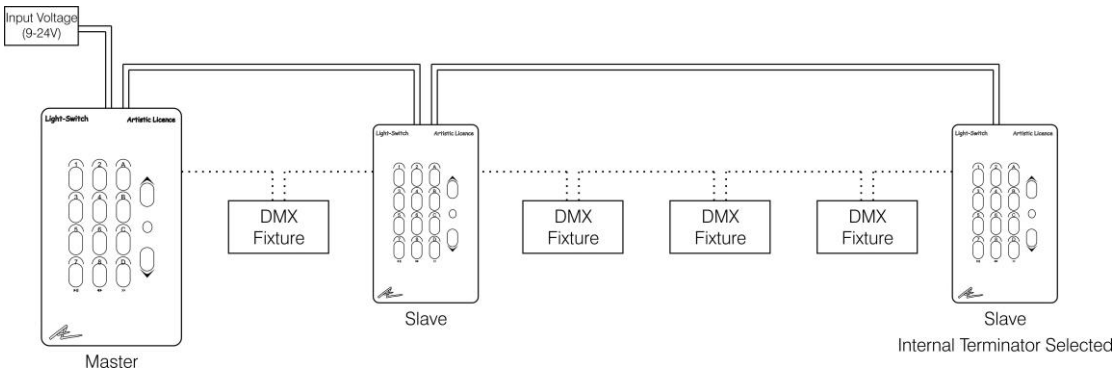
In this example we have one panel assigned to each of the three zones that are being used. Channel assignment can be exclusive to a zone or be assigned to multiple zones.

- Exclusive – A channel can only be controlled by one zone
- Merged zones – A channel can be controlled by one or more zone controllers

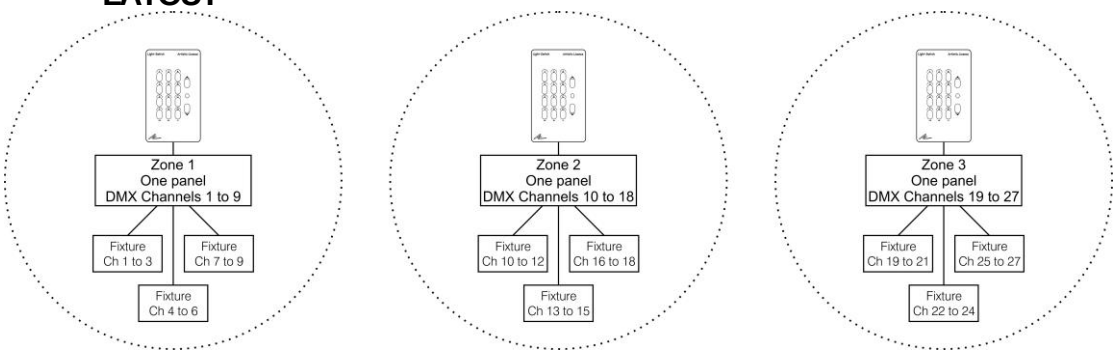
WIRING

The wiring of this system is as follows.

- A Master panel at the start of the DMX cable
- Remaining panels set as Slaves and are located anywhere on the DMX cable
- DMX512 fixtures located anywhere on the DMX cable
- DMX line is terminated (If a slave panel is last in line then the internal resistor can be used)

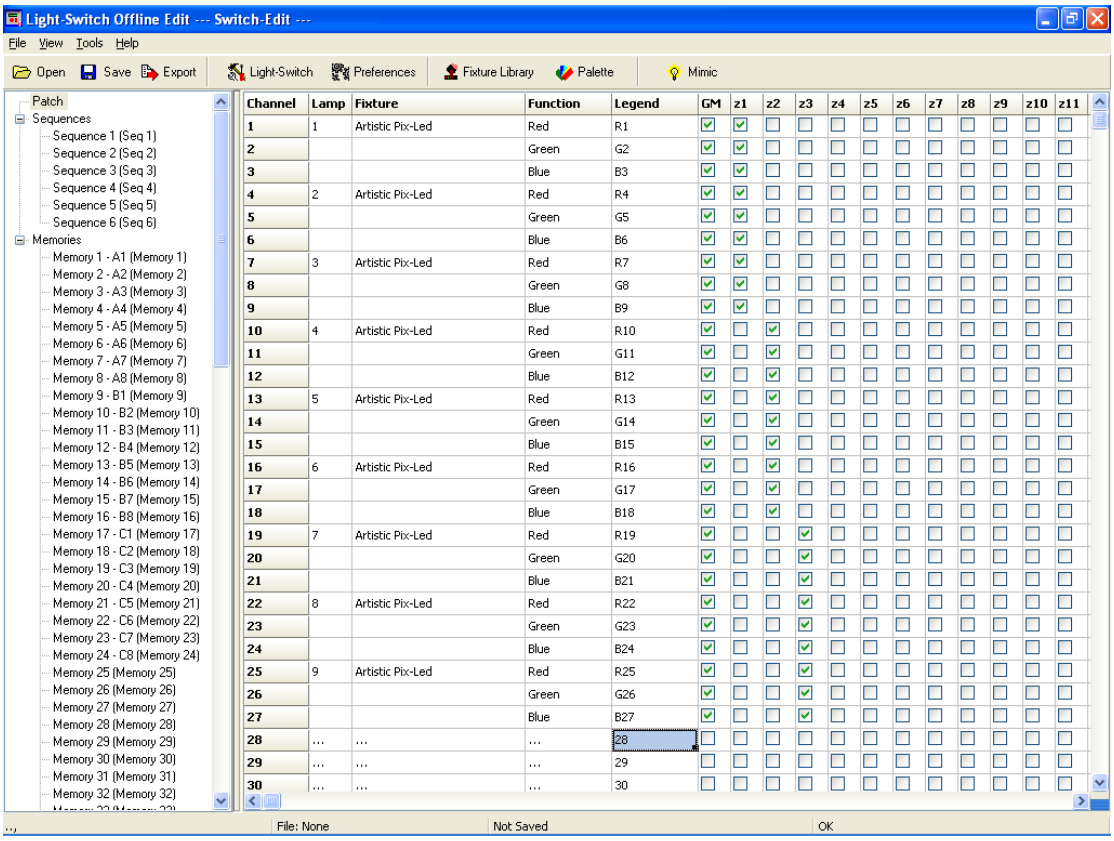


SYSTEM LAYOUT



SWITCH-EDIT Below is an example of Switch-Edit programming.

- Zone 1 to 3 are independent
- 3 channel fixtures have been used
- Each channel is controlled by the Grand-Master



MULTIPLE ZONES, MULTIPLE PANELS

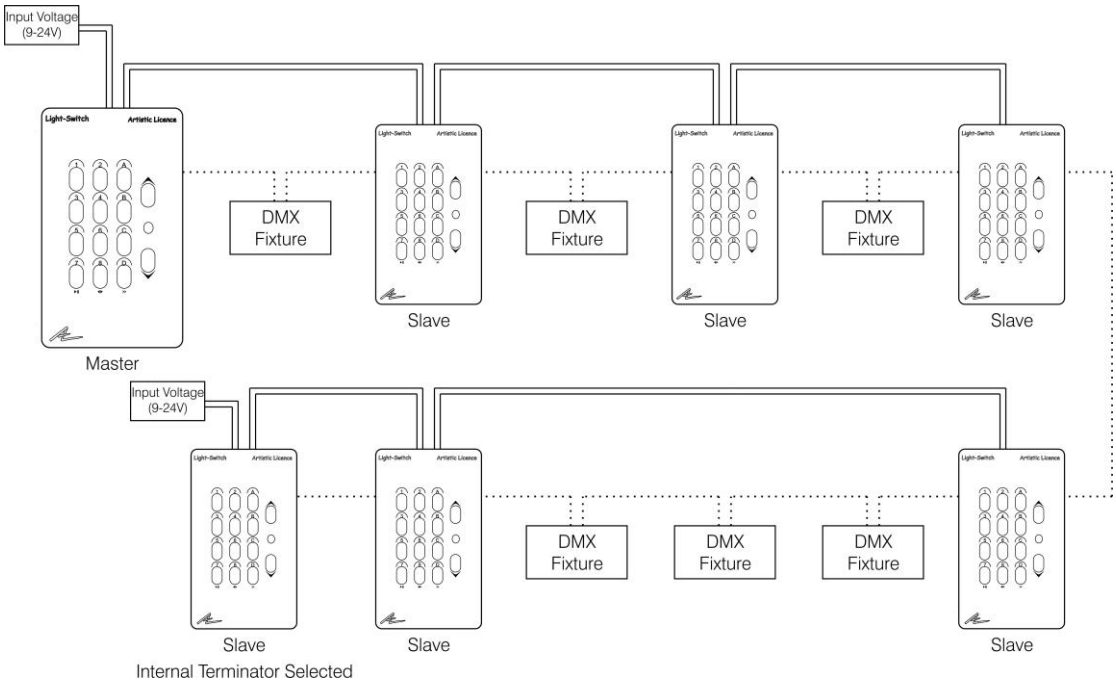
This example is similar to the previous one as it uses three zones but each zone has multiple panels.

The programming of this system would be the same as before as the addition of extra panels makes no difference

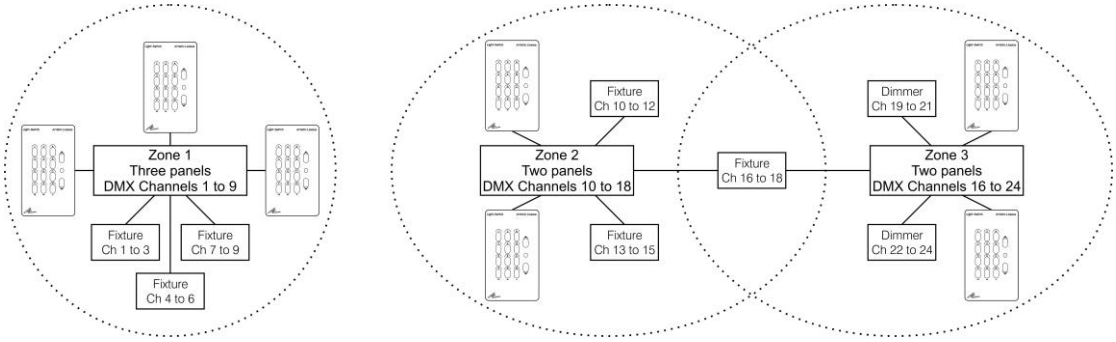
WIRING

The wiring of this system is as follows:

- A Master panel at the start of the DMX cable
- Remaining panels set as Slaves and are located anywhere on the DMX cable
- DMX512 fixtures located anywhere on the DMX cable
- DMX line is terminated (If a slave panel is last in line then the internal resistor can be used)

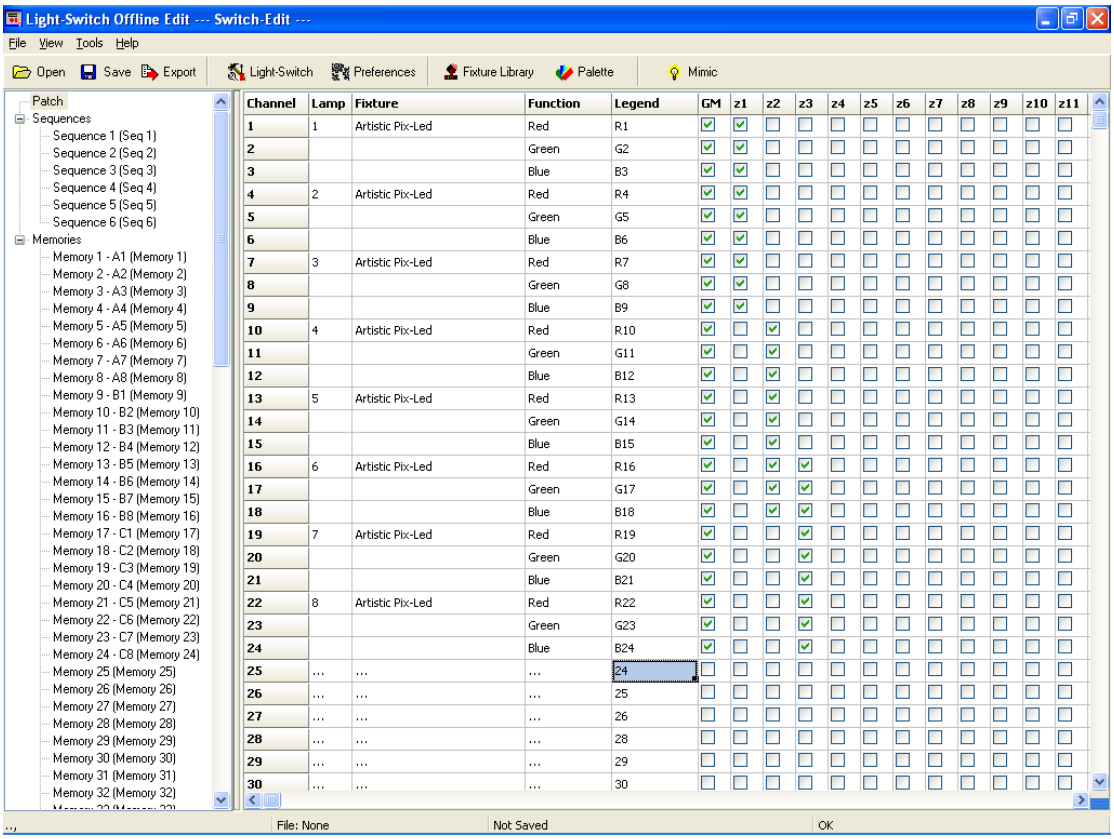


SYSTEM LAYOUT



SWITCH-EDIT Below is an example of Switch-Edit programming.

- Zone 1 has exclusive control of channels 1 to 9
- Zone 2 & 3 have exclusive channel assignments and also both control one fixture (Channel 16 to 18)
- 3 channel fixtures have been used
- Each channel is controlled by the Grand-Master



Channel	Lamp	Fixture	Function	Legend	GM	z1	z2	z3	z4	z5	z6	z7	z8	z9	z10	z11
1	1	Artistic Pix-Led	Red	R1	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
2			Green	G2	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
3			Blue	B3	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
4	2	Artistic Pix-Led	Red	R4	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
5			Green	G5	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
6			Blue	B6	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
7	3	Artistic Pix-Led	Red	R7	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
8			Green	G8	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
9			Blue	B9	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
10	4	Artistic Pix-Led	Red	R10	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
11			Green	G11	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
12			Blue	B12	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
13	5	Artistic Pix-Led	Red	R13	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
14			Green	G14	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
15			Blue	B15	☑	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
16	6	Artistic Pix-Led	Red	R16	☑	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐
17			Green	G17	☑	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐
18			Blue	B18	☑	☐	☑	☑	☐	☐	☐	☐	☐	☐	☐	☐
19	7	Artistic Pix-Led	Red	R19	☑	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐
20			Green	G20	☑	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐
21			Blue	B21	☑	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐
22	8	Artistic Pix-Led	Red	R22	☑	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐
23			Green	G23	☑	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐
24			Blue	B24	☑	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐
25	...	...	...	24	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
26	...	...	...	25	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
27	...	...	...	26	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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29	...	...	...	29	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
30	...	...	...	30	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

MULTIPLE ZONES, MULTIPLE PANELS (PART 2)

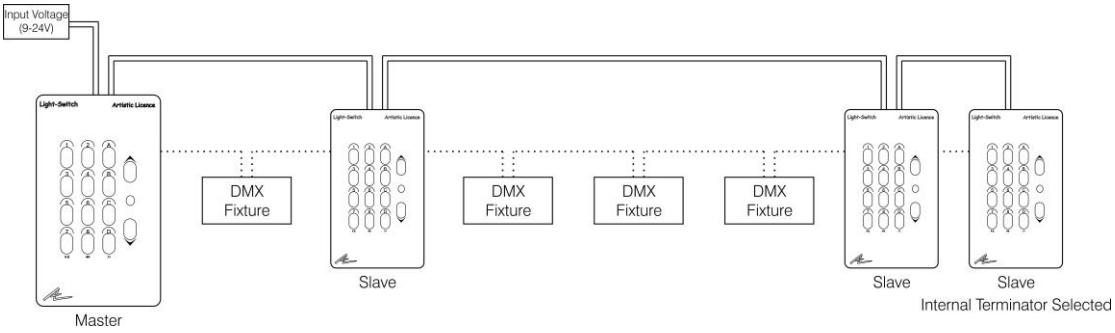
This is another example of multiple zones with multiple panels. In this example there are four zones, one of which can control all channels.

To program this system you need to program four zones, one used to simulate the 'Master' panel. Channel assignments would be split between the three zones while all channels are assigned to zone 4.

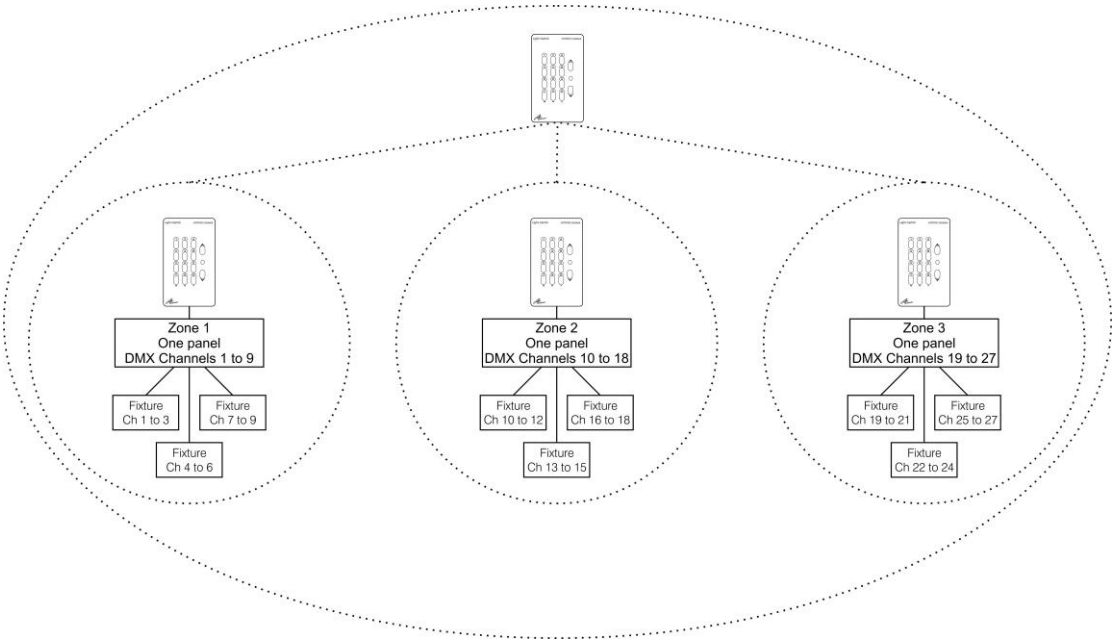
WIRING

The wiring of this system is as follows:

- A Master panel at the start of the DMX cable
- Remaining panels set as Slaves and are located anywhere on the DMX cable
- DMX512 fixtures located anywhere on the DMX cable
- DMX line is terminated (If a slave panel is last in line then the internal resistor can be used)

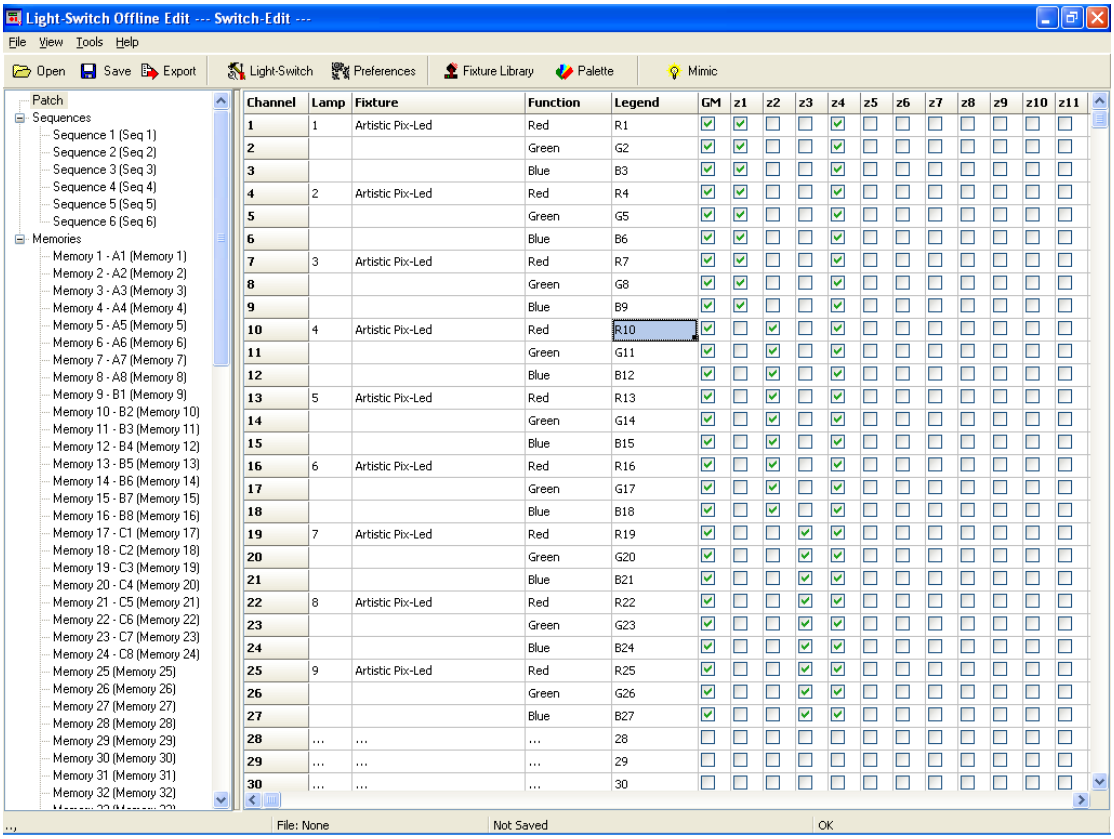


SYSTEM LAYOUT



SWITCH-EDIT Below is an example of Switch-Edit programming.

- Zone 1 to 3 are independent
- Zone 4 controls all zones
- 3 channel fixtures have been used
- Each channel is controlled by the Grand-Master
- Panel used to control all channels (zone 4) should not be confused with the 'Master' panel used in the wiring configuration. It can be any one of the Light-Switch panels.



S W I T C H - E D I T

OVERVIEW

Switch-Edit is a Windows application that provides the following functionality:

- An on-line editor that allows live programming of moving lamps.
- An off-line editor allowing all Light-Switch Memories, Sequences and configuration data to be programmed in a console style format.
- A Moving Lamp personality editor.
- File compatibility with other Artistic Licence products.

Switch-Edit is compatible with Windows XP & Windows 10.

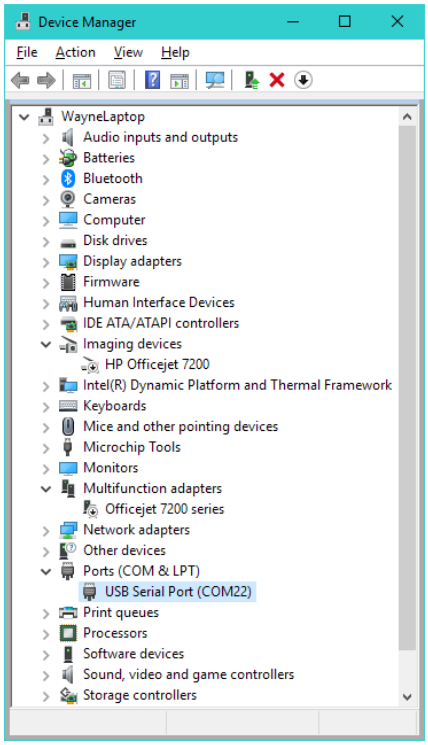
INSTALL Switch-Edit can be downloaded from:

https://artisticlicence.com/product/light-switch/

Install Switch-Edit before connecting the Light-Switch. During installation you will be prompted to install the FTDI USB drivers. These are required.

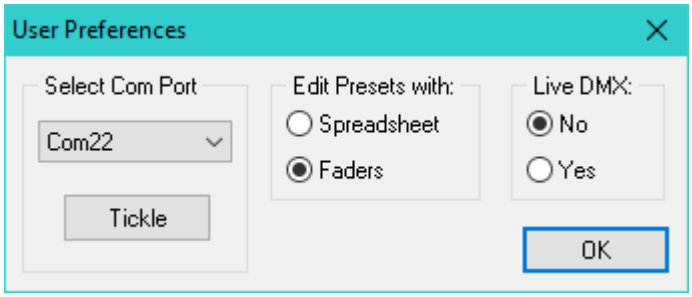
After installation, connect the Light-Switch and then view the Windows Device Manager as follows:

- Open the 'Run' dialogue box (hold down the Windows key and press R)
- Type devmgmt.msc
- Click OK



Select Ports (COM & LTP) and make a note of the COM number (in the example above it is COM22).

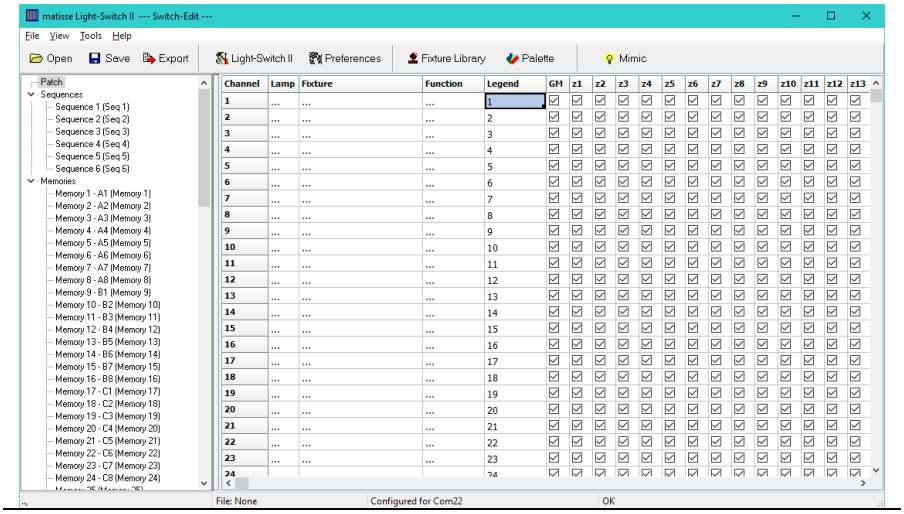
Run Switch-Edit as click on Preferences.



Select the required serial port and then click the 'Tickle' button. All leds on the Light-Switch will flash in response.

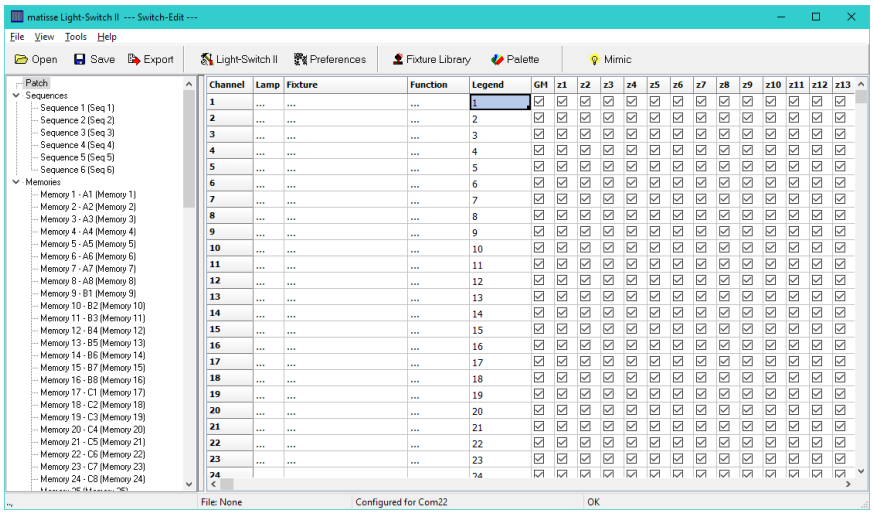
MAIN SCREEN

Switch-Edit displays the following screen when started.
The left panel of the screen displays the information store. This lists all the data that will be downloaded to Light-Switch. This is referred to as the Show Panel.
The right panel is used to display the spreadsheet or fader style information for editing presets and lamp personalities. This is referred to as the Edit Panel.

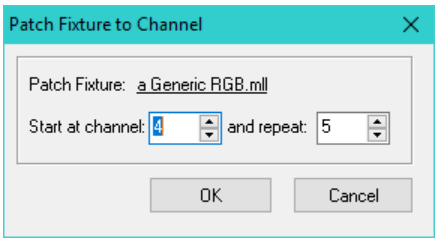


SETTING THE PATCH

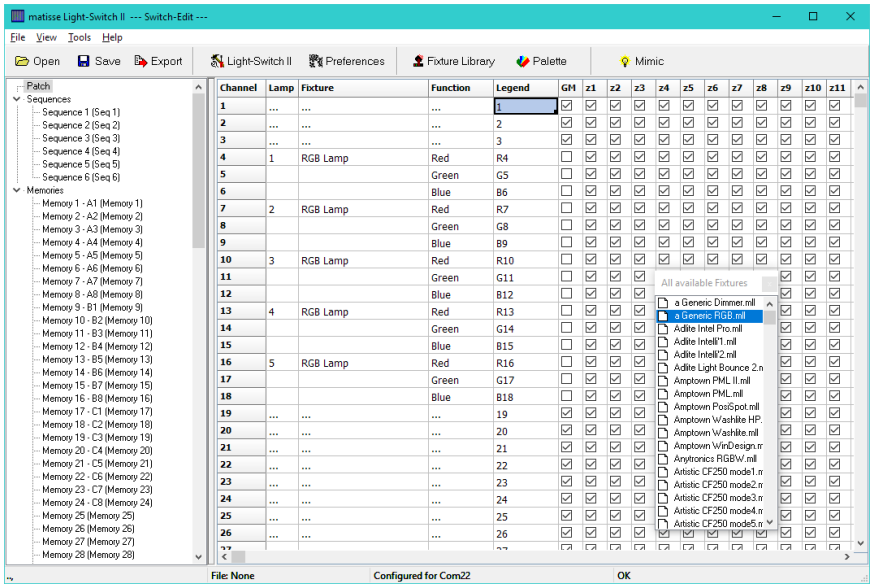
The patch is used to select the DMX512 channel allocation for all lamps to be controlled. Lamps can be multi-channel moving lamps or single channel dimmers. The patch is also used to set the GM and zone allocation for each channel.
Select Patch in the Show Panel. The patch spreadsheet is then displayed in the Edit Panel.
Click the Fixture Library button at the top of the screen. The palette of available fixtures is then displayed:



Select the required lamp from the palette and drag it onto the required start channel of the patch.
A dialogue is displayed which confirms the start channel and the number of lamps to be patched.



The example shown will patch five generic RGB colour mixers starting at channel 4. The resulting patch is shown below:



PATCH COLUMNS

The columns of the Patch display provide the following information:

Column	Name	Purpose
1	Channel	Lists the DMX512 channel number from 1 to 512
2	Lamp	The number of the moving lamp. Switch-Edit generates this automatically, numbering lamp 1 as the lowest DMX channel value.
3	Fixture	The text name of the moving lamp. This corresponds to the name in the Fixture Library Palette.
4	Function	Describes the lamp function controlled by this channel.
5	Legend	Shows a three-character mnemonic that represents the channel function and channel number.
6	GM	Indicates if a channel is controlled by the Grand-Master function.
7 to 22	Zone 1 to 15	Assigns a DMX channel to a zone. Only the controllers that are assigned to the checked zones can control the individual channels. By default all zones are checked which is the most common use.

DELETING A LAMP

To delete a lamp from the patch, simply right click on the lamp. A popup menu is displayed offering this option.

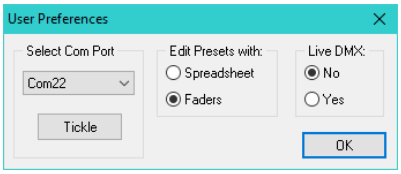
ZONES

When defining a patch for the system it is important to decide how you want the fixtures to be controlled.
The most common (default) method is to have one or more panels controlling the same zone (one zone option). Please refer to the wiring information section in the Quick Start Guide.
If the system requires individual areas controlled by designated panels then zones can be used to achieve this.

- A Light-Switch panel can be configured to be a controller for any one of the 15 zones. *(Please refer to the Quick Start Guide)*
- There can be up to 30 panels controlling the same zone
- Using Switch-Edit a channel can be configured so that one or more zone controllers can control it.
- All Light-Switch panels assigned to a zone will mimic the other panels in that zone

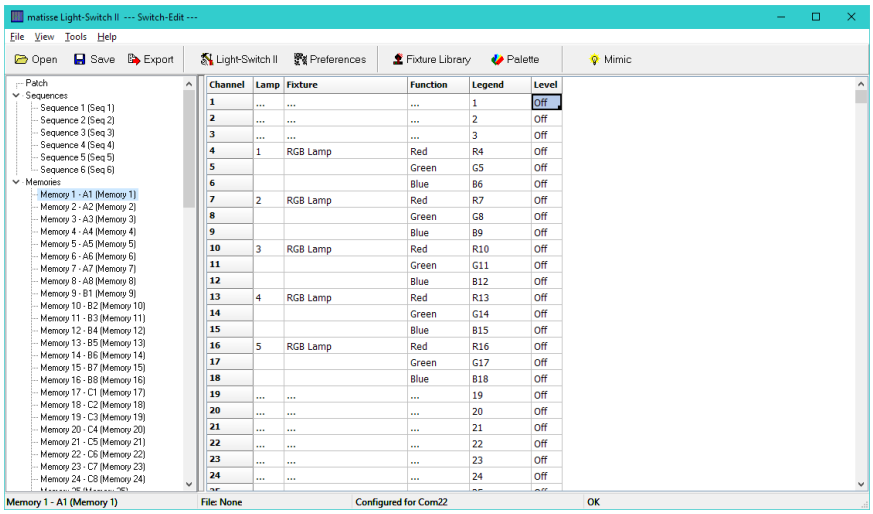
EDITING MEMORIES

To edit a memory, select the required memory in the Show Panel. Depending upon the setting in the Preferences menu, the Edit Panel will display either a spreadsheet or an array of faders.



EDITING MEMORIES BY SPREADSHEET

When editing memories in spreadsheet mode, the Edit Panel displays as shown below:



MEMORY COLUMNS

The columns of the Memory spreadsheet are similar to those displayed in Patch mode. Configuration of Grand-Master and zones is not available through the memory screen.

Column	Name	Purpose
1	Channel	Lists the DMX512 channel number from 1 to 60
2	Lamp	The number of the moving lamp. Switch-Edit generates this automatically, numbering lamp 1 as the lowest DMX channel value.
3	Fixture	The text name of the moving lamp. This corresponds to the name in the Fixture Library Palette.
4	Function	Describes the lamp function controlled by this channel.
5	Legend	Shows a three character mnemonic that represents the channel function and channel number. This is displayed when editing memories on Light-Switch.
6	Level	The level of this channel in this memory. The level can range from 0 to 255 or off.

EDITING MEMORIES BY FADER

When editing memories in fader mode, the Edit Panel displays as shown below:

FADER ROWS

Each channel of each moving lamp or dimmer is displayed as a fader. Below each fader, a 5 line text display describes the function:

Row	Name	Purpose
1	Channel	The Channel number ranging from 1 to 512.
2	Lamp	The Lamp Number ranging from 1 to 512. Channels that are not patched do not have a lamp number but can still be programmed.
3	Function	A text description of the lamp attribute controlled by this fader. If the channel is not patched, 'G-M' is displayed indicating that the channel is controlled by the Light-Switch Grand-Master fader.
4/5	Name	The name of the moving lamp.

SETTING LEVELS

Dragging the fader knob with the mouse sets fader levels.

EDITING LEVELS

Right clicking on any fader produces a popup menu. The popup menu provides numerous memory editing functions as detailed in the table below.

The fader that is right clicked is described as the selected channel in the table below:

Entry	Name	Purpose
1	Exclude channel from this memory	Selected channel is set to Off in this memory
2	Exclude fixture from this memory	If the selected channel is part of a moving lamp, all channels in the lamp are set to Off in this memory.
3	Exclude INTENSITY channels of this fixture	If the selected channel is part of a moving lamp and it is an intensity (dimmer) channel, all intensity channels of the lamp are set to Off in this memory.
4	Exclude POSITION channels of this fixture	If the selected channel is part of a moving lamp and it is a position (pan or tilt) channel, all position channels of the lamp are set to Off in this memory.
5	Exclude COLOUR channels of this fixture	If the selected channel is part of a moving lamp and it is a colour channel, all colour channels of the lamp are set to Off in this memory.
6	Exclude BEAM channels of this fixture	If the selected channel is part of a moving lamp and it is a beam (iris, gobo, prism) channel, all beam channels of the lamp are set to Off in this memory.

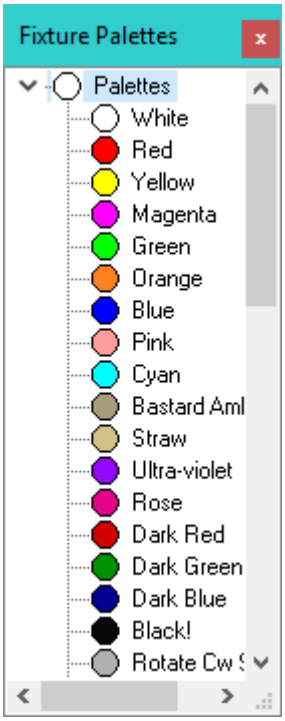
Entry	Name	Purpose
7	Exclude CONTROL channels of this fixture	If the selected channel is part of a moving lamp and it is a control (lamp strike etc.) channel, all control channels of the lamp are set to Off in this memory.
8	Exclude all INTENSITY channels from memory	If the selected channel is part of a moving lamp and it is an intensity channel, all intensity channels in this memory are set to Off.
9	Exclude all POSITION channels from memory	If the selected channel is part of a moving lamp and it is a position channel, all position channels in this memory are set to Off.
10	Exclude all COLOUR channels from memory	If the selected channel is part of a moving lamp and it is a colour channel, all colour channels in this memory are set to Off.
11	Exclude all BEAM channels from memory	If the selected channel is part of a moving lamp and it is a beam channel, all beam channels in this memory are set to Off.
12	Exclude all CONTROL channels from memory	If the selected channel is part of a moving lamp and it is a control channel, all control channels in this memory are set to Off.
13	Clear memory to zero	Sets all channels to zero level.
14	Clear memory to off	Sets all channels to Off (i.e. excluded from this memory).
15	Remove fixture from patch	Removes this fixture from the patch.

USING PALETTES

To display the palette, click on the Palette button at the top of the screen. The Palette contains 50 entries that contain settings for every attribute of every fixture.

These values are defined in the Fixture Editor.
For ease of use, the palette entries are coded by colour, but they are equally valid for use with position and beam attributes.

The palette can be used in both spreadsheet and fader view of a memory. Simply drag the required palette entry and drop it on the required fixture. The cursor changes to a hand icon with a small moving lamp icon.



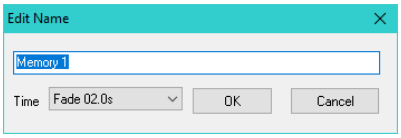
The entire fixture changes to represent the levels contained in the palette. This drag and drop function can be further modified by combination of the Shift, Ctrl and Alt keys as detailed in the table below.

Hold Key	Cursor	Dropping on Channel Type	Result
None	Moving Lamp Icon	All	Entire fixture is set to the level contained in the palette.
Shift	Fader Icon	All	Only the channel that is dropped upon will change to the palette value.
Ctrl	Light Bulb	Intensity	All intensity channels within the fixture change to the levels contained within the palette.
	Arrows	Position	All intensity channels within the fixture change to the levels contained within the palette.
	Colour Wheel	Colour	All intensity channels within the fixture change to the levels contained within the palette.

Hold Key	Cursor	Dropping on Channel Type	Result
Ctrl cont	Diamond Gobo	Beam	All intensity channels within the fixture change to the levels contained within the palette.
	Hammer	Control	All intensity channels within the fixture change to the levels contained within the palette.
Alt	Multiple Lamps	All	Sets all patched fixtures to the levels contained in the palette.

EDITING MEMORY LEGENDS & TIMES

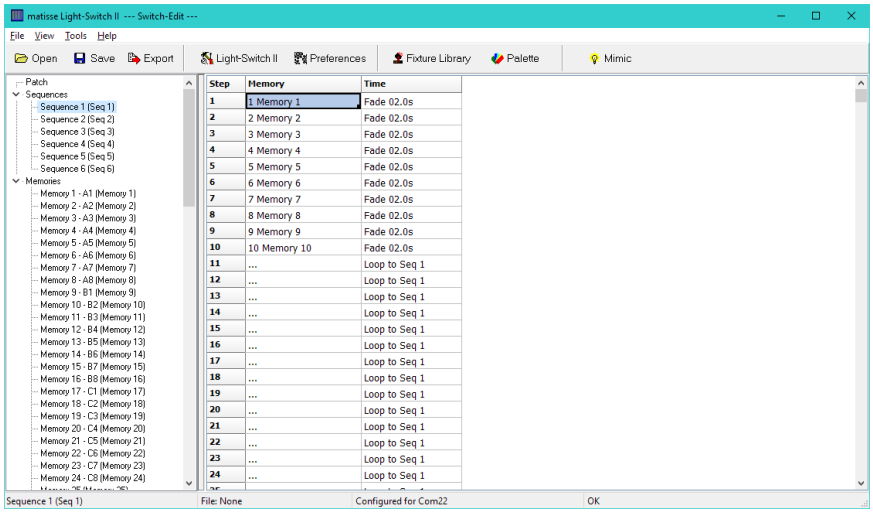
The name or legend of each memory and its fade time can be changed by right clicking on the required memory in the Show Panel.



SEQUENCE

To edit a Sequence, select the required Sequence in the Show Panel.

A spreadsheet is displayed as shown below:



SEQUENCE COLUMNS

The columns of the Sequence spreadsheet function as shown in the table below:

Column	Name	Purpose
1	Step	Sequences contain 100 steps that can each contain a Memory.
2	Memory	The number of the Memory assigned to this step.
3	Time	The fade or wait time of this step.
4	Legend	The name or legend of the Memory assigned to this step.

SEQUENCE EDITING

By default, each sequence is set up as a 10 step sequence with consecutive memory numbers.

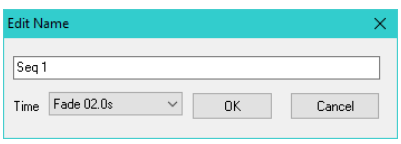
To edit the memory assigned to a step, simply type a new number in the Memory column. The legend will update to confirm the change.

TIME EDITING

The time field provides a pull down list that contains all the available time and control options.

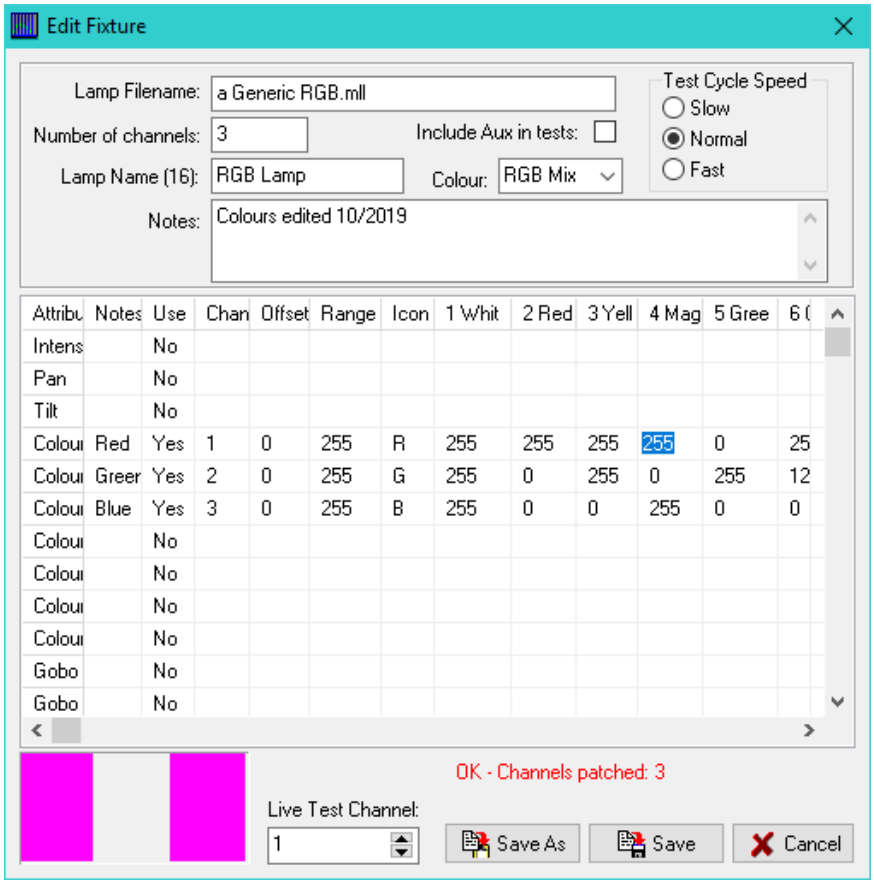
EDITING SEQUENCE LEGENDS

The name or legend of each Sequence can be changed by right clicking on the required Sequence in the Show Panel.



EDITING FIXTURES

To edit a fixture personality, double click on a fixture entry in the Fixture Palette.
The following dialogue is displayed (this example is the Artistic Licence Colour-Fill CF250 mode 6).



SPREAD SHEET

The spreadsheet displayed allows each of the possible fixture attributes to be controlled. Each attribute (pan, tilt etc.) contains the settings detailed below:

Column	Name	Function Result
1	Attribute	Defines the fixture channel type.
2	Notes	This field is simply for your information; it is not downloaded to the Light-Switch.
3	Use	Set to Yes if this channel function is active.

<table>
<tr><th>Column</th><th>Name</th><th>Function
Result</th></tr>
<tr><td>4</td><td>Chan</td><td>This is the channel address for this lamp attribute. Numbering is in the range 1 to 38.</td></tr>
<tr><td>5</td><td>Offset</td><td>This is the minimum value of data that is valid for this attribute. Normally this is zero, however some fixtures (the MadScan for example) mix attributes on a single channel. If intensity is controlled over the range 128 to 255, you must enter a value of 128 in this field.</td></tr>
<tr><td>6</td><td>Range</td><td>This is the range of values of data that are valid for this attribute. Normally this is 255, however some lamps (the MadScan for example) mix attributes on a single channel. If intensity is controlled over the range 128 to 255, you must enter a value of 127 in this field.</td></tr>
<tr><td>7</td><td>Icon</td><td>This is a single letter used as an abbreviation to describe the channel attribute. The following are the default abbreviations:
<table>
<tr><th>Abbreviation</th><th>Attribute</th></tr>
<tr><td>P</td><td>Pan</td></tr>
<tr><td>T</td><td>Tilt</td></tr>
<tr><td>R</td><td>Red</td></tr>
<tr><td>G</td><td>Green</td></tr>
<tr><td>B</td><td>Blue</td></tr>
<tr><td>C</td><td>Colour</td></tr>
<tr><td>g</td><td>Gobo</td></tr>
<tr><td>I</td><td>Intensity</td></tr>
<tr><td>i</td><td>Iris</td></tr>
<tr><td>p</td><td>Prism</td></tr>
</table></td></tr>
<tr><td>8-58</td><td>Palette</td><td>This is the default data value for each attribute of each palette.</td></tr>
</table>

HEADER The header to the spreadsheet allows overall configuration of the fixture:

Field	Function
Lamp Filename	The name of the file that contains this fixture personality.
Number of Channels	Used to enter the total number of channels required by this fixture.
Lamp Name	This is the 16 character name of the fixture.
Colour	Defines whether the fixture uses red, green, blue or cyan, magenta, yellow colour mixing.
Include Aux In Test	This field is for file compatibility with Micro-Scope 3a.
Test Cycle Speed	This field is for file compatibility with Micro-Scope 3a.
Notes	This field is provided to document revisions to the personality.

FOOTER

The footer to the spreadsheet provides two additional controls:

Field	Function
Graph	The graph shows the level of each consecutive fixture channel for the selected palette. It also changes colour to reflect the colour assigned to the palette.
Live Test Channel	This defines the DMX512 channel to use for live testing the fixture data. If a fixture is available, this greatly simplifies the task of data entry.
Warning Display	The Warning Display provides help with entry of complex lamps. Switch-Edit analyses the data as you enter it, and checks for any possible problems. The display options are: ***Error: Channel x is duplicated:*** This means that you have entered identical channel numbers for two or more lamp functions. ***Error: There are x channels over patched:*** This means that you have entered a channel number that exceeds the number in 'Number of Channels'. ***Error: There are x functions over patched:*** This means that you have entered more lamp functions than the number in 'Number of Channels'. ***Warning: There are x functions unpatched:*** This means that you have entered less lamp functions than the number in 'Number of Channels'. Unpatched functions transmit with a zero channel level. This is therefore a warning not an error. On complex lamps, you will regularly see this message. ***OK: X channels patched:*** This message simply confirms that all is well.

FINISHING EDITING

To finish the editing there are three options:
Save As: Allows the edited personality to be saved as a new personality. This is useful when entering a new mode for a fixture as only the differences need be entered.
Save: Simply saves the edited personality.
Cancel: Drops any changes made during the editing session.

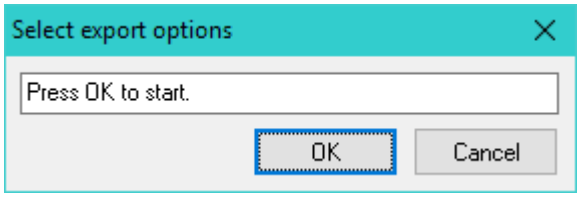
MENU

The main menu functions can also be accessed from the button panel at the top of the screen. The main functions are:

Open: Used to load a file from disc into Switch-Edit.
Save: Used to save a file from Switch-Edit to disc.
Import: Used to read an USITT ASCII text format file.
Export: Used to send data from Switch-Edit to Light-Switch.

EXPORT

Export sends data from Switch-Edit to the Light-Switch. Lamp Personality and Text Notes are not sent to the Light-Switch, so you should save your show to disc as well as exporting.
Ensure that Light-Switch is switched on and connected to the PC Com port.
Once the Export key is pressed, the following is displayed:

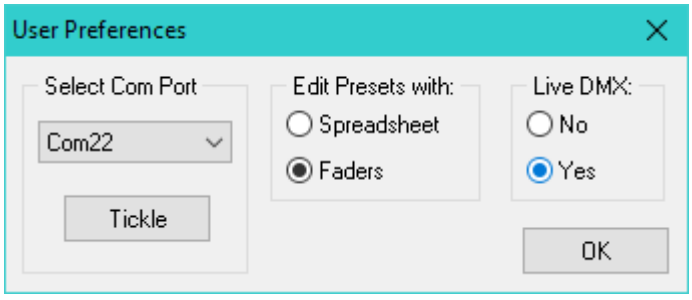


When ready to export click the OK key.
Switch-Edit will then export the data. The export process may take up to three minutes. Only the memories that are used are exported. When the Export process finishes, Light-Switch will automatically return to normal operation.

During the download process, the Grand-Master buttons will flash to show that data is being received. If an error occurs, all buttons will flash. If this occurs, cancel the Export and start the process again.

LIVE EDITING

Switch-Edit is able to send live DMX512 data via Light-Switch when editing.
This allows the show to be programmed visually with the aid of the actual lighting rig.
The Setting dialogue allows this feature to be enabled and also the PC Com port to be selected:



USITT ASCII IMPORT

Switch-Edit allows the import of USITT ASCII text files. This is an international standard designed to allow lighting data to be transferred between differing manufacturers.
Switch-Edit implements the following subset of commands:

CLEAR ALL: All memories will be cleared to zero channel levels. If this command is removed, the import will effectively merge data into the existing show.
CUE: Cue numbers are not used, the data is simply loaded to the next consecutive memory number. The cue is automatically assigned to the next available sequence step.
TEXT: The text field is loaded into the memory's legend.
UP: The up fade is assigned to the sequences step fade time. If the fade time is larger than Light-Switch's limit, additional wait steps are inserted to match the time.
FOLLOW ON: The follow on time is used to insert additional wait steps in the sequence.
LINK: The link cue number is used to define the step of sequences to which the end of the last sequence will link. This allows the import of shows that have an initialisation section followed by a continuous loop.

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The Mould Making Workshop
Soby Mews
Bovey Tracey
TQ13 9JG
UK
Tel: +44 (0)20 88 63 45 15
Fax: +44 (0)20 84 26 05 51
Email: Sales@ArtisticLicence.com

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