



ArcControl 1024



USER MANUAL

Version: 1.0

User Guide - Getting Started

This manual is in three sections:

1. Getting Started: Specifications, installation, and using the controls (p. 2)
2. The Quick-Setup Assistant – rapidly getting results (p. 10)

Continued on the CD ROM, enclosed:

3. Advanced Setup: The Engineer's Menu, and advanced configuration (p. 22)

Contents:

Introduction	2
Technical Specification	2
How do I ?	3
Getting Started	3
Rear Terminal Connections	4
DMX Wiring	4
Number of DMX Devices Connected	6
Basics - Taking a First Look at the Display	7
Using ArcControl 1024 for the First Time – Quick Setup	10
Using Sound-to-Light	15
Using Favourites	16
Select a Scene to be a Favourite from the Scenes Menu	17
Editing a Favourite	18
To Edit the Favourite's Name	18
To Edit the Favourite's Master Brightness	19
To Edit the Favourite's Master Speed	19
To Edit the "Recall at Power-up" Setting	19
Master Speed and Master Brightness	20
Using Quick Setup if the ArcControl 1024 Has Been Used Before	21
Entering Engineer's Mode for Detailed Configuration	22
Configure Menu	23

Continued on the CD (enclosed):Continued on CD to page 50

Introduction

ArcControl 1024 from ROBE lighting s.r.o. is a fully-programmable, network-enabled DMX control system.

It is a stand-alone product, that can be configured to produce patterns on DMX fixtures in a few minutes, without having to use PC-based configuration software.

ArcControl 1024 many features enable you to get up and running very quickly, or to edit and create fully definable scenes, sequences and triggers in precise detail.

Technical Specification

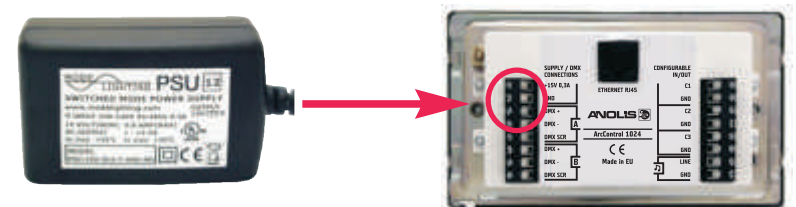
DMX Channels	2 complete universes of 512 channels each
DMX Standard	DMX 1990 A
DMX refresh rate	Configurable, 36Hz Max
Power Supply	15V DC, 300mA, (included)
Networking	Ethernet 10/100 MHz - Auto uplink detection Built-in web server Telnet command server
Analogue channels	3 independent 0-10v outputs, 50mA
Contact inputs	3 volt-free contact inputs
Audio Input	Line-level mono audio input for beat triggering
Real-time clock	Built-in real-time clock, with 6-month battery back-up
LCD Screen	128x64 pixel, monochrome with configurable RGB backlight
Physical Size	35mm deep Fits standard 47mm-deep UK double-gang backbox
Weight	255 grammes, without fascia
Standard Fascia	Stainless Steel
Finishes	Polished Brass Polished Chrome White

How do I ...?

How do I ...?	Description	Page
Connect an LED fixture	Use the DMX screw-terminals on the rear of the product	5
Create standard colours and patterns	Use the Quick Setup Assistant	10
Change the overall brightness	Use the scroll wheel to set "Master Brightness"	20
Change the speed of a sequence	Use the scroll wheel to set "Master Speed"	20
Create custom colours and patterns	Add fixtures, create scenes and create sequences using the Configuration menu options	On CD
Use a PIR sensor to activate a sequence	Set a "trigger" for one of the contact inputs	On CD
Check to see if a DMX fixture is working	Use the slider controls in the Test DMX Fixture feature	On CD
Recall scenes using a web browser	Find out or set the ArcControl 1024 IP address, and use a web browser	On CD
Monitoring DMX scenes using a web browser	Use the DMX Output Test feature to access all channels individually or the DMX Fixture Test feature to control an individual fixture	On CD
Find out the IP address	Use Network Setup in the Configuration menu	On CD

Getting Started

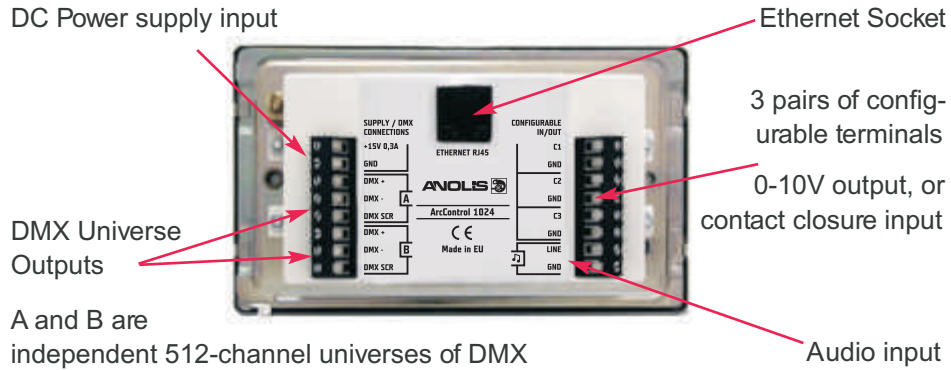
The DMX Generator can be installed in a standard 47mm UK-type double-gang backbox. All cable connections are made on the rear of the product. Connect a 15V DC power supply to the supply terminals on the back of the product. (see p.6)



On the Mode PSU, supplied with the ArcControl 1024, the + wire has a white stripe on it, and the - wire has no stripe.

Rear Terminal Connections

On the back of the Box are terminals for DC power, two DMX universes, and three pairs of configurable terminals that may be used as analogue outputs or trigger inputs..



DMX Wiring

There are two separate, fully independent, DMX “Universes” on a ArcControl 1024 Each has DMX+, DMX – and Screen connections via screw-terminals, as shown above.

DMX fixtures are usually wired together using a daisy-chain. The furthest device in the chain needs to be terminated with a 120Ω resistor between DMX + and DMX-.

For a trouble-free installation it is recommended that you use good quality shielded cable with a twisted pair for the data, with a minimum size of 24AWG.

The DMX standard suggests a maximum length of cable of 300m, before signal repeaters are used.

DMX wiring should not be T'd off, or star-wired. ‘Y’ connections should not be used, as they will cause degradation in the signal quality.

DMX Wiring - Continued




ArcControl 1024 should be connected at one end of the daisy-chain, and not in the middle. However, the default outputs created by the **Quick Setup Assistant** are transmitted from both universes, and therefore it would be possible to have one chain of DMX fixtures connected to output A, and another connected to output B.

Avoid long runs with power or high-voltage cables, as noise pickup can interfere with the signal that reaches the DMX fixtures.

DMX Connector Wiring

ArcControl 1024 is intended for use in fixed installations, and therefore has rising-clamp screw-terminal connections for the DMX.

The following is a summary of common DMX pin-outs on other connectors:

Connector	DMX +	DMX -	Screen/0V
 DMX Standard 5-pin XLR (male, pins view)	3	2	1
 3-pin XLR (male, pins view)	3	2	1
 Standard RJ-45	1 White/Orange	2 Orange	7+8 Brown+Brown/White

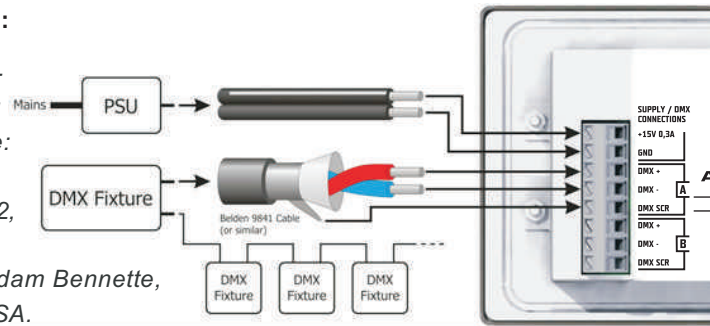
Number of Terminal Devices Connected

Up to 32 “loads” may be connected to each DMX universe. Modern DMX fixtures do not present a full unit of “load” to the DMX output, and therefore more than 32 may be used. For example all DMX fixtures from Mode Lighting are 1/10th load, and therefore 320 may be connected to each DMX Universe.

If you need to connect more than 32 fixtures-worth of “loads” then use a DMX signal amplifier or booster.

Further information:

For further information on DMX wiring and termination see: “Recommended Practice for DMX512, A Guide for Users and Installers” by Adam Bennette, available from PLASA.

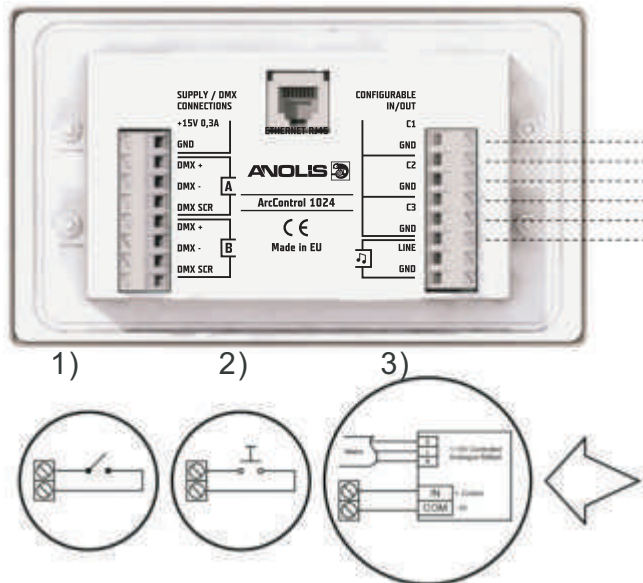


Configurable Terminal Wiring

The three pairs of configurable terminals on the rear of ArcControl 1024 can be configured as either Contact Inputs or Analogue outputs (see page 32).

They are wired as follows:

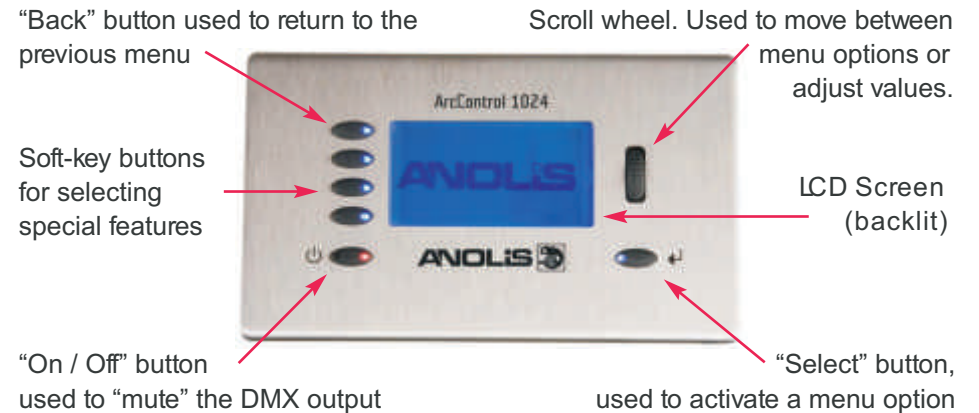
- 1) Switch Input
- 2) Button Input
- 3) Fluorescent Ballast Output



Basics - Taking a First Look at ArcControl 1024 Controls

Using the ArcControl 1024 looks and feels very much like using a pocket Mp3 player: you set up scenes as if they were songs, and sequences are handled much like play-lists. You can assign Favourite looks for quick access.

Configuring the DMX Generator is performed entirely using a combination of the scroll-wheel, the “Back” button, the “Select” button and three soft-keys.



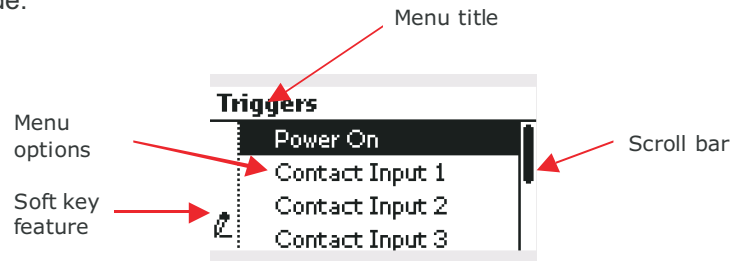
Independent Control of Fixtures

The ArcControl 1024 is unusual in that you can connect multiple fixtures to one DMX universe even if you want to control them totally independently of each other. This is because the ArcControl 1024 allows you to change any DMX channel level or group of channels’ levels at a time without having to specify the levels of all the other channels.

For further details see the section on creating custom Scenes (see CD).

Basics - Taking a First Look at ArcControl 1024 Display

Each menu has three parts: the title, the menu options, and the scroll bar. Some menus also have up to three extra soft-key features indicated by icons on the left hand side.

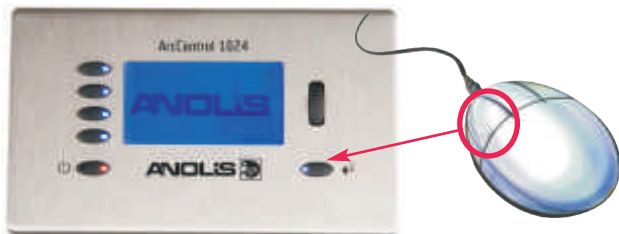


1. The top-left button, which is next to the menu title, takes the user back to the previous menu screen from any sub-menu. This "Back" button action is uniform throughout the system's operation, and is just like the "Back" button on your computer's web browser.

When the back button is available it will illuminate orange.



2. The bottom-right button is the "Select" button, which is used to select menu options, to tick or un-tick toggle options, or to execute commands, or to move to the next menu. This is just like clicking on items in a computer's web-browser.

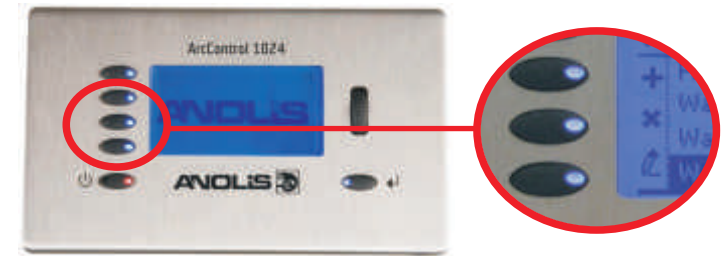


3. The bottom left-button is "On/Off", or "Mute".



The button is red when the output has been "muted", and all DMX channels will be transmitted with a value of 0.

4. The three middle buttons next to the screen on the Left-Hand Side act as soft-keys. In some menus these have special functions, which are indicated by icons on the left hand side:



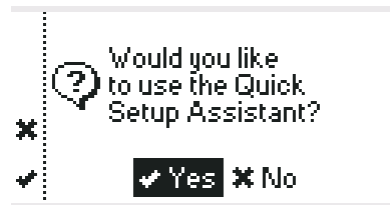
The icon/text on the screen next to the three buttons below indicate the function of the soft-keys (for example in the image above they are add (+), delete (-) and Edit (!)).

Some menus may not have soft-keys options, in which case the three middle buttons do not perform any function.

Basics - Using ArcControl 1024 for the First Time - Quick Setup

The **Quick Setup Assistant** rapidly configures your ArcControl 1024 with default colours and sequences suitable for the fixtures that you have connected.

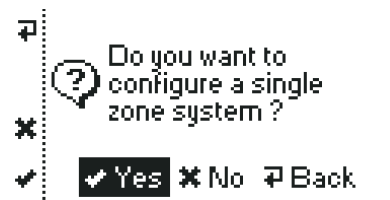
When your new ArcControl 1024 is first switched on the following screen is shown:



- For quick-setup, choose **Yes**:
- Highlight the **Yes** option in the centre of the screen and press the select button or
- Press the soft-key next to the ✓ icon.

1. If you select **No** or ✓ instead then you will be able to configure the ArcControl 1024 using the **Configuration** menu options (see page 21 for further details)

You can choose between a single zone (fixtures of one type are configured to do the same scenes at the same time), or multiple-zones (many different fixture types with independent control).

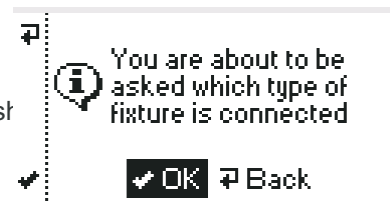


- To configure a single zone, press **Select** or the <✓> button.

The ArcControl 1024 will then ask you two questions in order to configure standard scenes and sequences, for a single zone.

2. Selecting the DMX Fixture Type

The ArcControl 1024 will confirm that you wish to proceed:

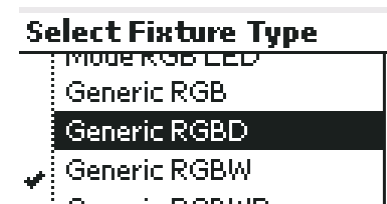


To proceed:

- Highlight the **OK** option in the centre of the screen, and then press the select button or
- Press the soft-key next to the ✓ icon.

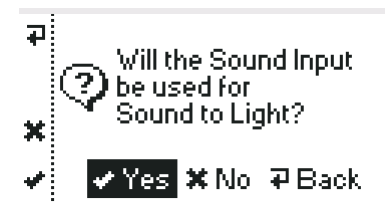
To return to the previous screen:

- Highlight the **Back** option and then press the select button or
- Press the **Back** button, on the top-left of the ArcControl 1024



- Highlight the Fixture and press

3. You are then asked if you plan to use the Sound-to-Light feature. This is so that if you don't need it then the day-to-day user interface won't confuse users by including the Sound-to-Light on/off switch as part of the main menu.



And that's it!

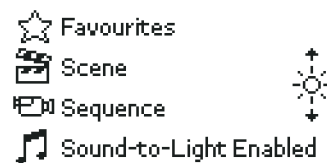
The ArcControl 1024 will create standard static solid colours, standard rolling-block colours and cascading colours automatically, filling both DMX universes so that it doesn't matter which one has been used.

Standard Static Solid Colours	Standard Sequences/Cascading Colours
White	
Red	
Orange Red	Short Rainbow
Orange	
Gold	
Yellow	Long Rainbow
Green-Yellow	
Lawn Green	
Chartreuse	Hot Colours
Green	
Jade	
Mint	Warm Colours
Aquamarine	
Cyan	
Sky Blue	Cool Colours
Deep Sky Blue	
Royal Blue	
Blue	Pastel Chase
Violet	
Purple	
Indigo	Arc Line
Magenta	
Hot Pink	
Deep Pink	
Crimson	

The Main Menu: Recalling Standard Colours/Sequences and Favourites

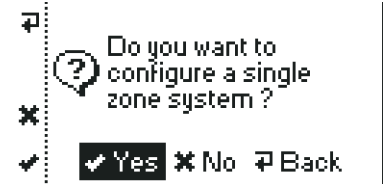
From the *main menu*, shown below, the user has the option to select a Favourite output, or a specific Scene or Sequence.

In the main menu all four of the buttons on the left of the screen will be illuminated blue to show that they are available.

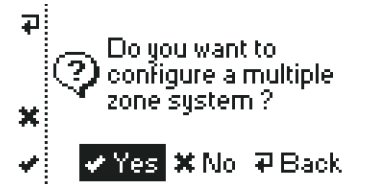


Basics - Using ArcControl 1024 for the First Time - Multi-Zone Quick Setup

The Multi-Zone Quick Setup Assistant enables you to quickly configure different fixture types or groups perhaps in different areas in a building, each with the standard scenes for independent operation. A zone is a group of identical fittings.



If you answered “**No**” to configuring a single zone system then you will be asked if you want to configure a multi-zone system:

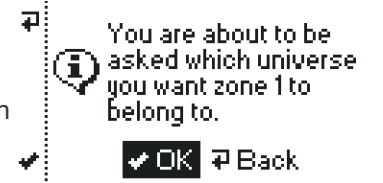


To configure a multi-zone system, press **Select** or the <✓> button.

The system will start at the first zone, and will walk you through the setup, step-by-step:



In a multi-zone system it may be more convenient for you to connect different zones to different DMX universes, you are therefore given the option of choosing which universe the fixtures in the zone are connected to.



Press **OK** to continue.

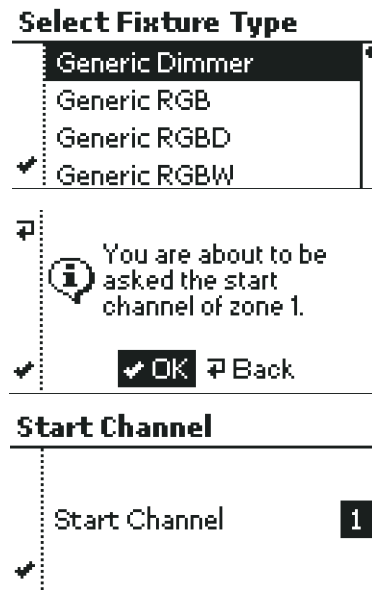


Scroll the highlight bar onto either DMX Universe A or DMX Universe B. Press the **Select** button or the ✓ soft-key to continue.

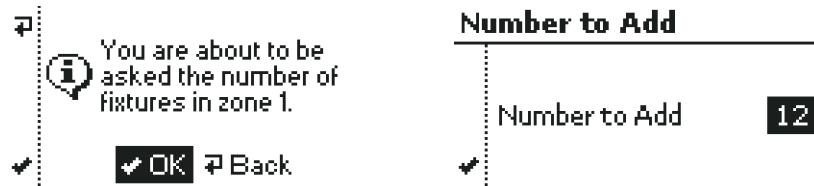
Next, select the type of fixture used in this zone:

Move the highlighted bar to the fixture you are using.
Press the **Select** button or the ✓ soft-key to continue.

Next you will be asked to specify the DMX channel that is used. If you are configuring several zones, then the start-channel given is the next-available DMX channel, taking into account all of the fixtures that have already been added in previous zones.
If you need to, then use the scroll wheel to adjust the starting channel.
Press the **Select** button or the ✓ soft-key to continue.



You will then need to specify how many fixtures are in this zone:



If you need to then use the scroll wheel to adjust the number of fixtures.
Press to **Select** button or the ✓ soft-key to continue.

You will then be asked if you want to configure another zone.



Highlight **Yes** or **No** and then press **Select**, or use the < ✓ > or < ✓ > soft keys to proceed.

If you are configuring another zone, then follow the on-screen instructions again.
The ArcControl 1024 will now create scenes and sequences for each zone, as well as “master” favourites that control all zones.

Using Sound-to-Light

ArcControl 1024 has a built-in beat trigger system to give you a stunning light-show, controlled directly from your sound system.

To use sound-to light, connect a line-level audio source to the ArcControl 1024 audio input. ArcControl 1024 detects beats, and uses them step through the current sequence.

If “Sound-to-Light” was selected during the Quick Setup Assistant then it can be enabled and disabled by toggling button 4.

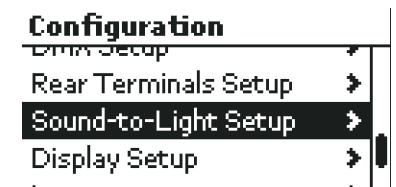


The musical notes icon changes to show whether the sound-to-light is currently controlling sequences.

Enabling Sound-to-Light if it Wasn't Selected During the Quick Setup

Enter **Configuration** mode by pressing: 4 (following the instructions on page 22)

Scroll down to “**Sound-to-Light Setup**” and press **Select**.



“Show Sound-to-Light” will be highlighted.
Use the **Select** button to tick or un-tick this item.

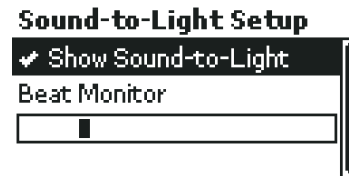
Press **Back** turn to the **configuration** menu.
Press **Back** again to return to the **main menu**.



Viewing The Audio Beats

You can view the incoming audio beats using the “beat monitor”, which is shown in the “Sound-to-Light Setup” menu.

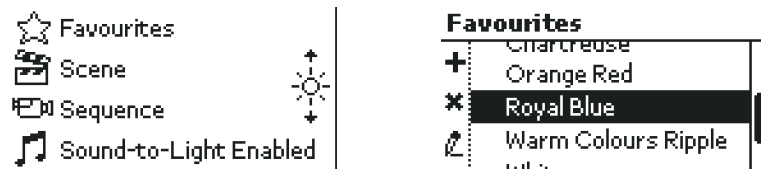
For each beat a black blob will fly across the screen from left to right.



Using Favourites

A favourite is a combination of scenes/sequences with a master brightness level and a master speed setting. A single “favourite” therefore defines a complete “look” for the output of your ArcControl 1024. A venue with ArcControl 1024 installed would typically set up favourites for common events.

Favourites are accessed by pressing the button next to the **Favourites** option, which is at the top of the **main menu**:



Favourites may be renamed to indicate their use. You may have as many favourites as you need.

Favourites are required if you want to set triggers (see p. 30 on the CD) from external inputs or the IR remote control to activate colours or patterns on the ArcControl 1024.

There are three ways of creating a new Favourite:

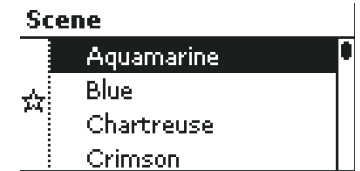
Capture the Current „look” as a New Favourite

From the **main menu** press the **favourites** soft key to display the list of favourites. Press the **+** soft-key to add the current “look” as a favourite.



Select a Scene to be a Favourite from the Scenes Menu

From the **main menu** press the **Scene** soft key to display the list of scenes



Highlight the scene that you want to add to the Favourites list

Press the **✓** soft key to add the scene, a message will show that this has been done.



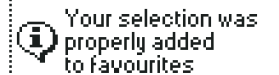
Select a Sequence to be a favourite from the Sequences Menu

From the **main menu** press the **Sequence** soft key to display the list of sequences.

Highlight the sequence that you want to add to the Favourites list



Press the **✓** soft key to add the sequence, a message will show that this has been done.



Editing a Favourite

From the **main menu** press the **Favourites** soft key to show the list of favourites.

Select the favourite that you want to edit, and press the **edit** soft key.

You have options to change any of the following attributes

The name

The master brightness used by the favourite

The master speed applied to sequences recalled by the favourite

Whether the favourite is recalled at power-up

To edit a Favourite's Name

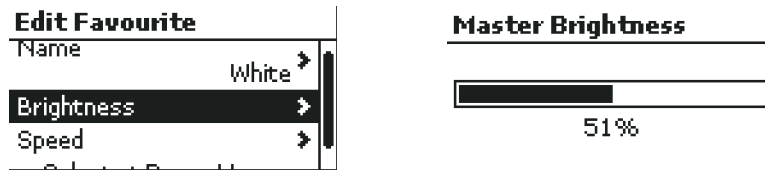
Highlight the **Name** option, and press **Select**.



The text editor appears. For more information on using the text editor see page 35. Once you have the name you want, press **Back** to return to the **Edit Favourite** menu.

To Edit the Favourite's Master Brightness

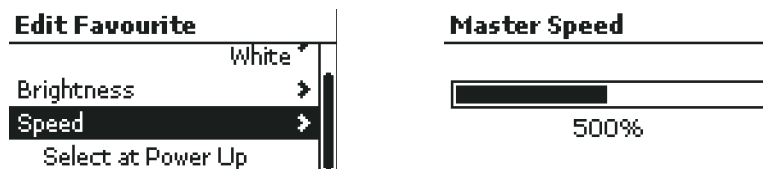
Use the scroll wheel to highlight the **Brightness** option, and then press **Select**.



Use the scroll wheel to adjust the brightness to the level that you want. Press **Back** to return to the **Edit Favourite** menu.

To Edit the Favourite's Master Speed

Use the scroll wheel to highlight the **Speed** option, and then press **Select**.



Use the scroll wheel to adjust the speed to the level that you want. Press **Back** to return to the **Edit Favourite** menu.

To Edit the 'Recall at Power-Up' Setting

Use the scroll wheel to highlight the **Recall at Power-Up** option

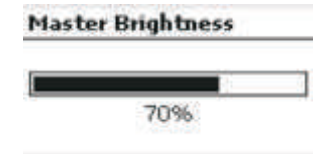


Use the **Select** button to tick or un-tick the option.

Master Speed and Master Brightness

Use the **Select** button to choose between **Master Brightness** control (default) and **Master Speed** control on the scroll-wheel.

By default, from the **Main menu**, the scroll wheel is used to proportionally adjust the brightness of all current outputs at once (think of this as working just like a "volume" control on a hi-fi system):

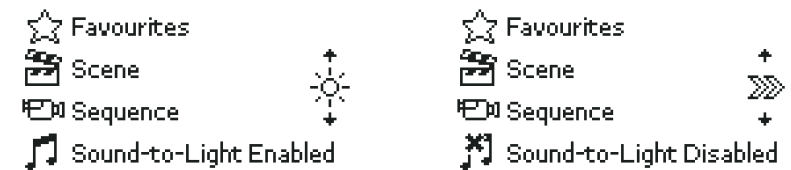


Brightness may be adjusted between 0% and 100%

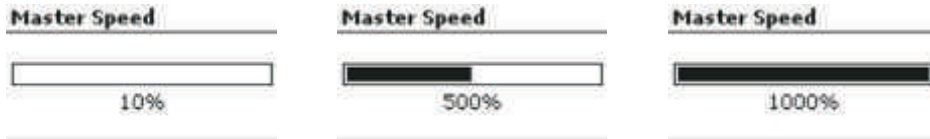
Any sequences which are running will be "turned up" or "turned down" as appropriate, and will carry on running at the new brightness level.

The ArcControl 1024 will return to the **main menu** after 5 seconds, or press the orange **Back** button to return to the main menu immediately.

When on the main menu, use the **Select** button to change between the **Master Brightness** and **Master Speed** function on the scroll wheel. The icon on the right-hand side of the screen changes to show which function is active:



Speed may be adjusted between 10% and 1000%.



NB Speed may only be adjusted when the **Sound-to-Light** is not active.

Using Quick Setup if the ArcControl 1024 Has Been Used Before

If the ArcControl 1024 has been used before, the **Quick Setup Assistant** is available via the **Configuration** menu (see page 22), and it checks to see whether you really want to start a fresh setup:



Entering Engineers Mode for detailed Configuration

To enter Engineer's Mode from the **Main Menu** press the fourth button (Sound-to-Light) and the select button alternately, twice (i.e. press left, right, left, right).



Configure Action Menu

The **Configuration** menu is used to set up all functions of the DMX Generator:



Fixtures; The DMX fittings connected to the ArcControl 1024
 Scenes; Groups of static levels for channels of DMX
 Sequences; The recall of scenes automatically over time
 Triggers; Sets up the way in which the buttons or inputs cause scenes or sequences to be recalled.



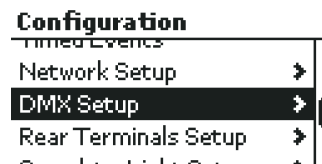
The scroll-bar position shows which section of the menu is currently on view. Use the scroll wheel to move up and down between menu items and to bring new items into view.

Clock: Sets the built-in real time clock, and geographical location.

Timed Events: Configures how the real-time-clock can be used to make scenes or sequences happen at pre-programmed times or dates.

Network Setup: Configures the TCP/IP settings of the DMX Generator.

DMX Setup: Configures the number of channels transmitted, and the timing parameters of the DMX data, such as the break, mark-after-break and packet refresh timing.



Rear Terminals Setup: Selects the function of the configurable terminals on the rear of the product, whether they are to be analogue 0-10V outputs, or witch inputs.

Sound-to-Light Setup: Enable the Sound-to-Light and view the "Beat Monitor"



Display Setup: Choose the backlight colour and contrast of the display



Language: Select the display language

Clear Lighting Setup: Return to a blank system, so that new settings can be created.