ALTMAN
LIGHTING

GENESIS

Powered by **LSC**

Lighting Control Console

Operator Manual

VERSION 3.0

PREFACE

ABOUT THESE INSTRUCTIONS

The document provides basic information on installation and operational instructions for a qualified, trained installer. These instructions provide information for the following product:

- Genesis Lighting Control Console
- Genesis Lighting Control Wing
- Genesis Dust Cover

Note: Additional product information can be found on our web site at www.altmanlighting.com or by scanning the QR code to the right.

Please read all instructions before installing or using this product. Retain these instructions for future reference.

Scan QR code to go to the Genesis Lighting Controller web page.

HAVE A QUESTION ABOUT THESE INSTRUCTIONS?

The material in this document is for information purposes only and is subject to change without notice. Altman Lighting assumes no responsibility for any errors or omissions which may appear in this manual.

Should you find an error, have a suggestion or question regarding your Altman Lighting product, we would love to hear from you.

You can reach us at:

Altman Lighting
1400 East 66th Ave.
Denver, CO 80229

1-303-500-7072 (Main)

www.altmanlighting.com
customerservice@altmanlighting.com

Note: Information contained in this document may not be duplicated in full or in part by any person without prior written approval of Altman Lighting. Its sole purpose is to provide the user with conceptual information on the equipment mentioned. The use of this document for all other purposes is specifically prohibited.

The material in this manual is for information purposes only and is subject to change without notice. Altman Lighting assumes no responsibility for any errors or omissions which may appear in this manual. For comments and suggestions regarding corrections and/or updates to this manual, please visit the Altman Lighting web site at www.altmanlighting.com or contact your nearest Altman Lighting Regional Manager.

El contenido de este manual es solamente para información y está sujeto a cambios sin previo aviso. Altman Lighting con no asume responsabilidad por errores o omisiones que puedan aparecer. Cualquier comentario, sugerencia o corrección con respecto a este manual, favor de dirijirlo a la oficina de Altman Lighting más cercana.

Der Inhalt dieses Handbuches ist nur für Informationszwecke gedacht, Aenderungen sind vorbehalten. Altman Lighting uebernimmt keine Verantwortung für Fehler oder Irrtuemer, die in diesem Handbuch auftreten. FürBemerkungen und Verbesserungsvorschlaege oder Vorschlaege in Bezug auf Korrekturen und/oder Aktualisierungen in diesem Handbuch, moechten wir Sie bitten, Kontakt mit der naechsten Altman Lighting Niederlassung aufzunehmen

OUR COMMITMENT

Altman Lighting continually engages in research related to product improvement. New materials, production methods and design refinements are introduced into existing products without notice as a routine expression of the philosophy. For this reason any current Altman Lighting product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise noted.

Rev: 1   Version as of: **1 September 2021**

Genesis Lighting Controller INSTALLATION INSTRUCTIONS / INSTRUCTIONS D'INSTALLATION

CLEANING AND CARE

WARNING! All cleaning should be performed with power completely removed from the Console. Never remove protective covers when the Console is powered. Wear appropriate protective eye wear and gloves when cleaning the unit. All service and maintenance, other than described herein, should be performed by a qualified technician or Authorized Service Center.

Do not allow any liquids or foreign objects to enter the console. If any liquids are spilt on the console, the inside should be cleaned and dried as soon as possible. Only suitably qualified personnel should remove the covers and perform any such maintenance.

WARNING! Under no circumstances should ammonia-based cleaners, acetone, or other harsh solvents be used on or near the Genesis Control Console. Cleaning should be with a damp cloth. Do not use any powerful solvents.

For all other service and maintenance issues, please contact your local Altman Lighting office or an Authorized Service Center.

WARNING! Disassembly (other than as described herein), alterations, unauthorized service, etc. will void the product warranty. Contact your local Altman Lighting office or an Authorized Service Center for technical support and service.

When connecting any devices to the console, make sure that all connections are correct before switching on the power. If any doubt exists, obtain the assistance of qualified personnel.

IMPORTANT INFORMATION

PRODUCT SAFETY NOTICES

When using electrical equipment, basic safety precautions should always be followed including the following:

a. *READ AND FOLLOW ALL SAFETY INSTRUCTIONS.*
b. *Do not use outdoors unless the product is specified to operate in outdoor environments.*
c. *Do not mount near gas or electric heaters.*
d. *Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.*
e. *The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.*
f. *Do not use this equipment for other than intended use.*
g. *Refer service to qualified personnel.*

WARNINGS

WARNING: RISK OF ELECTRICAL SHOCK! You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltages and damage the device. It is always recommended that a "lock out tag" device is installed on the appropriate circuit disconnect prior to beginning electrical work of any kind. A qualified electrician must perform this installation.

WARNING: Insulation between low-voltage supply and control conductors is provided by basic insulation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to personnel.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

WARNING: This Control Console is NOT for residential installation or use.

THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE BY:

A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND THE HAZARDS INVOLVED.

CE PRODUIT DOIT ÊTRE INSTALLÉ SELON LE CODE D'INSTALLATION PERTINENT, PAR UNE PERSONNE.

CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR.

CONSULTER UN ÉLECTRICIEN QUALIFIÉ POUR VOUS ASSURER QUE LES CONDUCTEURS DE LA DÉRIVATION SONT ADÉQUATS.

FCC NOTICE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

ALTMAN LIGHTING PRODUCT WARRANTY

WARRANTY TERM

Altman Lighting, Inc., a subsidiary of Altman Stage Lighting Company, Inc., herein referred to as Altman, warrants each new product (except for spare parts or products Altman does not manufacture) for a period of TWO (2) years from date of shipment to correct by repair or replacement any part defect due to faulty material or workmanship. Under these same terms products with an LED light source shall be warranted for a period of FIVE (5) years and a Day.

Altman warrants for NINETY (90) days any spare part it manufactures. On spare parts or products Altman does not manufacture, including, but not limited to, lamps, sockets, lenses, roundels, electronics, ignitors, ballasts, etc.; Altman will grant the same warranty given Altman by its vendors.

Altman assumes no responsibility for damage or faulty performance caused by misuse, improper installation, careless handling or where repairs have been attempted by others.

This warranty is in lieu of all warranties or guarantees expressed or implied and no representative or person is authorized to assume Altman any other liability with the sale of Altman's products.

For complete warranty terms and conditions, please refer to our web site at www.altmanlighting.com.

WARRANTY SERVICE

In order to request warranty service, a Return Material Authorization (RMA) number must be issued prior to return.

Return shipments must be visibly marked with the RMA number; the product must be returned (shipping prepaid) to the factory at:

Altman Lighting Inc.
Attention: RMA #
1400 East 66th Ave
Denver, CO 80229

Returns must be within FORTY FIVE (45) days of receipt of RMA

ALTMAN
LIGHTING

Conventions Used in this Manual
Throughout this manual, certain conventions have been used to make the meaning clearer.

- A word in **Bold** text represents a virtual button on the touch screen.
- A word in [**Bold**] text with square brackets represents a physical button.
- Emphasis is indicated by <u>underlining</u>.

All Trademarks referred to in this manual are the registered names of their respective owners.

Every care is taken in the preparation of this manual, ALTMAN takes no responsibility for any errors or omissions.

The Genesis operating software and the contents of this manual are copyrighted.

1 INTRODUCTION

1.1 OVERVIEW

Genesis combines the ease of use of a fader-based console, with the power of a touch screen graphical user interface to make control of LED fixtures easy and intuitive while still allowing control of moving lights and conventional dimmers. The software shows what to do next, ensuring a very easy learning curve for even the novice user.

Genesis Wing #GEN-WG-12   *Genesis Console #GEN-24*

Genesis can control 24 lighting fixtures of any type, dimmer, LED, moving LED and moving lights. Expansion Wings allow 12 additional fixtures to be controlled per wing. Faders are used to control intensity and the large touch screen has "Apps" that allow you to easily program color, position or other attributes. The "Home" screen "rig view" has fixture icons showing intensity, color and position of each fixture. The fixture icons can be positioned on the screen to emulate their actual position in a rig.

Genesis makes controlling multi-color LED fixtures easy. The different types of attributes (RGB, RGBA, RGBAW or CMY) are all controlled via a simple touch screen color picker. Position (Pan and Tilt) is also controlled via

9

the touchscreen and other attributes by virtual faders. This allows Genesis to control not just color, but all the attributes of modern moving lights.

Where Genesis really shines is in its effects. The unique Animate Apps provides a simple and intuitive way to quickly create chases and patterns in a single cue, usually within just a few seconds. This feature alone makes the Genesis the most powerful in its class. The Shapes App provides a quick and simple way of creating continuously moving positions on fixtures that have Pan and Tilt attributes by constantly varying those attributes.

An Undo command system and context sensitive Help ensures that Genesis is easy to use.

By adjusting the intensity and color of fixtures and creating animations or shapes, the current output can then be recorded onto any Red Playback fader. Genesis has the capacity to record up to 1,000 cues, across 100 cue-lists or chases.

Fixture library updates and new software features are easily installed via a USB drive. Show files (that are stored in the console) can be backed up to a USB drive for off-site storage.

1.2   QUICK START GUIDE

A summary of the information in this "User Manual" can be found in the Genesis "Quick Start Guide" supplied with your Genesis for download at www.altmanlighting.com

1.3   LATEST FEATURES / FIXTURES

Altman Lighting has a corporate policy of continuous improvement covering areas such as product design and documentation. To achieve this goal, we undertake to release software updates for all products on a regular basis. Every software release includes the latest version of the Fixture Library.

This version of the manual covers up to version 3.0 of the software. The latest features are,
- Remote Triggers. You can now control the output of the Genesis from other devices such as touch phones or third-party button panels. See section 16.1
- New chase patterns of reverse and random have been added. See section 13.1.11
- **Copy memory:** This is useful to duplicate a cue-list and then use different filters in each duplicate cue-list for busking playback. See section 13.1.8
- **Name memory:** You can now give each memory (Cue-List) a descriptive name.
- Fixture intensity levels are now displayed on home screen. This allows you to accurately set and match intensity levels. See Section 13.1.4
- **View DMX output.** A new screen showing the DMX output levels of each universe and every DMX slot. See section 4.12
- You can now set Art-Net and sACN outputs to any universe number. See section 4.11
- **Live override**. The output can be overridden by an Art-Net or sACN input from another lighting console. See section 4.11.4
- Color Sliders are now located directly on the Apps screen making them quicker to access. Color Gels are now accessed from the Color Picker app. See section 8.5.1
- The Apps screen can only be selected by tapping the Apps button. Previously Apps could also be accessed by tapping anywhere on the fixture section.
- Updated "Select" screen without [Set] button. See section 8.3
- The free "Genesis Editor" software can be used to off-line edit a show from a Genesis. See section 17.7

- The Sample Show no longer automatically loads on first use

See section 24 for a full list of the features that were added in each software release.

1.4 EXPANSION WINGS

The Genesis Wing is an accessory for the Genesis lighting console.
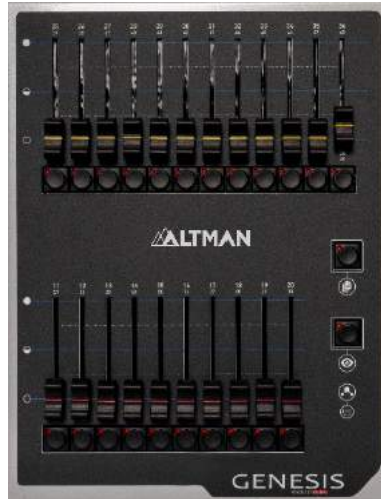
Up to 2 wings can be connected to a Genesis console.

Connecting a Genesis Wing provides control of an additional 12 lighting fixtures (25-36) and an extra 10 playbacks (11-20) (with 10 pages of memory) as well as a second DMX512 universe (U2) output.

Connecting a second Genesis Wing provides control of a further 12 fixtures (37-48) and a further 10 playbacks (21-30) (with 10 pages of memory) as well as a third DMX512 universe (U3) output.

1.5   SAMPLE SHOW

Genesis comes with a "Sample" show to load
so the controls can become familiar before
patching a show. To load the sample show from
the "Home" screen touch:

Tools/Load/SampleShow.

To skip the sample show and patch fixtures
now, go straight to section: 4.1.

The sample show is patched with the following
fixtures:

- 4 SGM Moving lights patched to yellow
  faders 1 -4
- 8 x Spectra Cyc RGBA LED cyclorama
  fixtures patched to yellow faders 6-13
- 6 x Dimmers patched to yellow faders 14-19
- 6 x AP150 RGBW LED par fixtures patched
  to yellow faders 20-25
- Chalice LED Downlight patched to yellow
  fader 26
- 2 PHX2 RGBA LED Profile fixtures patched
  to yellow faders 27-28

Sample memories are recorded on Page 10 for
experimentation. The other 9 pages of memory
are blank.
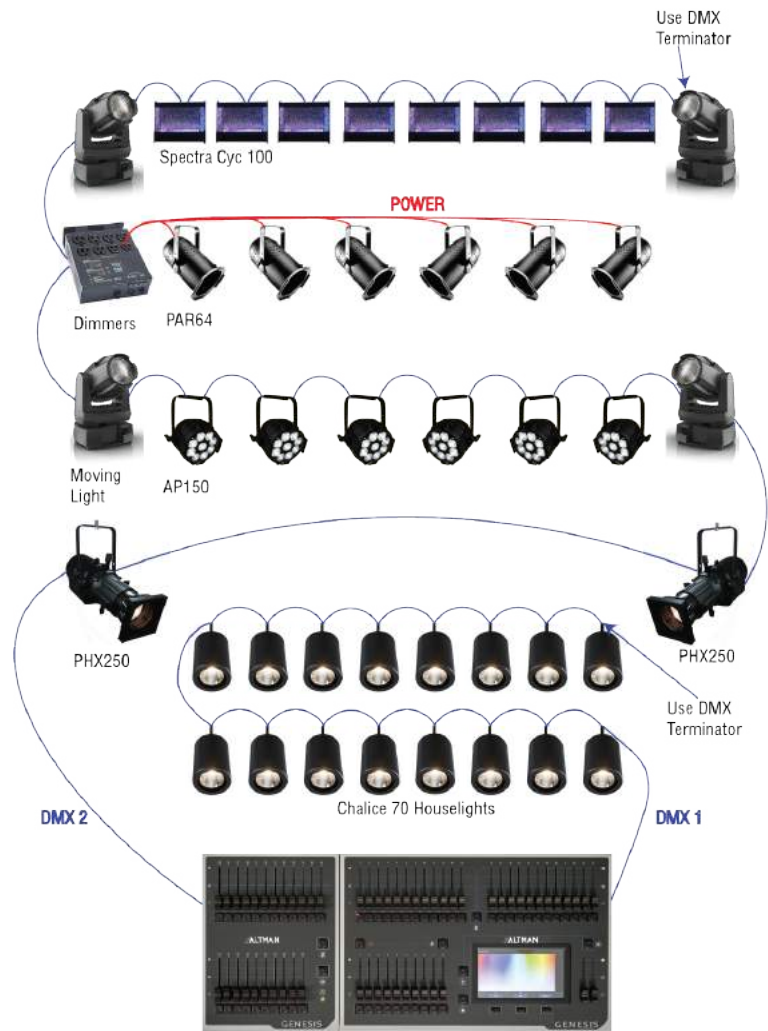
1.6   VISUALIZER

A simulation of the fixtures is available in the sample show. Working on a virtual stage, a 3D visualizer
lighting program called "Genesis Visualization show" can be downloaded. See section 19 for details.

1.7   MODELS AND ACCESSORIES WITH PART NUMBERS

Model Order Code	Description
GEN-24	Genesis control console and external power supply
GENESIS/LTDC	Dust cover for Genesis control console.
GEN-WG-12	Expansion wing for Genesis console.

2   GETTING CONNECTED

2.1   REAR PANEL LAYOUT

| External Power Supply Input | 2 x USB connectors | Ethernet | DMX 512-A output | Kensington Lock |
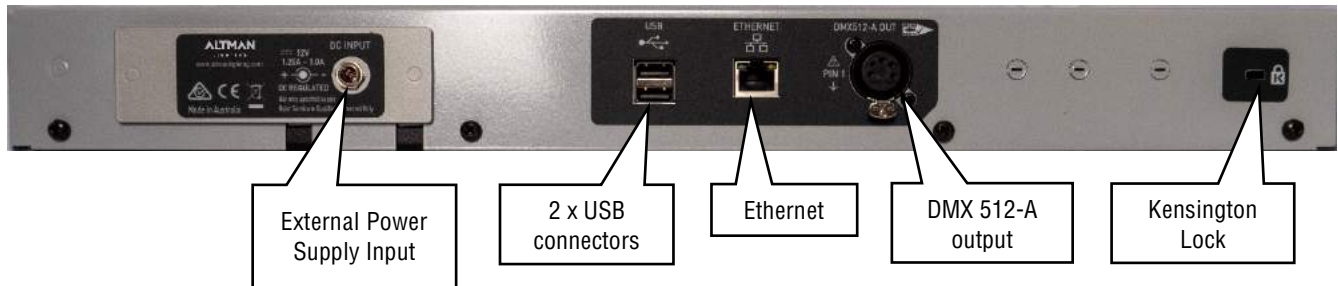
2.2   POWER INPUT

Genesis has a DC power input. Connect the DC plug to the back of the console. Then plug the AC power cord into a standard NEMA 5-15 or 5-20 outlet. The console will then boot up.

After briefly displaying the opening message, Genesis will commence operating in the same state that it was in with all the cues, animations and patches etc. as they were when Genesis was last switched off.

2.3   POWERING OFF

Switching off the console is inverse to the power input section. The Genesis has an inbuilt back up power supply. When the power is removed. the Genesis will operate on its own power supply for 5 seconds to allow it to automatically save the current show.

⚠ After resetting the system by removing the power, allow 15 seconds before re-starting to ensure that the system has fully shut down.

2.4   DMX 512 OUTPUT CONNECTOR

The console has a 5 pin DMX512-A output connector. Connect a DMX data cable from the DMX512-A output of the console to the DMX512 input of your equipment (LED fixtures, dimmers, etc.) and set the required DMX addresses on your equipment.

⚠ Only use specific DMX cable (available from your lighting supply company). Never use audio cable. The end of the DMX line must be terminated (with a 120 Ω resistor) to prevent the signal reflecting up the line and causing possible errors.

See section 4.2 "Patching a Fixture" for more details.

See section 23.11 for more information on DMX cables.

2.5   USB CONNECTORS

Two USB connectors are provided. They can be used to connect:

- A memory stick for show backup and software upgrades.
- A LED USB desk light (up to 250mA).
- Expansion wing. Up to two wings can be connected.

2.6   ETHERNET NETWORK CONNECTOR

An RJ45 Ethernet network connector is provided. It can be used to output Streaming ACN (sACN) and ArtNet. These are lighting control protocols that send DMX lighting data over a network.

See section 0 "Network" for more details.

2.7   KENSINGTON LOCK SLOT

The Kensington Lock slot allows you to secure your Genesis using a commercially available tethering device.

3   HELP AND UNDO

3.1   HELP

Context sensitive help is available on the touch screen for most functions. Press the ⊘ button to open the help screen. Press ⊘ or [**Back**] to close.

3.1.1   Languages

Help pages are available in several languages. To select a language, from the "Home" screen touch **Tools/Setup/Language** then touch the language of your choice.

3.2   UNDO

To quickly undo your last action double tap ↺ .

Genesis remembers most of your actions in a list. Press ↺ once to see the list.

Touch **Undo** to undo an action and step down the list.
Touch **Redo** to redo an action and step up the list
Actions that have been undone turn grey.

Undo

Redo

Undo/Redo History
Record Memory P2-M6
Record Memory P1-M4
Record Memory P1-M2
Record Memory P1-M1
Position change: channel 24
Colour change: channel 24
Position change: channel 24
Colour change: channels 9, 8, 11,
Colour change: channels 9, 8, 11,
Colour change: channels 9, 8, 11,
Colour change: channels 9, 8, 11,
Colour change: channels 2, 4, 6, 8, 10, 12, 20, 22, 24,
Colour change: channels 1, 3, 5, 7, 9, 11, 19, 21, 23,
Position change: channels 22, 23, 24,
Position change: channels 22, 23, 24,
Position change: channels 19, 20, 21,
Position change: channels 19, 20, 21,
Patch: 19 20 21 22 23 24

Press 🏠 [**Back**] or press ↺ when finished.

> ⚠ Note: The undo list is automatically cleared whenever you save your show, start a new show, load an existing show or switch off the power.

> ⚠ Note: The "Undo" function is not available when editing "Rig View" (section 7), when using the "Fixture Editor" (section 19) or when deleting a memory (section 13.1.11).

ALTMAN
LIGHTING

4   PATCHING FIXTURES

4.1   OVERVIEW

The output control signal from the Genesis is DMX512-A. DMX is an international standard for controlling lighting equipment. Your lighting fixtures and dimmers have a DMX input and usually a DMX output so that you can connect multiple devices in a daisy chain fashion. By setting an address on each fixture and using Genesis to control each fixture based on its address, each fixture will use a quantity of DMX channels to control its different functions as listed in its specifications. The address chosen for each fixture must allow for the addresses used by other fixtures so that no overlaps exist. For example, fixture 1 is set to address 001 and the fixture uses 4 DMX channels. Fixture 2 must be set to address 5 (or higher).

The DMX signal is output on the 5 pin XLR connector on the rear of Genesis. Each optional wing also has a DMX output. Fixtures can also be controlled via the network connector using either "ArtNet" or "sACN" protocols.
See section 18.5.2 for details.

Genesis includes a fully integrated fixture library of over 5500 fixtures (most with multiple operating modes) supplied by Carallon, an independent supplier of fixture libraries.

If you do encounter a fixture that is not in the library, there are two choices:

1. A fixture request service is available via support@altmanlighting.comPlease send all fixture details including the fixtures DMX map and manual. This process takes at least one month from the date of request.
2. The inbuilt Fixture Editor allows for quick creation of templates for new fixtures. See section

Input of manufacturer/model and DMX address of each of fixture is done in the patch menu of Genesis. By choosing a fixture number (1 to 24) (yellow fader and button) then patching the fixture to that number, Genesis will load a "template" for that manufacturer/model of fixture. The template tells Genesis how to control that fixture.
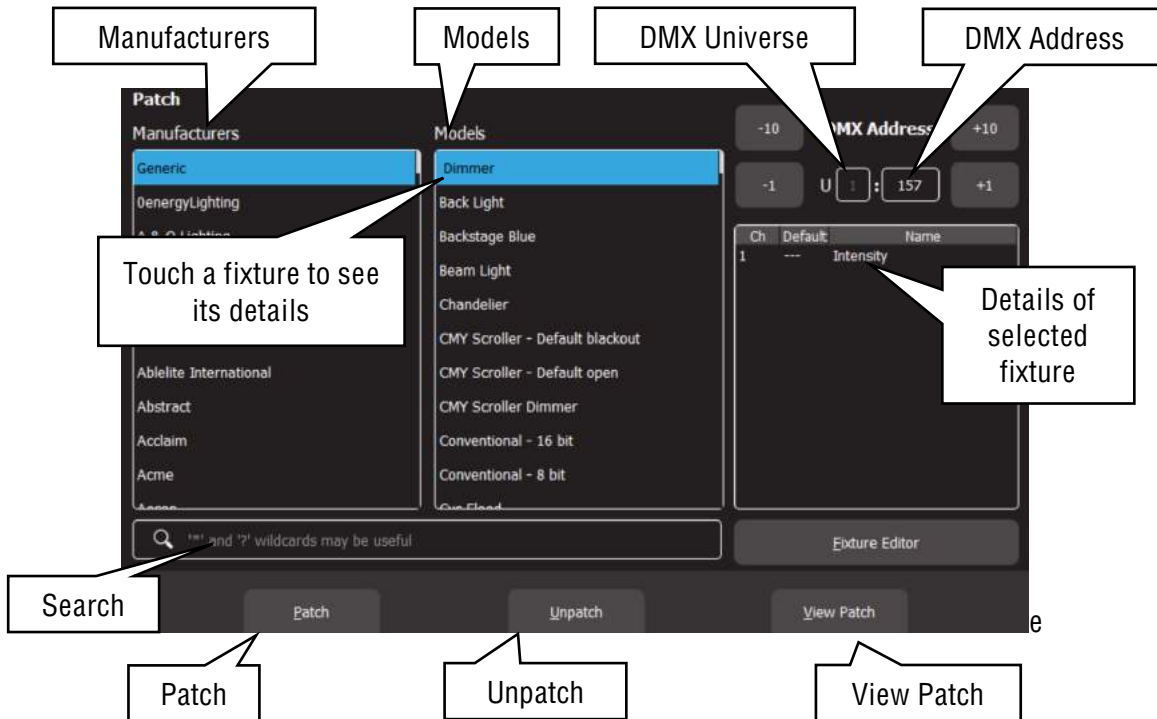
The yellow fader of the fixture number selected now controls the intensity and the touch screen provides the correct controls for that fixture. For example, if the fixture is a multi-colored LED, Genesis provides a color picker App to control the color and the yellow fader will control its intensity. If the fixture has pan and tilt capabilities, Genesis provides a position control App to control the position.

4.2   PATCHING A FIXTURE

Set the DMX address on the fixture to be patched.

On Genesis, from the "Home" screen, touch **Tools/Setup/Patch**.

Select the fixture Manufacturer and Model of the fixture to be patched from the lists. Swipe the screen to scroll the list. Dimmers and many LED fixtures can be found in the "Generic" manufacturers listing.

You can touch the "Search" icon and type in a manufacturer or model name using the pop-up keyboard. The symbol (*****) can be used as a substitute (wild card) for any string of characters in your search term. You can also use the symbol (?) as a substitute for one character.

When you select a fixture file, the details of the DMX channels for that fixture are shown on the right.

NOTE: Optional control wings or using ArtNet or sACN will provide access to multiple universes.

Set the universe to which the fixture is connected by touching the "U" box and using the **+10**, **+1**, **-10** and **-1** buttons. The assigned universes are remembered if the wings or nodes are still plugged in when Genesis is switched on. To change the assigned universes, unplug the wings or nodes and plug them in in the order that you require. The first plugged in wing or node will be assigned to universe 2, the next to universe 3 etcetera.

Next, set the DMX address (to match the DMX address on the fixture) using the **+10**, **+1**, **-10** and **-1** buttons.

Select a fixture number for the fixture by tapping one of the flashing buttons below the yellow faders. The button/fader that you choose will be used to control this fixture.

Touch **Patch** to make the connection.

Repeat the above steps for each different fixture. Fixture numbers that have already been patched are lit.

To see all the patched fixtures, touch **View Patch**.

View Patch
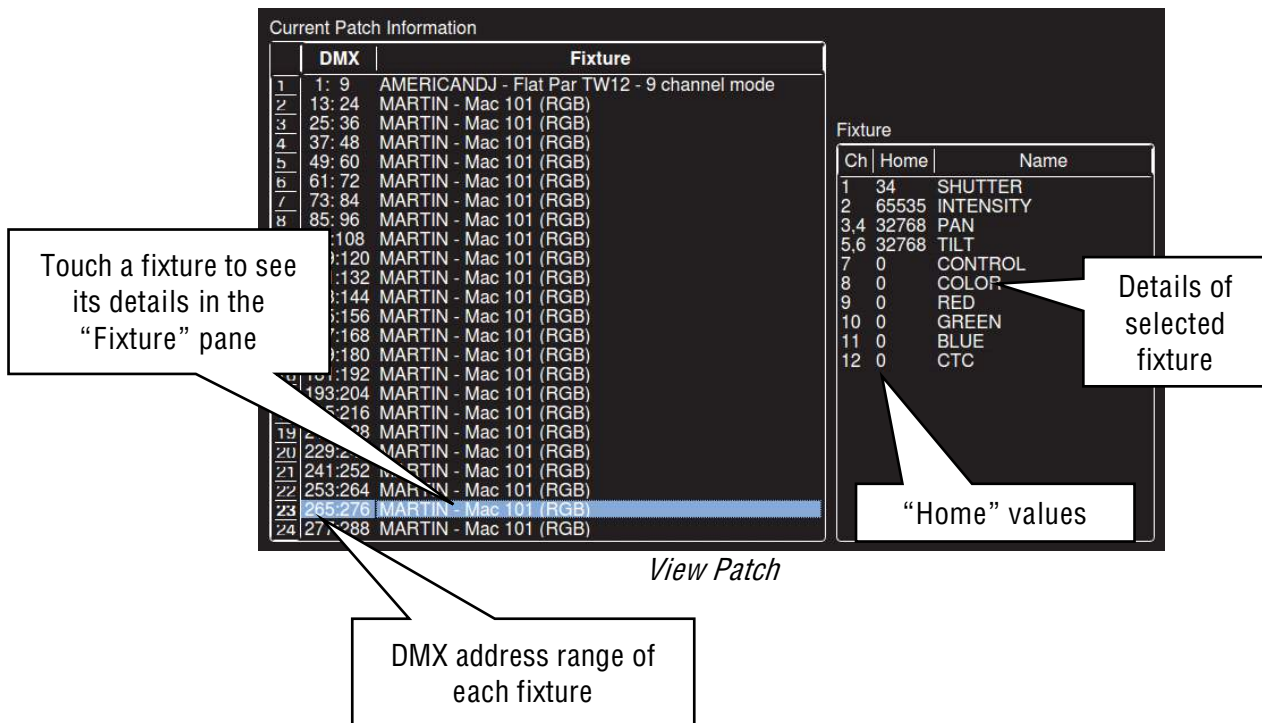
Touching a fixture name will show the details of the channels for that fixture on the right in the "Fixture" pane.

To return, tap 🏠 [**Back**].

When finished patching double tap 🏠 [**Back**].

4.3   PATCHING MULTIPLE FIXTURES IN ONE OPERATION

If multiple fixtures of the same type exist that are set to contiguous DMX addresses, they can all be patched in one operation. Select the starting address of the first fixture then select each of the fixture numbers by tapping the yellow buttons or to select a range of fixture numbers, **hold** the first number and tap the last number in the range. Touch **Patch**, Genesis will patch all the fixtures to their faders and automatically increment the starting DMX address for each fixture.

4.4   PATCHING MULTIPLE FIXTURES TO THE SAME FADER

Multiple fixtures of the same type and mode but with different DMX addresses can be patched to the same yellow fader. This frees up yellow faders for other fixtures.

NOTE: these fixtures will be operated together as a group as they are patched together under the same control fader.

Multi-patching is often done when multiple fixtures have a common purpose (such as a color wash on the stage) and control them all from the same fader is required. Each fixture could be set to the same DMX address and only make one patch would be needed, but if access the fixtures to change their addresses is not

available or permission to change their addresses is not granted, using their existing addresses will be required.

Therefore, each fixture has a different DMX address but is patched to the same yellow fader.

Remember that each fixture must be the same type and be set to the same mode of operation.

4.5   PATCHING COMPOUND FIXTURES

A "compound" fixture is a fixture that contains multiple fixtures within the one fixture. Compound fixtures are also known as "Multi-Cell" fixtures.

For example, many RGB LED strips are compound fixtures because they have multiple RGB cells within the one fixture. The fixture has a menu that allows you to select different "modes" of operation. A simple mode might provide 3 control channels (RGB) that control the entire fixture. Other modes might allow you to divide the fixture into 3 sections and use 9 channels to control the RGB of each section. The most complex mode might allow you to individually control every pixel. Complex modes use a lot of DMX channels and can be difficult to program.
Compound fixtures usually also have modes that allow you to control effects that are built into the fixture such as pixel mapping effects, color pulsing or chase effects. These modes use some DMX channels to control those effects.

ALTMAN recommends that when patching compound fixtures you select a mode that uses the least amount of channels but includes channels that control the built in effects, preset colors, zoom modes, or similar.

4.6   UN-PATCHING A FIXTURE

From the "Home" screen touch **Tools/Setup/Patch**.

To un-patch a fixture, press its fixture number (1 to 24) then touch **Unpatch**.

When finished patching double tap 🏠 [**Back**].

4.7   UN-PATCH A MULTI-PATCHED FIXTURE

Multiple fixtures of the same type and mode but with different DMX addresses can be patched to the same yellow fader as described above. You can un-patch individual fixtures from a multi-patch or un-patch all fixtures in the multi-patch.

From the "Home" screen touch **Tools**, **Setup**, **Patch**.
All buttons below the yellow faders will flash to show that they are available fixture number choices. Press the fixture number button of the multi-patch to select it. The selected fixture number is lit. Touch **Unpatch**.
The screen shows with a list of fixtures patched to the selected yellow fader. The center of the screen shows a list of the fixtures in the multi-patch with their Universe and DMX address range

19
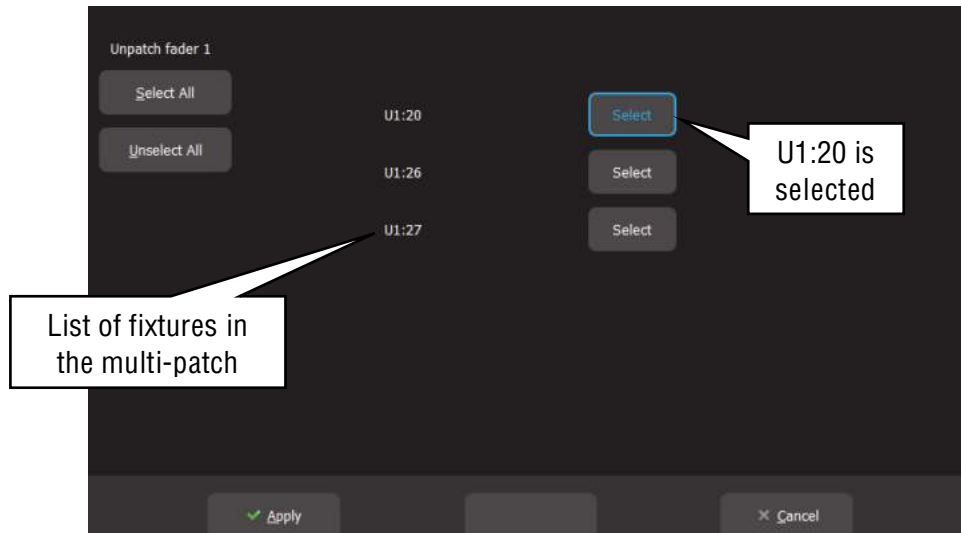
Touch the **Select** buttons of the fixture(s) that you wish to remove from the multi-patch.
You can also use **Select All** or **Unselect All**.
Touch **Apply** and the selected fixtures will be unpatched.

When finished, double tap⌂ [Back].

Note: Multiple fixture numbers can be selected when un-patching. If multiple fixture numbers are selected and some are multi-patched you will be shown the following warning when you touch **Unpatch**:
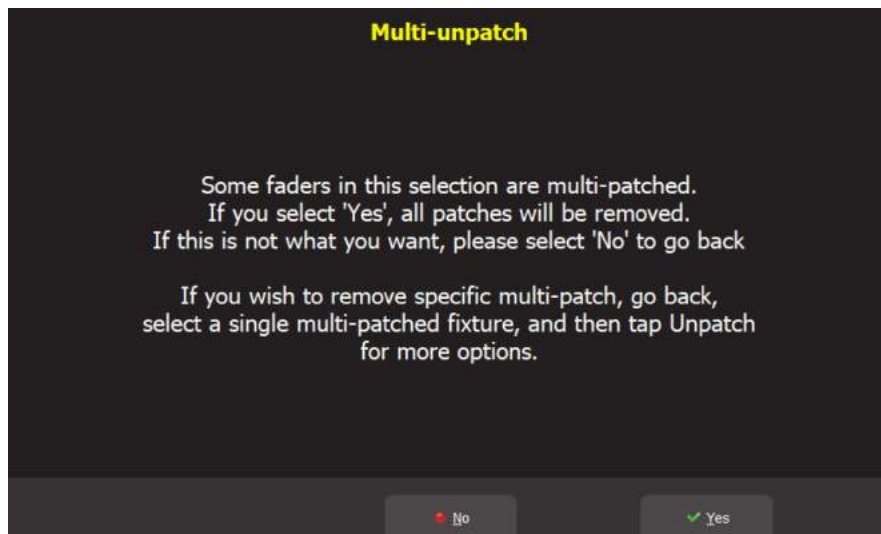
Touch **No** then select a single multi-patched fixture number and follow the instructions above.

4.8   SAVE PATCH

When saving a show, the patch is saved as part of that show. See section 4.

If the patch is to be used on a regular basis such as in a permanent installation or in a touring show that always uses the same lighting rig, it can be saved as the "default show". See section 18.8.

4.9   HOME VALUES

When using the "Clear" a fixture function (see section 8.9), if the fixture has a color mixing function (RGB or CMY) Genesis will set its color to white and if it has a movement function it will center the pan and tilt. These values are hard coded in the Genesis software. All other attributes of the fixture will be set to their "home" values that are listed in their fixture template. These values can be seen in the "View Patch" screen (above). Typically, these values will set a color wheel to clear, gobo wheel to open, shutter to open etcetera so that the fixture outputs an open white beam.

4.10   FIXTURE EDITOR

It is possible to create a template for a new fixture if it is not listed in the Genesis fixture library. The Fixture editor can also be used to edit an existing fixture template.

See section 18.3 for details.

4.11   UNIVERSES

From the home screen touch **Tools**, **Setup**, **Universes**.
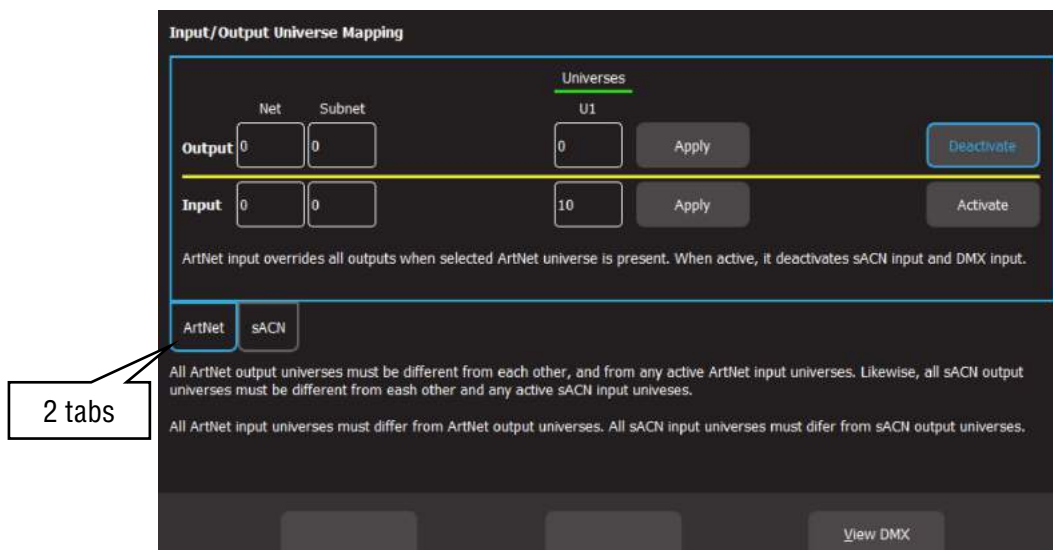
Input/Output Universe Mapping (No Wings or QX1 Nodes connected)

The "Input/Output Universe Mapping" screen has the following functions:
- Set the universes (U1, U2, U3) for sACN output and for ArtNet output

- Activate/deactivate sACN output and ArtNet output

- Select the universes for sACN input and ArtNet input

- Activate/deactivate the sACN or ArtNet input that can override the output

- View the DMX output levels on each Universe

There are 2 tabs that can be selected, **ArtNet** and **sACN** and each have settings for "Output" and "Input" as described below.
Note: Universe 2 (U2) is only available when one wing or a QX1 node is connected and Universe 3 (U3) is only available when either two wings or one wing and a QX1 node are connected.

21

4.11.1   Sacn and artnet output rules

Genesis can transmit its DMX output as DMX512, sACN and ArtNet. The patch screen (see 18.5) allows you to patch each fixture to U1 (Universe 1). If an optional wing or QX1 node (USB to DMX adaptor) is connected you can also patch fixtures to U2 (Universe 2). If a second wing or QX1 node is connected you can also patch fixtures to U3 (Universe 3).

The "Universes" screen allows you to map the U1, U2 and U3 outputs of the patch screen to any sACN and ArtNet universes that you select.

The following rules apply when mapping sACN and ArtNet.

- All sACN output universes must be different from each other and from any active sACN input universes.

- All ArtNet output universes must be different from each other and from any active ArtNet input universes.

- All sACN input universes must differ from sACN output universes.

- All ArtNet input universes must differ from ArtNet output universes

4.11.2   Artnet Output

ArtNet is a streaming protocol to transport multiple DMX universes over an Ethernet cable/network. Genesis can transmit ArtNet from the Ethernet connector. Genesis supports Art-Net v4 which is configured as 128 Nets (0-127) each with 16 Subnets (0-15), each containing 16 Universes (0-15).

From the home screen touch **Tools**, **Setup**, **Universes**, touch the **ArtNet** tab.
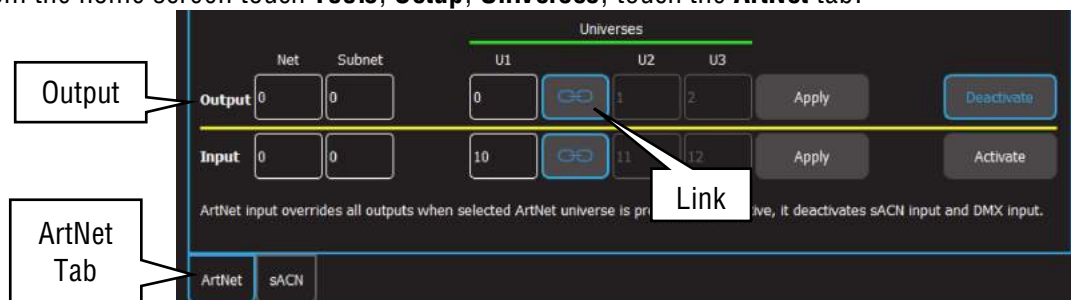
ArtNet Output (Two Wings or One Wing and a QX1 Node connected)

<u>Note</u>: The U2 box only appears if a wing or a QX1 node is connected to the Genesis. The U3 box only appears if two wings or one wing and a QX1 node are connected.

Enter the <u>Output</u> "Net" and "Subnet" in their respective boxes.
- In the <u>Output</u> "U1" box, enter the number of the ArtNet universe that is to be mapped to the fixtures that have been patched to U1 in the Patch screen
- In the <u>Output</u> "U2" box, enter the number of the ArtNet universe that is to be mapped to the fixtures that have been patched to U2 in the Patch screen.
- In the <u>Output</u> "U3" box, enter the number of the ArtNet universe that is to be mapped to the fixtures that have been patched to U3 in the Patch screen.

Touching the "Link" symbol between the U1 and U2 boxes activates it (its border turns blue) causing U2 to be automatically set to be the 1 higher than U1 and U3 to be automatically set to be the 2 higher than U1.

Touch **Apply**. To output ArtNet on the ethernet connector touch **Activate.** To stop outputting ArtNet touch **Deactivate.**

Note: When using Art-Net, Genesis must have a valid IP address and NetMask entered in the "Network Settings" in order for Art-Net to work correctly. It is essential that the IP address is set to be compatible with the address on the device sending the Art-Net packets. Set the IP address according to the ArtNet recommendations using a 2.0.0.0. address range.
See section 4.11.5 for ArtNet Input settings.
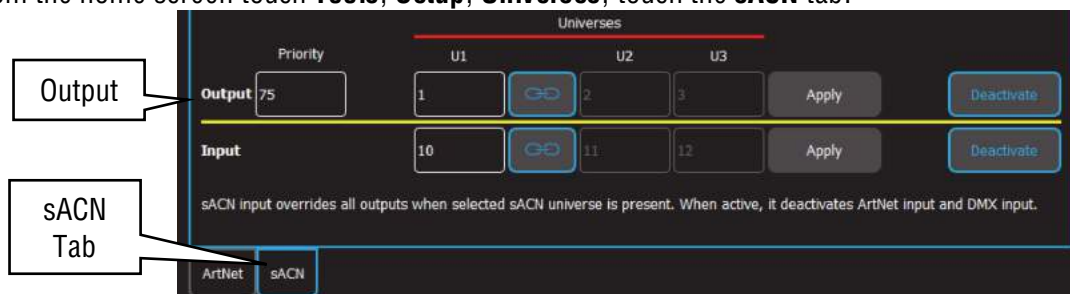
4.11.3   sACN Output

sACN (Streaming ACN) is an informal name for the E1.31 streaming protocol to transport multiple DMX universes over an Ethernet cable/network. Genesis can transmit sACN from the Ethernet connector.

sACN uses a priority system with the priority level set by the sACN transmitting device. If a device receives more than one sACN signal on the selected universe it will only respond to the signal with the highest priority setting. The default setting is 100. The priority can be set to any number in the range from 1 to 200, where 200 has the highest priority.
For example, two devices are transmitting sACN on Universe 1. One device has the default priority of 100 and the other has a priority of 150. The second stream will control the fixtures. If the second stream is not present, the first stream will take control. If both sACN streams have the same priority they will merge on an HTP (highest takes precedence) basis.

From the home screen touch **Tools**, **Setup**, **Universes**, touch the **sACN** tab.

sACN Output (Two Wings or One Wing and a QX1 Node connected)

Note: The U2 box only appears if a wing or a QX1 node is connected to the Genesis. The U3 box only appears if two wings or one wing and a QX1 node are connected.

- In the Output "U1" box, enter the number of the sACN universe that is to be mapped to the fixtures that have been patched to U1 in the Patch screen
- In the Output "U2" box, enter the number of the sACN universe that is to be mapped to the fixtures that have been patched to U2 in the Patch screen
- In the Output "U3" box, enter the number of the sACN universe that is to be mapped to the fixtures that have been patched to U3 in the Patch screen.

Touching the "Link" symbol between the U1 and U2 boxes activates it (its border turns blue) causing U2 to be automatically set to be the 1 higher than U1 and U3 to be automatically set to be the 2 higher than U1.

If more than one device will be transmitting sACN on the same universes, enter an appropriate Priority number (see above). The priority level applies to all three sACN universes.

Touch **Apply**. To output sACN on the ethernet connector touch **Activate**. To stop outputting sACN touch **Deactivate.**

4.11.4   Override (Art-Net or sACN Input)

Genesis can accept an Art-Net or sACN <u>input</u> signal from any other lighting console and can automatically override its own playback and retransmit the incoming signal (on the Genesis output universes) when it detects the incoming signal.

Example 1.
>   Genesis is outputting on DMX 1. Its input is set receive data in sACN universe 3. When Genesis sees data on sACN universe 3, it re-transmits that data on DMX 1 (instead of its own data).

Example 2.
>   Genesis is outputting on sACN Universe 1. Its input is set receive data in sACN universe 3. When Genesis sees data on sACN universe 3, it re-transmits that data on sACN Universe 1 (instead of its own data).

A typical example is a theatre where the house lights and basic stage lights are connected to the Genesis. During simple shows or meetings etcetera, these lights are controlled by the Genesis. During complex stage shows, an expensive lighting console in the control booth is used to control the lighting. The control booth console is programmed with a patch that contains the same fixtures as in the Genesis patch and an output of the control booth console is fed to the input of the Genesis. When the Genesis detects the signal from the other lighting console, it automatically hands over control of its fixtures to the control booth console.

When the control booth console is turned off (at the end of the show), the Genesis detects that there is no input signal and the lighting control is automatically returned to the Genesis after a short delay. The delay time is dependent upon the protocol in use. The other lighting console that is to take control needs to have the same fixtures patched as in the Genesis, except they will be patched to the sACN or ArtNet output that feeds the Genesis.

Only one input signal (sACN or ArtNet) can be selected at a time. Selecting a different input signal automatically disconnects the any previous selection.

4.11.5   ArtNet Input

To configure the ArtNet Input to "override" the output, from the home screen touch **Tools**, **Setup**, **Universes**, touch the **ArtNet** tab.
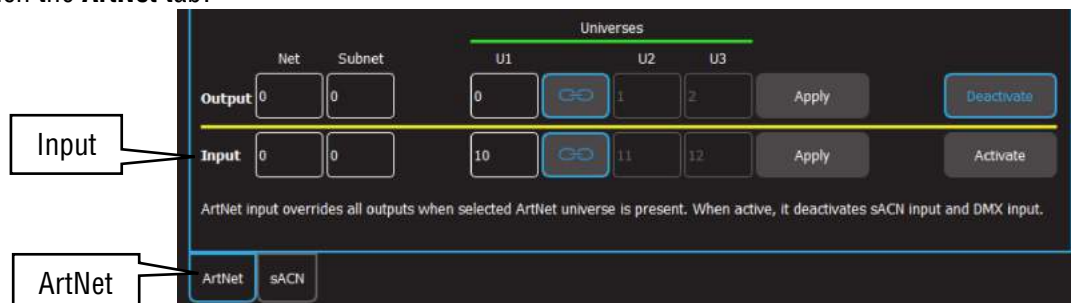
ArtNet Input (Two Wings or One Wing and a QX1 Node connected)

<u>Note</u>: The U2 box only appears if a wing or a QX1 node is connected to the Genesis. The U3 box only appears if two wings or one wing and a QX1 node are connected.

Enter the <u>Input</u> "Net" and "Subnet" in their respective boxes.
- In the <u>Input</u> "U1" box, enter the number of the incoming ArtNet universe that is to be mapped to the fixtures patched to Genesis U1 output

- In the Input "U2" box, enter the number of the incoming ArtNet universe that is to be mapped to the fixtures patched to Genesis U2 output
- In the Input "U3" box, enter the number of the incoming ArtNet universe that is to be mapped to the fixtures patched to Genesis U3 output

If the "Link" symbol between the U1 and U2 boxes is active (blue border) then U2 is automatically set to be the 1 higher than U1 and U3 is automatically set to be the 2 higher than U1.

Touch **Apply** then **Activate**.

4.11.6   sACN Input

To configure the sACN Input to "override" the output, from the home screen touch **Tools**, **Setup**, **Universes**, touch the **sACN** tab.

sACN Input (Two Wings or One Wing and a QX1 Node connected)
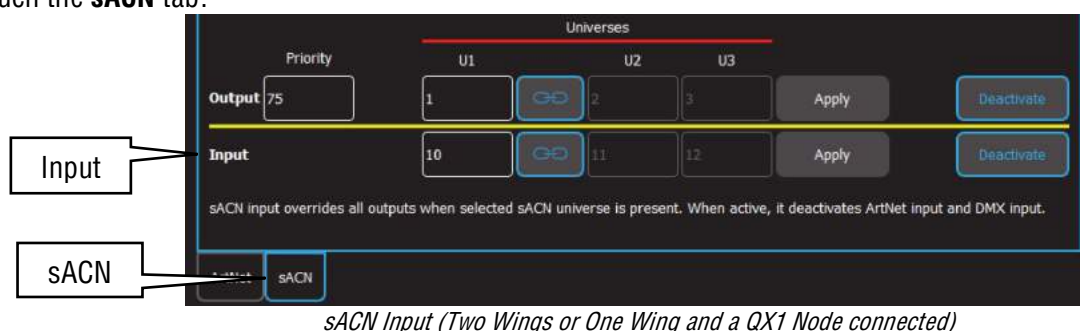
Note: The U2 box only appears if a wing or a QX1 node is connected to the Genesis. The U3 box only appears if two wings or one wing and a QX1 node are connected.

- In the Input "U1" box, enter the number of the incoming sACN universe that is to be mapped to the fixtures patched to Genesis U1 output
- In the Input "U2" box, enter the number of the incoming sACN universe that is to be mapped to the fixtures patched to Genesis U2 output
- In the Input "U3" box, enter the number of the incoming sACN universe that is to be mapped to the fixtures patched to Genesis U3 output

Touch **Apply** then **Activate**.

Note: "Override" mode can be completely disabled/enabled by a "Remote Trigger". See section 16.3.1.

4.12 VIEW DMX OUTPUT

From the home screen touch **Tools**, **Setup**, **Universes**, **View DMX**.
The screen shows the DMX levels for all 512 DMX slots of the universe as selected by the tabs at the bottom of the screen. Universe 2 becomes available when one wing or QX1 node (USB to DMX adaptor) is connected. Universe 3 becomes available when either two wings or one wing and a QX1 node are connected.
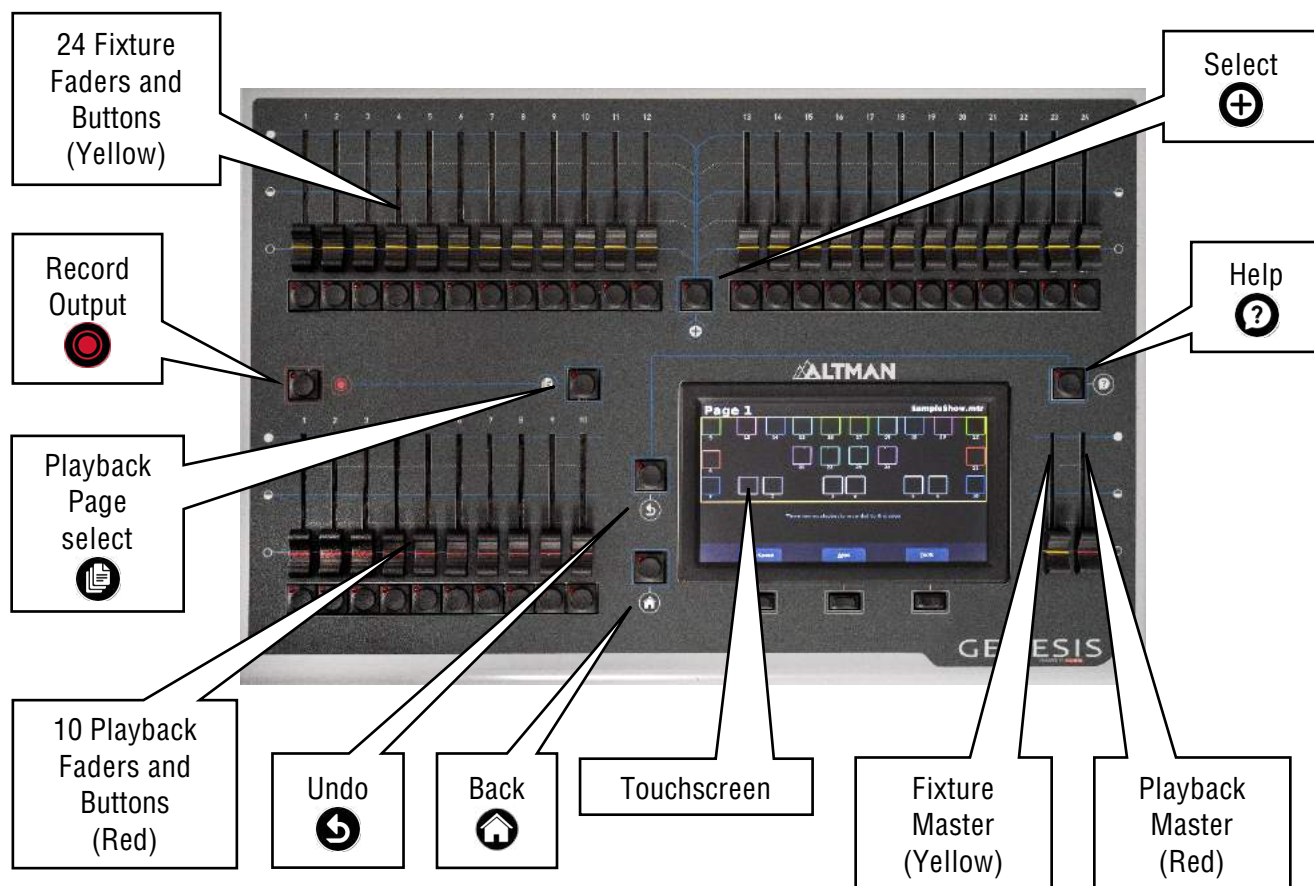
DMX Slot Numbers

DMX Slot Numbers
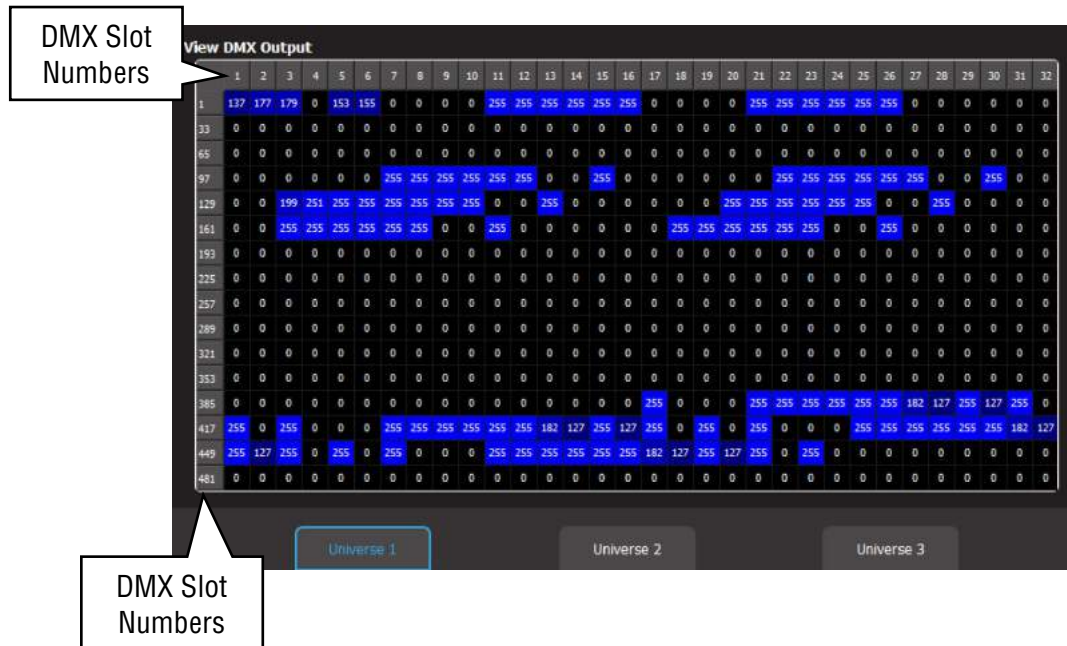
5   FRONT PANEL

5.1   OVERVIEW

24 Fixture Faders and Buttons (Yellow)

Select ⊕

Record Output

Help

Playback Page select

10 Playback Faders and Buttons (Red)

Undo

Back

Touchscreen

Fixture Master (Yellow)

Playback Master (Red)

5.2   BASIC OPERATION

Genesis can control up to 24 lighting fixtures (up to 48 fixtures with optional wings). The 24 Yellow fixture faders control fixture intensity. Moving a fixture fader automatically selects that fixture allowing its other attributes such as color or position to be controlled by Apps on the touch screen (see section 9). Moving a fader to zero deselects the fixture.

The ⊕ [**Select**] button provides more fixture selection options.

The Yellow "Fixture Master" has overall <u>intensity</u> control of the yellow fixture faders.
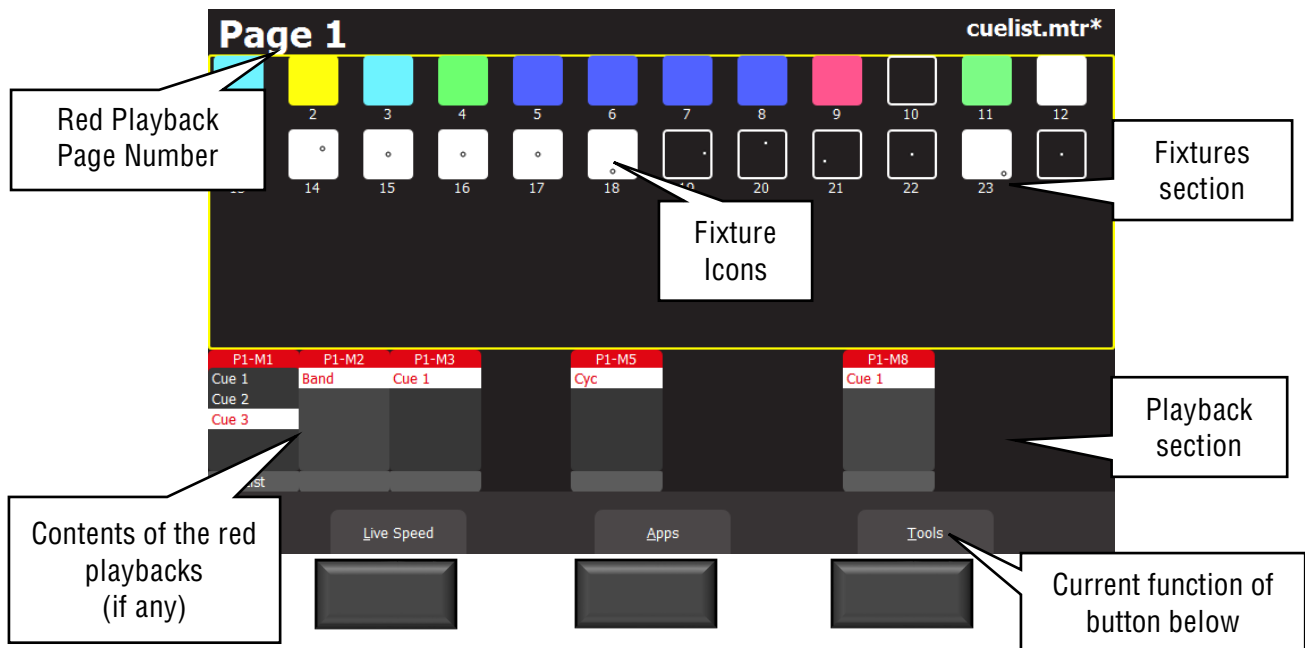
The current output can be recorded into any of the Red playbacks by tapping 🔴 [**Record**] then tapping a Red playback button of your choice [**1-10**]. Different looks can be recorded on different Red Playback faders or into a "Cue-list" on a single Red Playback fader so that you can easily change the entire look on stage by using the Red Playbacks. There are 10 red playback faders and 10 pages of memory giving a total of 100 memories.

Repeated taps of the 📑 [Page] button will step through the 10 pages of memory.

To switch directly to a page number HOLD 📑 [Page] and tap a Red playback button [1-10]. The Red "Playback Master" fader has overall <u>intensity</u> control of the Red playbacks.

6   TOUCH SCREEN

6.1   OVERVIEW

The 3 buttons below the touch screen have different functions for different screens. Their current function (if any) is shown on the screen above each button. Either tap the button or touch the virtual button on the screen to operate them.

If the touch screen is not on the "Home" screen (as shown above), tapping the 🏠 [**Back**] button steps back through the screens to the "Home" screen. Double tapping 🏠 [**Back**] quickly returns to the "Home" screen from any screen.

The "Home" screen is divided into two sections:

1.   The Fixtures section at the top (yellow border) has Fixture icons.
2.   The Playback section at the bottom has Playback icons (when a recording has been made).

⚠️ Note: All touchscreen events are triggered upon finger lift-off from the screen. This allows you to slide to a different button or no button if you select the wrong item.

An underlined letter on a touch screen button label indicates that the button can also be operated by pressing that letter on a USB keyboard plugged into Genesis.

Some screens have sliders to adjust values. When touching a slider, you can drag the slider and even let your finger drift off the slider as long as you keep your finger on the screen. If you touch the background, the slider will snap to where you touch.

Touch the background to snap the slider to that position

Touch the slider then drag it

6.2 FIXTURE ICONS

The top section of the "Home" screen has an icon for each of the fixtures that have been patched.

Dot shows position
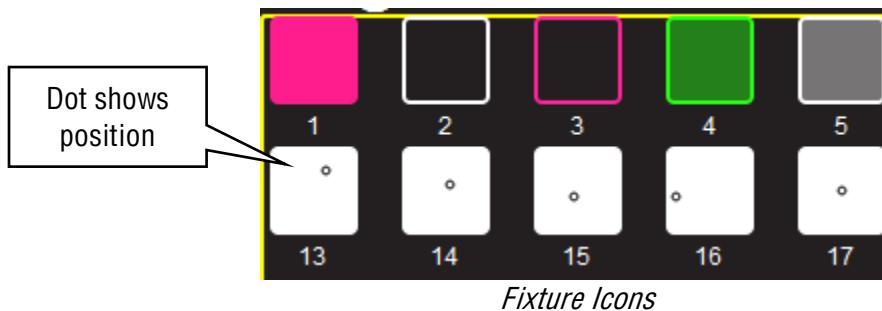
Fixture Icons

- The body of each icon shows the intensity, dark to bright.
- The body and border shows the color mixing (if the fixture has this capability).
- A dot shows the position (if the fixture has a pan/tilt function).

Note: The color of the icon represents colors created by RGB (Red, Green, Blue) or CMY (Cyan, Magenta, Yellow) color mixing in the fixture. Colors created by color wheels or filters are not shown.

Touching anywhere in the "fixtures section" (or touching **Apps**) opens the "Apps" screen. Apps are used to control the attributes of selected fixtures. Move a yellow fader to automatically select that fixture. Use an App to adjust the attribute.

Touching and holding any fixture icon for 2 seconds opens "Rig View". See section 7.

6.3 PLAYBACK ICONS

The bottom section of the "Home" screen has playback icons that show the contents of the 10 Red Playbacks. Playback icons appear when a memory is recorded into a Page/Playback and show the contents of the Playback.

Page/Memory Number

Cue Name

P1-M1 contains a "Cue-List" containing 3 cues

Black background indicates a "Page Freeze".

Touch a Playback icon to modify the memory

P1-M1	P1-M2	P2-M3
Cue 1	Band	Opener
Cue 2		
Cue 3		

ALTMAN LIGHTING

29
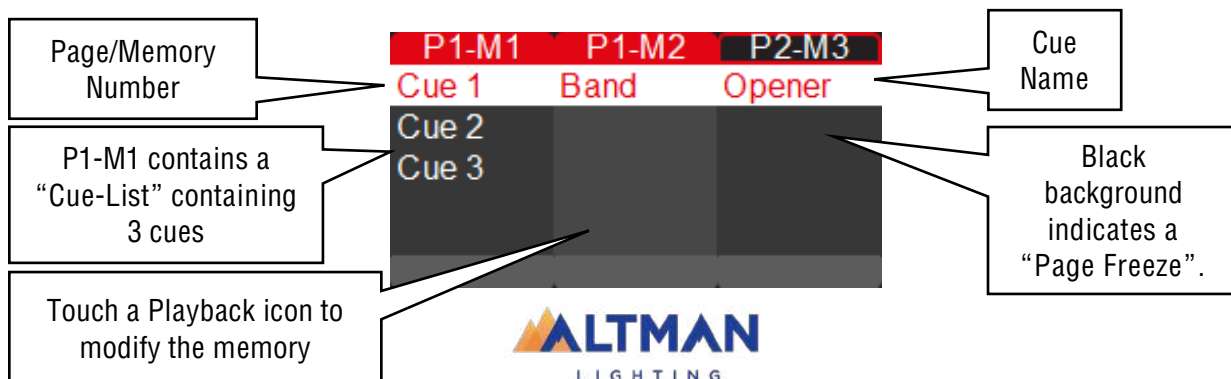
The top part of the icon shows the memory number in the form of "P#" (Page number) and "M#" (Memory number). The 10 memory numbers relate to the 10 playback faders.

There are 10 Pages of memory available. A black background on the page/memory number indicates that a "Page Freeze" has occurred. This means that this playback was active (faded up above zero) when the page number was changed and hence its memory is not from the "current" page. See section 11.2 for more information on "Memories" and section 12.4 for "Page Freeze".

Touching any playback icon opens the "Edit Memory" screen....
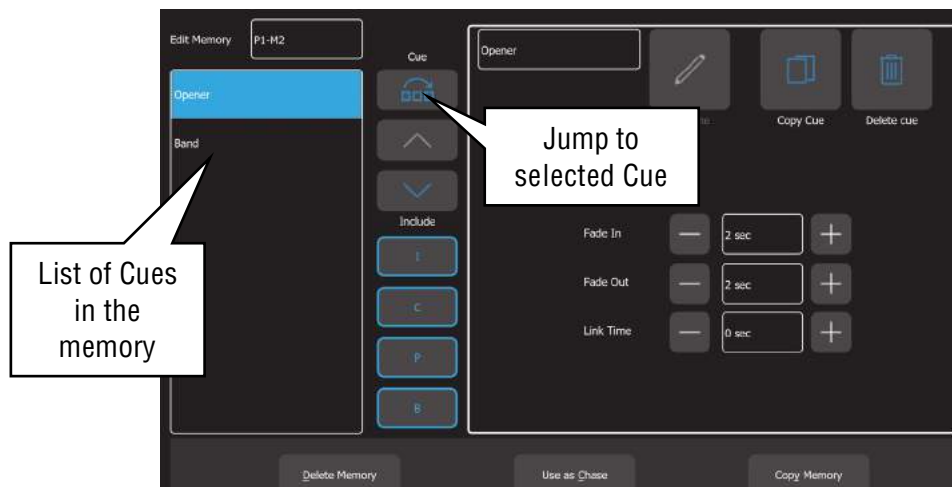
Touch a cue to select/de-select it. Multiple cues can be selected. Using this screen you can:

- Select a Cue then directly **Jump To** that cue. Useful if you have a long cue-list and you want to quickly playback a cue without stepping through all the intermediate cues.
- Re-order the selected cues using the ∧ or ∨ buttons.
- "Include ICPB". When a memory is recorded it includes all the Intensity, Color, Position and Beam (I C P B) attribute groups. Touching an attribute group (I C P B) excludes that group from the playback. The selection applies to all cues in the cue-list.
- Change "Fade In" time and a "Fade Out" times of the selected cues.
- Re-name the Memory
- Re-name the selected cue.
- Duplicate the selected cue.
- Delete the selected cues.
- Copy Memory (all cues in the list)
- Delete Memory (all cues in the list).
- Use the list as a chase or a cue-list.

For more details on the functions above and also how to edit the contents (intensity, color, position etcetera) of a cue see section **Error! Reference source not found.**.

Hint: You can also record a cue to a playback by pressing ⏺ [**Record**] then tapping that playback's displayer. See section **Error! Reference source not found.**.
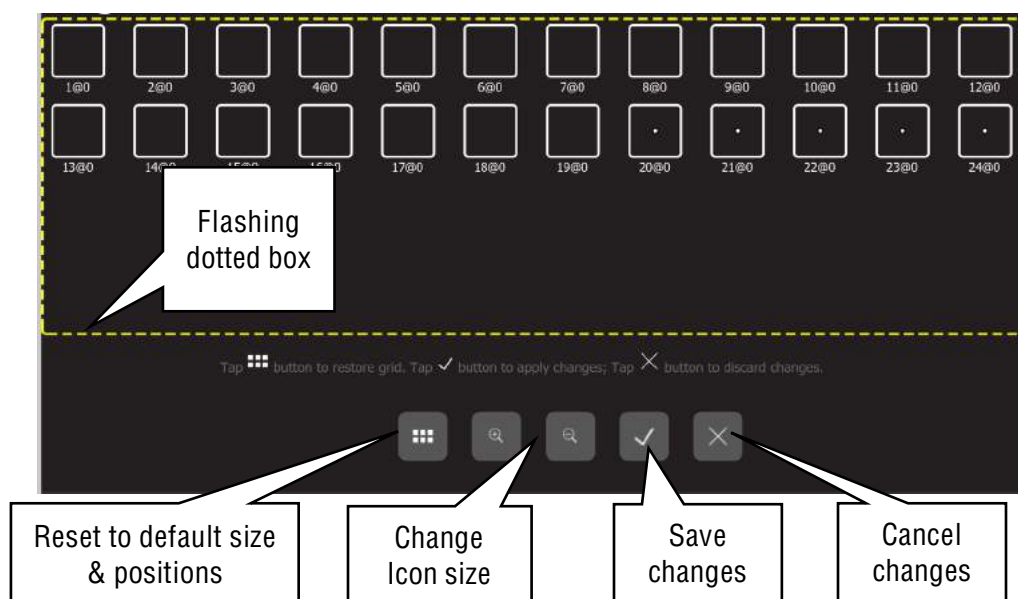
7   RIG VIEW

7.1   OVERVIEW

The fixture icons on the "Home" screen can be arranged geographically so that they are positioned on the screen in a similar fashion to their position in your rig or stage. This can assist in quickly identifying fixtures.

7.2   ARRANGING ICONS

To arrange the icons, tap and HOLD any of the fixture icons for 2 seconds. A yellow flashing dotted box appears around the icons. When the yellow box is flashing you can drag and drop individual fixture icons to position them on screen. You can also change the size of the icons or reset to the default positions. Touch [✓] to save your layout.

Flashing dotted box

Reset to default size & positions

Change Icon size

Save changes

Cancel changes
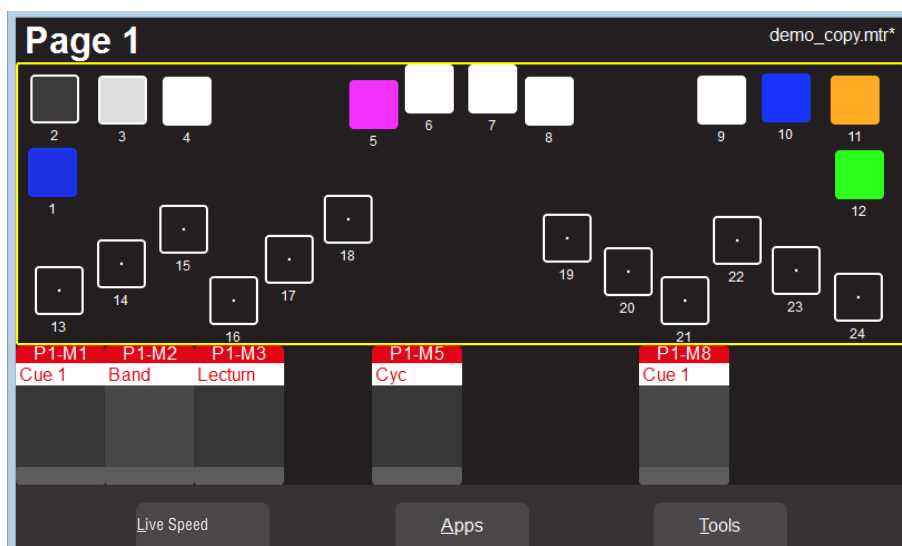
Example of Icons re-positioned to match rig

8   CONTROLLING FIXTURES

8.1   INTENSITY

The 24 (yellow) fixture faders (under the overall control of the yellow fixture master) control the intensity of the fixtures that are patched to them. To see the output of a fixture:
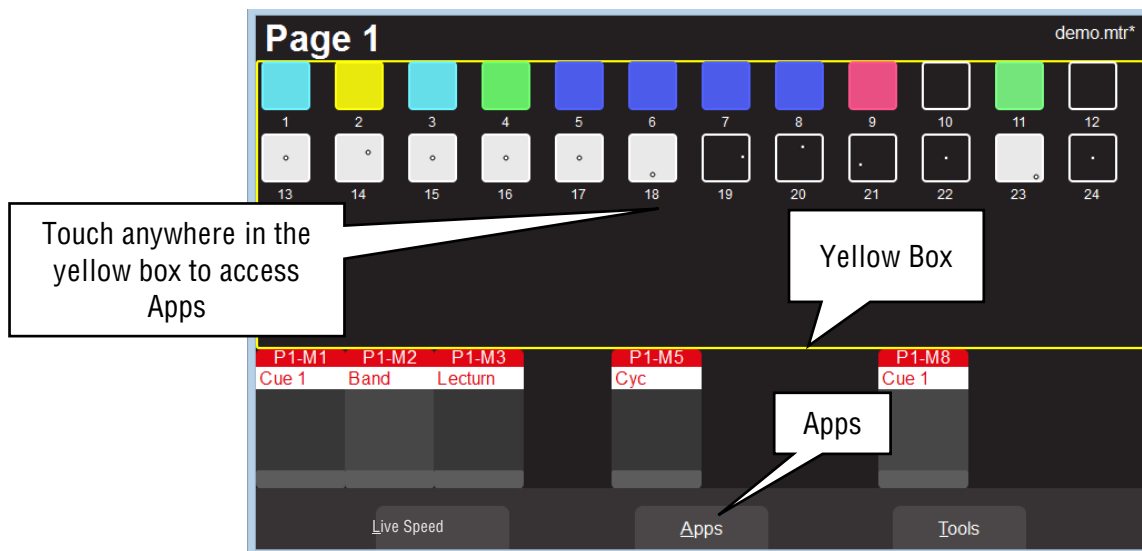
- Fade up the Yellow Master
- Fade up a fixture fader to set its Intensity

See also "Flash", section 14.

8.2   FIXTURE ATTRIBUTES

Genesis uses "Apps" on the touch screen to control the attributes (color, pan/tilt, shutter etcetera) of selected fixtures.

From the "Home" screen, open the "Apps" screen by touching anywhere in the top half of the "Home" screen (within the yellow box) or touching **Apps**.

"Home" Screen

The Apps screen opens:
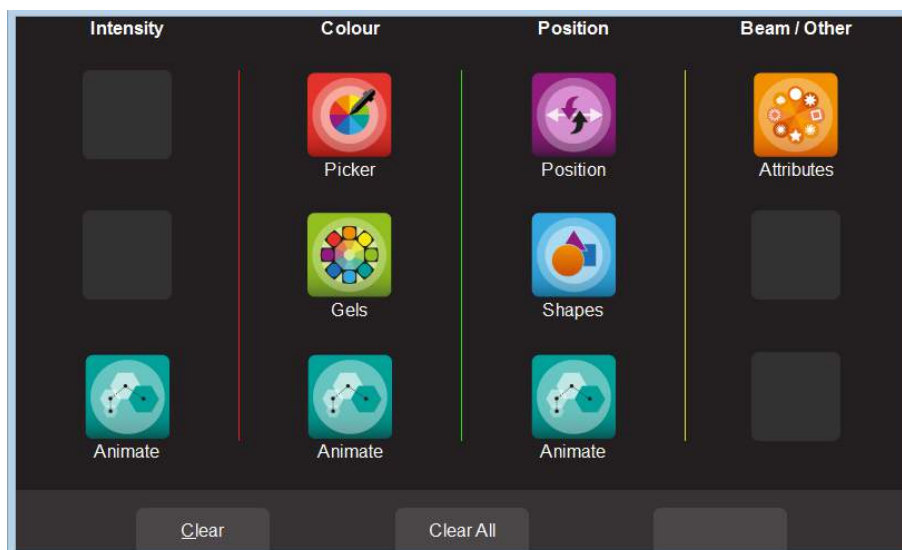
Apps Screen

First, select the App icon for the type of attribute that you want to control then select the fixture(s) to be controlled. Apps are arranged in 4 attribute columns. Each column has Apps for their type of attribute. All Animate Apps are described in section 9.

8.2.1   Intensity Column

The Intensity "Animate" app allows creation of intensity chasses and patterns.

8.2.2   Color Column

The "Picker" apps allows control of the color of selected fixtures and to "fan" colors across multiple fixtures.
The "Gels" apps allows picking from pre-set colors for selected fixtures
The "Animate" app allows creation of color chases and patterns.

8.2.3   Position Column

The "Position" app allows control of the pan and tilt position of selected fixtures and to "fan" positions across multiple fixtures.
The "Shapes" app provides a quick and simple way of creating continuously moving positions.
The "Animate" app allows creation of moving beam effects.

8.2.4   Beam / Other Column

The "Attributes" app provides control of all beam attributes such as "Gobo", "Color Wheel", "Shutter" etc. plus any other attributes of the selected fixture.

8.3   SELECTING FIXTURES

When you use an App, you need to select the fixtures that you want to control with that App. Fixtures that have attributes that can be controlled by the selected App will flash their buttons indicating that they are available for selection.

For example, if selecting a "Pan/Tilt" App, only fixtures with Pan/Tilt attributes will flash.

There are several methods of selecting fixtures:

- Move a yellow fader to automatically select that fixture. Move the fader to <u>zero</u> to <u>de-select</u> it. Move multiple yellow faders to select a multiple fixtures.
- Tap the button below a yellow fader to select that fixture. Tap again to deselect it. Multiple fixtures can be selected.
- To quickly select a range of fixtures, <u>hold</u> the first button and tap the last button in the range. This works in either direction, low number to high number or high number to low number.
- Press the ⊕ [**Select**] button. See below

When a fixture is selected its button is lit.

⚠ Note: When selecting multiple fixtures, the order in which the fixtures are selected is used by Genesis when <u>fan-ing</u> colors or positions and in <u>animations and shapes</u>. Changing the selection order will change the look of a fan, animation or shape by changing the selection order.

To use any previous selections, press the ⊕ button (located between the yellow faders). The "Selection" screen opens:
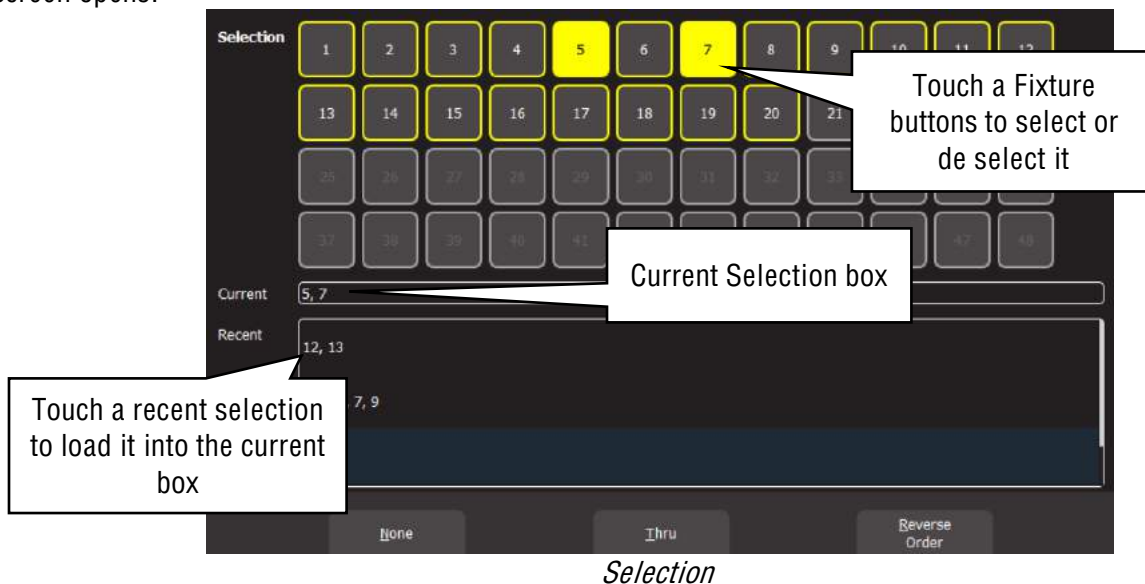
Selection

The "Selection" area (the top half of the screen) shows all the possible fixture numbers.
- Patched fixture numbers have a yellow border
- Un-patched fixture numbers have a grey border
- Fixture numbers 25 to 36 are only available if one wing is connected
- Fixture numbers 37 to 48 are only available if a second wing is connected
- Selected fixtures have a yellow background

You can touch the fixture buttons to select or de-select them. To select a range of fixtures, touch the first fixture in the range then touch **Thru** then touch the last fixture in the range.

The "Current" area (in the middle of the screen) shows the current selection, in the order in which they were selected.

Hint: When you select multiple fixtures, the order in which you select the fixtures is used by Genesis when you fan colors or positions and in animations and shapes. You can change the look of a fan, animation or shape by changing the selection order.

The "Recent" area (the bottom half of the screen) shows a list of recent selections. Swipe down to see more (if available).
- To use a recent selection, touch that selection to load it into the current box
- To reverse the current selection order touch **Reverse Order**.
- To clear the current selection touch **None**.

Once a previous selection is selected you can still use the faders or buttons to modify the selection as described above.

⚠ Note: Selecting multiple fixtures by pushing up their faders, might get a random selection order. You can always check the current order by tapping ⊕ [**Select**] and then re order the selection using the selection methods described above.

⚠ Note: When using Apps to control fixtures, you can only select fixtures that have attributes that can be controlled by that App. For example, if you use the color App you cannot select a dimmer because it does not have a color attribute.

8.4   AUTOMATIC FIXTURE DE-SELECT

When opening an App, fixtures that have attributes that can be controlled by that App flash their buttons indicating that they are available for selection. Selecting fixtures will light their buttons. When using the App to change any attribute of the selected fixtures, the buttons of the un-selected fixtures stop flashing. This means that selecting another fixture will cancel the previous selection and start a new selection process. This speeds up operations because there is no need to de-select fixtures once their attributes are set.

For example: Open the Color Picker App and fade up fixtures 1 and 2. They are automatically selected. Pick a color. Fade up fixture 3 and 4. This de-selects 1 and 2 and selects 3 and 4. Pick a color for 3 and 4.

Automatic fixture de-select can be overridden by holding the ⊕ [**Select**] button while selecting additional fixtures. This allows easy addition of fixtures to those which have already been adjusted.

8.5   CONTROLLING COLOR

8.5.1   Picker App

From the "Home" screen, open the "Apps" page (described above) then touch the color **Picker** app icon. Fixtures that have color attributes will flash their buttons. Select the fixtures (described above) then drag your finger to change the color. The final color is selected when you lift your finger from the screen. The side of the color picker app shows the recently selected colors (latest at the top). Touch any of the recent colors to re-use them.
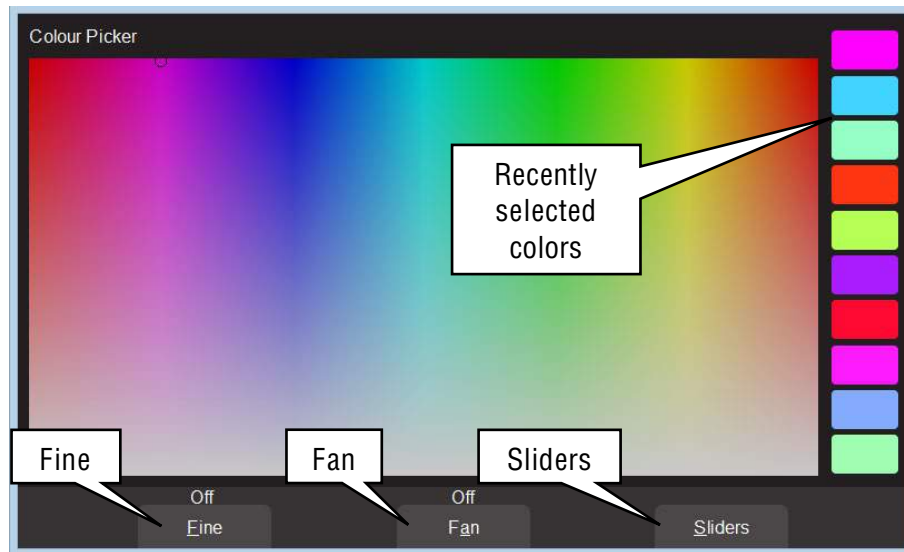
Color Picker

8.5.2　Fine

Touching **Fine** provides finer control of color. Touch again for normal control.

8.5.3　Fan

When multiple fixtures are selected you can fan their colors to create rainbow effects.:

- Touching **Fan** selects "Directional" fanning. Drag to fan the colors across the selected fixtures. The first fixture in a selection has the color where the screen is touched first and the last fixture in a selection has the color where you stopped dragging.
- Touching **Fan** again selects "Symmetrical" fanning. Drag to fan the colors. The first and last fixtures in your selection have the color where you first touched the screen and your finish color is in the center of you fixture selection.
- Touching **Fan** again turns fanning off.
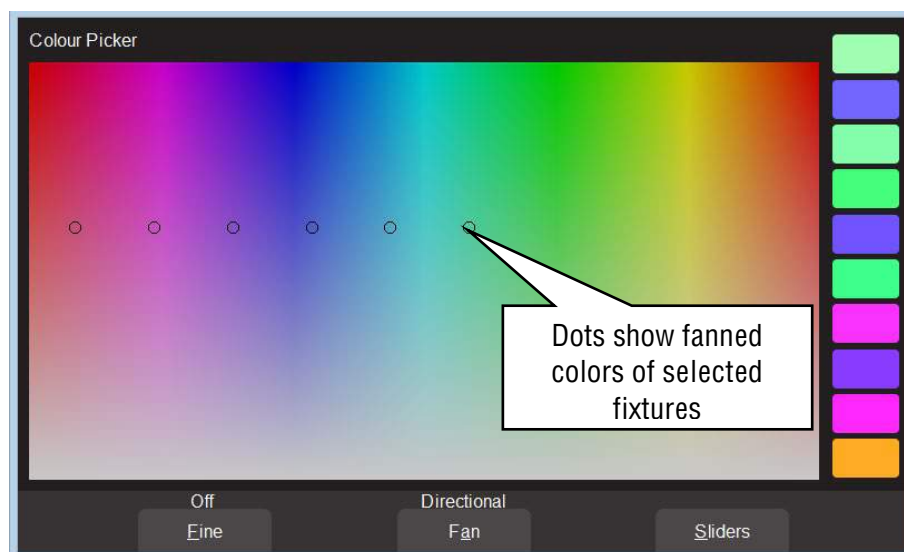
Directional Fanning

The fixture selection order is used by the Fan App. Experimenting with different orders of selection to will lead to different color effects. Previous selections can be re-used by tapp⊕the   [**Select**] button.

8.6   SLIDERS

Touching **Sliders** opens the "Color Sliders" screen that provides individual sliders for all colors. Red, Green and Blue are in a fixed section at the top of the window. Other colors, White, Amber, UV and Lime, as well as Color wheels are in the scrolling bottom half of the screen. Sliding a finger vertically in the bottom half will scroll the sliders up/down allowing access to more sliders if the selected fixture has additional attributes.

Color Sliders

- **+** and **–** buttons are provided for small increments.
- The decimal values of each slider is shown on the right.
- The Hexadecimal value of the last selected Red, Green, or Blue slider is shown at the top. Inside the Hex:# box, exact values can be entered using the keyboard that appears once selected. Enter values (in Hex) then touch **Set**.

8.6.1   Gels App

The color **Gels** app is similar to the "Picker" app but has 100 commonly used color gels to choose from.
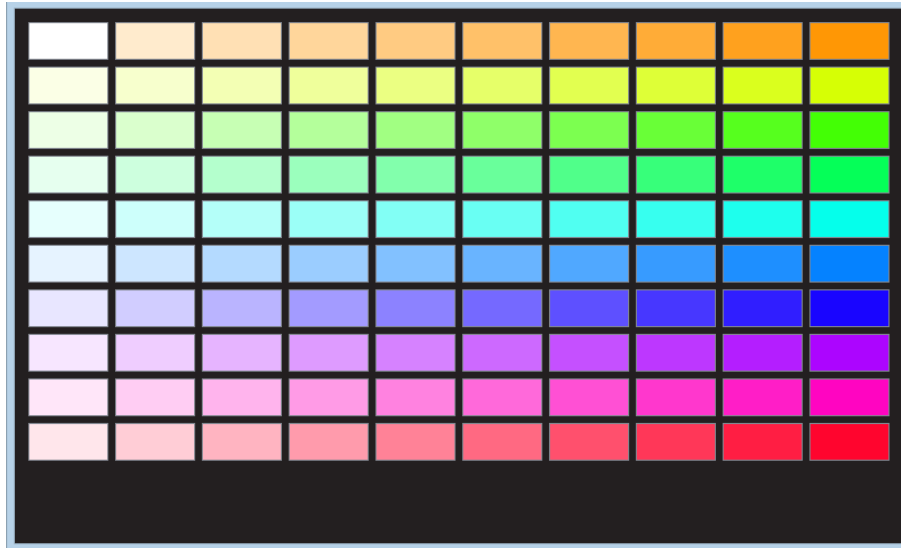
Color Gels

Touch a color to apply it to your selected fixtures.

8.7   CONTROLLING POSITION

From the "Home" screen, open the "Apps" page (described above) then touch the "position" app. Fixtures that have Position (pan and tilt) attributes will flash their buttons. Select the fixtures (described above) then drag on the position pad to move the position. There is no need to touch the current position icon to move a fixture, touch and drag <u>anywhere on the screen</u> and the selected fixture(s) will follow your movements. It is also possible to make fixtures move continuously in a shape or pattern. See section 10.
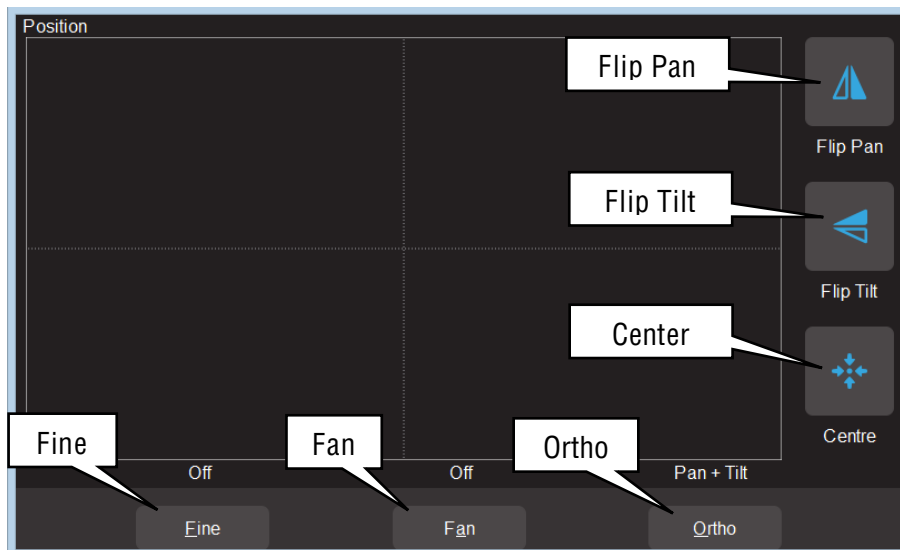
Pan /Tilt Position

8.7.1   Flip Pan/Flip Tilt

Touching **Flip Pan** inverts the pan as you drag.
Touching **Flip Tilt** inverts the tilt as you drag.

A blue border on the icon indicates "Flipped". These settings are useful if the fixture movement is opposite to the movement on the touch screen.

8.7.2 Center

Touching **Center** moves the selected fixtures to their <u>center</u> position.

8.7.3 Fine Control

For finer control touch the **Fine** button. Touch again for normal control.
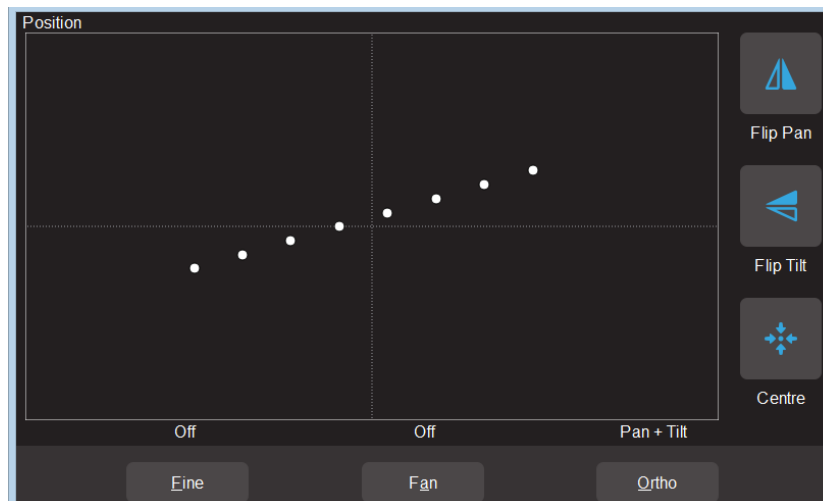
8.7.4 Ortho Control

Touches of **Ortho** cycles through, "Pan Only", "Tilt Only" and "Pan + Tilt". These settings are useful when making fine adjustments.

8.7.5 Fan

When <u>multiple fixtures</u> are selected, it is possible to fan their positions to achieve symmetrical patterns on stage.

- Touching **Fan** selects "<u>Centered</u>" fanning. Drag to fan the positions around the center fixture.
- Touching **Fan** again selects "<u>Directional</u>" fanning. Drag to fan the positions around the first fixture in a selection.
- Touching **Fan** again selects "<u>V–Shape</u>" fanning. This pan works best when fixtures are already fanned into a line. Drag to pull the line of fixtures into a V shape.
- Touching **Fan** again turns fanning off.
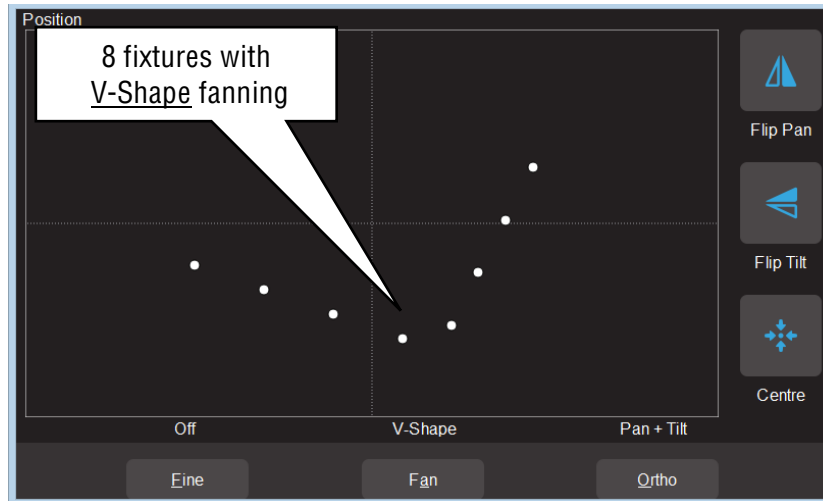
The fixture selection order is used by the Fan App. Experiment with different orders of selection to get different shapes. Previous selections can be re-used by tapping the ⊕ [**Select**] button.

8.8   CONTROLLING BEAM AND OTHER ATTRIBUTES

From the "Home" screen, open the "Apps" page (described above) then touch the "Attributes" app then select the fixture(s) to be controlled. This app provides slider controls for all attributes not controlled by the Intensity, Color or Position Apps. The controls will vary depending upon the selected fixture. Typical attributes are color wheels, gobo wheels, shutter and prisms. Up to 5 other attributes are displayed on a page. Touch **Next** to see more attributes (if available).

Typical "Other Attribute App"

All "Beam/Other" attributes can be set to either "Fade" or "Snap". When recording a cue that includes the selected fixture(s), this setting will be included. When the cue is played back, attributes set to "Fade" will follow the movement of the red playback fader. Attributes set to "Snap" will go to their recorded value as soon as the red playback fader is raised above zero.

40

8.9   CLEARING FIXTURES

When you use an App to change color, position or beam fixture attributes, the settings for the fixtures are remembered in the "Live Memory" of the yellow fixture faders. When you record a cue, these settings are retained in the Live Memory allowing you to make further changes and record more cues.

When you use an App to create an animation or shape it is also remembered in the yellow fixture faders' "Live Memory". When you record a cue any animation or shape in the Live Memory is automatically cleared.

It is standard practice to clear the "Live Memory" settings (see "Clear All" below) and therefore restore fixture(s) to their default settings (open, white, centred beam) as well as delete any animations or shapes whenever you are starting to program a new lighting look. You can also choose to only clear selected fixtures or selected attributes and retain some live settings as described below.
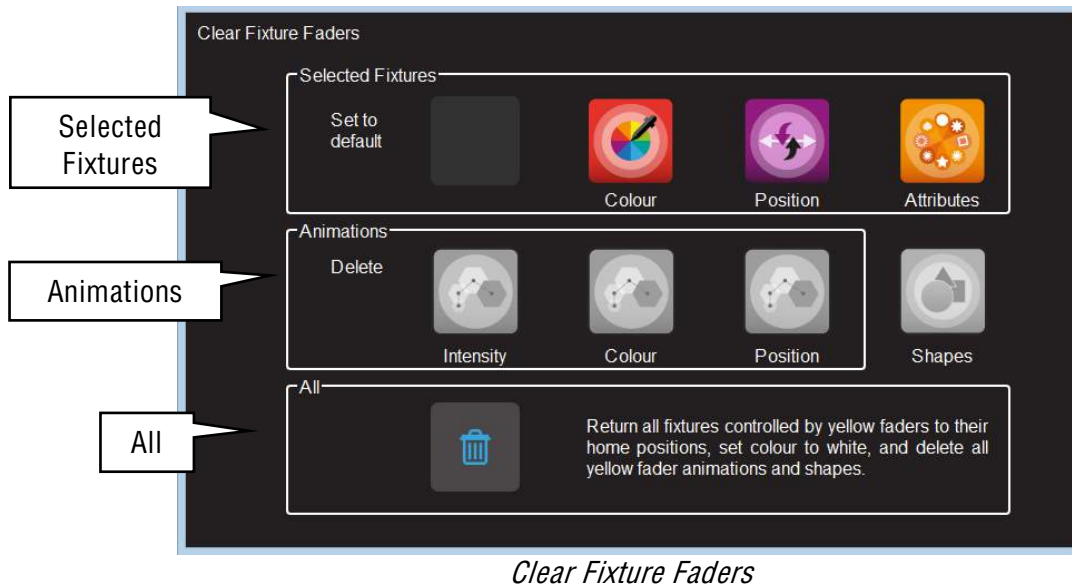
8.9.1   Clear All

To clear all setting from the Live Memory, from the "Home" screen touch **Apps**, then from the Apps screen touch **Clear All**.
Hint: It is a good idea to **Clear All** whenever you have any unexplained output from the Genesis.

Apps Screen

Clear Fixture Faders

The "Clear Fixture Faders" screen has 3 panes: "Selected Fixtures", "Animations" and "All".

8.9.2 Selected Fixtures

Selected fixtures can be set to their "Default" values. The default values are:
- Color = White.
- Position = Center.
- Attributes = The "Home" value from the fixtures template.

To clear a fixture(s), select the fixture(s) then touch the required Icon (Color, Position or Attributes).

8.9.3 Animations

Intensity, color and position animations can be selectively deleted by touching the required Icon (Intensity, Color or Position)

8.9.4 All

Touching the (trash can) icon will set all fixtures to their default values (listed above) whether they are selected or not. It will also delete all animations running on the yellow faders. Recorded animations are not affected.

Note: It is good practice to **Clear/All** before starting to program your fixtures or whenever you have any unexplained output from the Genesis.

---

9   ANIMATE APPS

9.1   OVERVIEW

Animate Apps take the static output of Genesis and bring it to life by providing a simple and intuitive way of creating moving patterns and color or intensity chases.

Animations work with 2 or more selected fixtures and they shift the attributes (such as intensity or color or position) from one fixture to the next and loop the settings of the last selected fixture back to the first. The shifting runs continuously forming a pattern or chase. There must be at least one different setting amongst all the selected fixtures so that you can see the different setting being shifted from one fixture to the next. There are Animate Apps for:

- Intensity
- Color
- Pan/Tilt

Multiple animations can be recorded in a single cue.

9.2   CREATING AN ANIMATION

The basic steps to creating an animation are:
1. Program the output of Genesis for the static look of the animation. Remember that there must be at least one different attribute setting amongst all of the fixtures. For example, in a 4-fixture color animation, 3 fixtures might be red and one blue.
2. Open an Animation App (Intensity, Color or Pan/Tilt), select all of the fixtures for the animation then touch **Create** and the animation runs.
3. You can adjust the animation controls if necessary. See section 9.3.
4. To keep the animation for later playback, record it as a cue. See section 11.

Examples of intensity, color and pan/tilt animations are described in section 9.4.

Multiple animations can be running simultaneously and all the animations that are running when a cue is recorded will be included in the cue.

Note: The order in which fixtures are selected is used by the animation app. Different animation patterns can be made by experimenting with different selection orders. The selection order is shown in the animation app when you "create" the animation (see "Animation Controls" below). To change the selection order of an animation, touch **Delete**, select the new fixture order then touch **Create**.

Selecting fixtures by moving multiple faders at the same time might produce a random selection order, however Genesis will automatically attempt to arrange the fixtures in numerical order for you.

ALTMAN
LIGHTING

Note: Recording a cue that contains an animation automatically clears that animation from the yellow faders. Therefore, if you want to keep the animation continuously running on the output you should fade up the red playback fader before tapping its button to make the recording. Fixture attributes such as color or position are not cleared by recording a cue.

9.3   ANIMATION CONTROLS
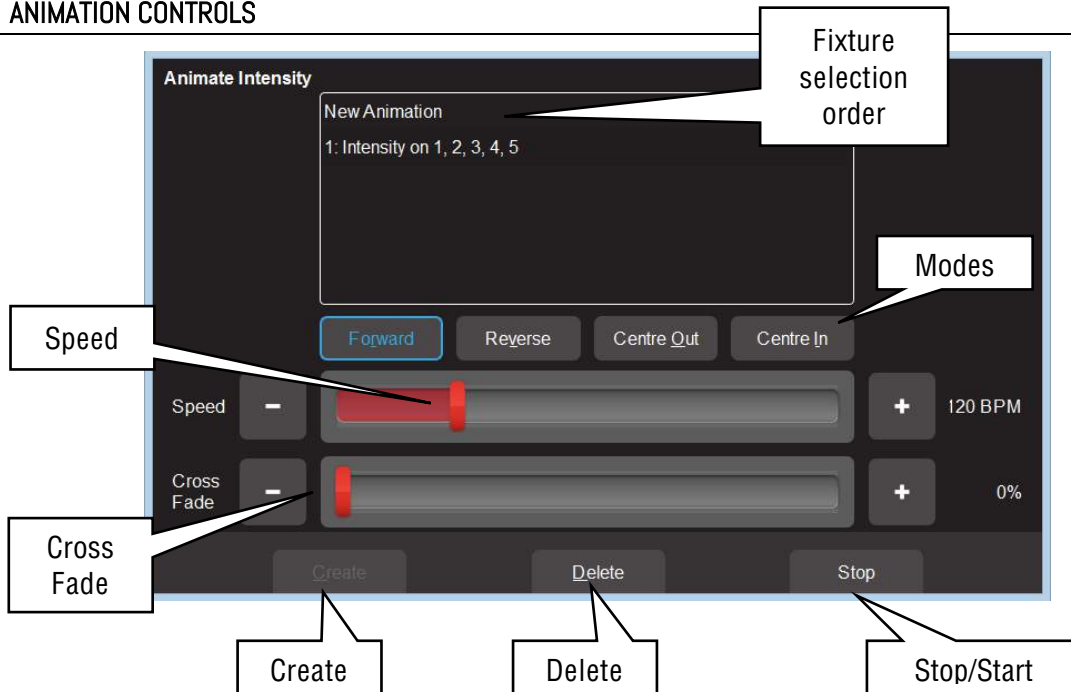
All animation Apps have Slider controls for:

- **Speed** in BPM (Beats Per Minute)
- **Crossfade** between steps (as a percentage of the speed).

For example, if the speed is set at 60 BPM (which is one step per second), then with crossfade set at 0% (that is, no fade), the animation will wait for one second, then snap to the next step. None (0%) of the available speed time will be used for crossfading.

If the crossfade is set to 50%, then the animation will perform a 0.5 second crossfade to the next step, wait for 0.5 seconds and then perform the next crossfade. That is, 50% of the time is used to perform a crossfade and 50% of the time is spent waiting before starting the next crossfade.

If the crossfade is set to 100%, then the animation will use 100% of the time performing a crossfade to the next step. When the crossfade is complete, the next crossfade will commence immediately.

Animations can be run in the following modes. These choices will only be noticeable when 3 or more fixtures are in the animation.

- **Forward** or **Reverse**.
- **Center Out** or **Center In**.

These choices work best with an odd quantity of fixtures so that the pattern is symmetrical around the center fixture. If you have an even number of fixtures there is no center fixture because the center is the gap between fixtures. You must therefore program a symmetrical static look with at least one different setting on both sides of center.

You can also **Stop** and **Start** the animation.

> ⚠️ Note: Changing modes between Forward (or Reverse) and Center In (or Center Out) on a running animation can cause unexpected (and sometimes interesting) results depending upon the position of the animation pattern at the instant modes are changed. For consistent results, **Stop** the animation, change modes then **Start** the animation again.

9.4   ANIMATION EXAMPLES

The following sections have examples of how to create intensity, color and Pan/Tilt animations. All animations have the same controls available to vary the animation.

> ⚠️ Note: It is a good idea to clear all fixtures before you start to create your first animation. From the "Home" screen touch **Apps/Clear/All**.

If there is an animation running that needs to be retained, then only clear the type of attribute in the new animation. For example, if a color animation is running and creating a Pan/Tilt animation is needed. From the "Home" screen touch **Apps/Clear/**"Animations" **Position**.

9.4.1   Intensity Animation

Example 1:
To create a 4-fixture intensity animation with only one fixture on at a time (a chase) using fixtures 1 to 4:

- Use the fixture faders to create the static look of the animation on the output by fading up fixture 1 and fading down all other output.
- Open the "Intensity" **Animate** app.
- Select fixtures 1 through 4 by holding fixture [**1**] button and tapping fixture [**4**] button (or tap them individually in the order that you want them to animate).
- Touch **Create** and the animation runs as an intensity chase on fixtures 1 to 4.
- Use the controls described above to set the rate, crossfade, direction etcetera.

	Fixture 1	Fixture 2	Fixture 3	Fixture 4
Step 1		■	■	■
Step 2	■		■	■
Step 3	■	■		■
Step 4	■	■	■	
Step 1		■	■	■

Example 2:
To create a 6 fixture intensity animation with 5 fixtures on at a time using fixtures 1 to 6:

- Use the fixture faders to create the static look of the animation on the output by fading up fixtures 1, 2, 3, 4 and 5 and fading down all other output.
- Open the "Intensity" Animate app.
- Select fixtures 1 through 6 by holding fixture [1] button and tapping fixture [6] button (or tap them individually in the order that you want them to animate).
- Touch Create and the animation runs as an intensity chase on fixtures 1 to 6.
- Use the controls described above to set the rate, crossfade, direction etcetera.

	Fixture 1	Fixture 2	Fixture 3	Fixture 4	Fixture 5	Fixture 6
Step 1						■
Step 2	■					
Step 3		■				
Step 4			■			
Step 5				■		
Step 6					■	
Step 1						■

9.4.2   Color Animations

Example 1:
To create a red/blue color animation across fixtures 7 to 10:

1. Fade down all output.
2. Fade up fixtures 7, 8 and 9 then use the "Color" **Picker** App (section 8.5) to set the fixtures to red.
3. Fade up fixture 10 then use the "Color Picker" App to set the fixture to blue.
4. You have now created the static look of the animation.
5. Open the "Color" **Animate** App.
6. Select fixtures 7 through 10 by holding fixture [**7**] button and tapping fixture [**10**] button (or tap them individually in the order that you want them to animate).
7. Touch **Create** and the color animation runs.
8. Use the controls described above to set the rate, crossfade, direction etcetera.

	Fixture 7	Fixture 8	Fixture 9	Fixture 10
Step 1	red	red	red	blue
Step 2	blue	red	red	red
Step 3	red	blue	red	red
Step 4	red	red	blue	red
Step 1	red	red	red	blue

Example 2:
To create a fanned color animation across fixtures 13 to 20:

1. Fade down all output.
2. Fade up fixtures 13 to 20.

3. Open the "Color" Picker App and select "Symmetrical Fan" by touching Fan twice then drag to fan the colors across the selected fixtures.
4. You have now created the static look of the animation.

Choosing "Symmetrical" fans the colors around the center fixture(s) so that the first and last fixtures have similar colors. This gives the animation a smooth color transition from last fixture to the first fixture.

5. Open the "Color" **Animate** App.
6. Select fixtures 13 through 20 by holding fixture [**13**] button and tapping fixture [**20**] button.
7. Touch **Create** and the fanned colors animate through the selected fixtures.
8. Use the controls described above to set the rate, crossfade, direction etcetera.

9.4.3 Pan/Tilt Animations

Example 1:
To create a Pan/Tilt animation across fixtures 21 to 24:

1. Fade down all output.
2. Open the "Pan/Tilt" Position App.
3. Fade up fixture 21 and position it to the front of the stage.
4. Fade up fixtures 22, 23 and 24 and position them to the back of the stage.
5. You have now created the static look of the animation.
6. Open the "Pan/Tilt" Animate App.
7. Select fixtures 21 through 24 by holding fixture [21] button and tapping fixture [24] button (or tap them individually in the order that you want them to animate).
8. Touch Create and the Pan/Tilt animation runs.
9. Use the controls described above to set the rate, crossfade, direction etcetera.

Example 2:
To create a fanned Pan/Tilt animation across fixtures 21 to 24:
1. Fade down all output.
2. Clear any previous Pan/Tilt animations. From the Apps screen touch Clear, All (or only clear "Position" animations).
3. Open the "Pan/Tilt" **Position** App.
4. Fade up fixture 21, 22, 23 and 24.
5. Touch **Fan** then drag to fan the fixture positions.
6. You have now created the static look of the animation.
7. Open the "Pan/Tilt" **Animate** App.
8. Select fixtures 21 through 24 by holding fixture [21] button and tapping fixture [24] button.
9. Touch **Create** and the Pan/Tilt animation runs.
10. Use the controls described above to set the rate, crossfade, direction etcetera.
11. You can return to the **Position** app if needed and reposition the animation.

9.5   MULTIPLE ANIMATIONS

If there are animation(s) running, another of the same type (Intensity, Color or Position) can be created by touching **New Animation**. Select the fixtures to be included then touch **Create**. All the animations of the selected type are listed in the box.

When multiple animations are running you can switch the controls to any of them by touching their name.

New Animation

Touch an animation to control or delete it
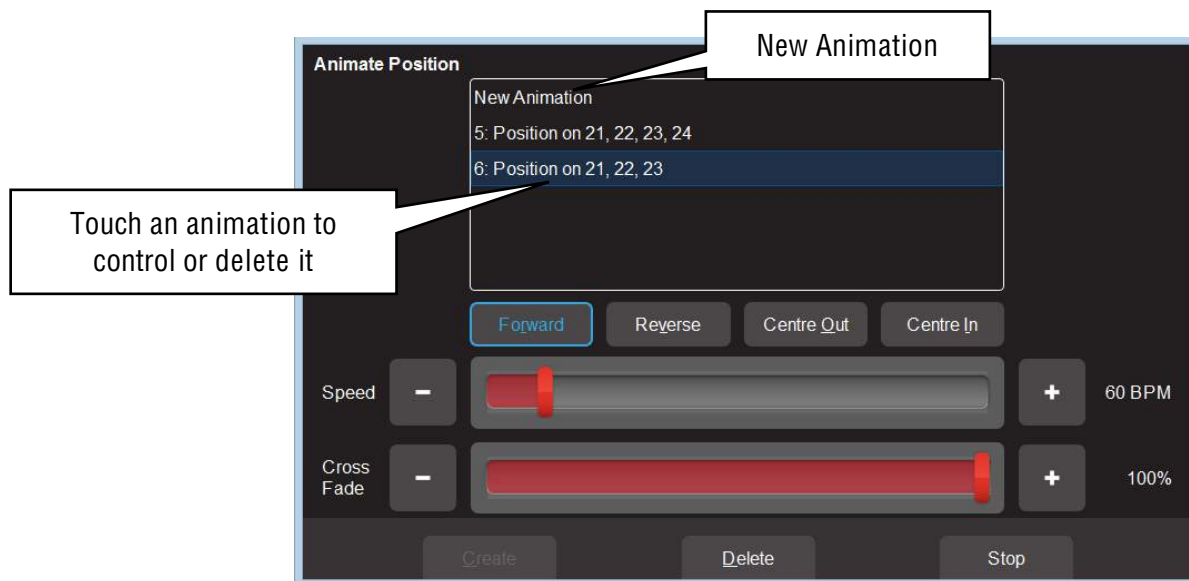
9.6   RECORDING ANIMATIONS

Recording the output of the Genesis as a cue will include any animations that are running. Recording an animation will automatically clear that animation from the yellow faders where it was created. If you want to keep the animation running on the output, fade up the red playback fader on which you make the recording and ensure that the Red Master is also up before you record the cue. See section 11 for details on how to record cues.

9.7   DELETING ANIMATIONS

To delete a single animation, open the Animation app in which it is running (Intensity, Color or Pan/Tilt), touch the animation number then touch **Delete.**

To delete all animations of one type (Intensity, Color or Pan/Tilt), from the "Apps" screen, touch **Clear** then from the "Animations" pane choose to delete either **Intensity**, **Color** or **Position** animations.

To delete all animations and restore all fixture(s) to default settings (open, white, centered beam), from the "Apps" screen, touch **Clear** then **All** (trash can icon).

9.8   ANIMATIONS IN CHASES

A chase is cue-list that automatically steps from cue to cue. Any cue in a chase can contain animations so complex effects can be easily created by including animations in a chase.

9.9   ANIMATE SPEED

"Live Speed" allows you to override the speed of animations. The changes are only a temporary offset applied to the settings saved in the cue or on the yellow faders. See section 13 for details.

10   SHAPES APP

10.1   OVERVIEW

The Shapes App provides a quick and simple way of creating continuously moving positions on fixtures that have Pan and Tilt attributes by constantly varying those attributes.

10.2   CREATING A SHAPE

⚠ Note: You might find it easier to position your fixture(s) before you apply a shape movement to them, however you can still position them after applying the shape.

To create a shape, from the "Home" screen, open the "Apps" page (by touching any fixture icon) then touch the "Position" **Shapes** icon.

Fade up the fixture(s) to which the shape is to be applied. This automatically selects the fixture(s).

The following shapes are available:

- Ellipse (clockwise or anti-clockwise).
- Rectangle (clockwise or anti-clockwise).
- Triangle (clockwise or anti-clockwise).
- Random.
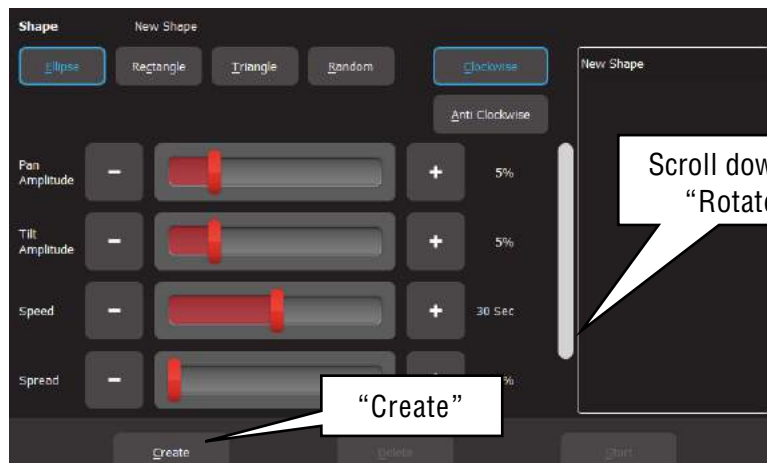
Touch **Create** and the shape runs.

There are controls for:
- Pan Amplitude
- Tilt Amplitude (Set pan and tilt to the same amplitude to create a circle when using Ellipse)

- Speed (in seconds)
- Spread (in percentage) Applies when 2 or more fixtures are selected and spreads them around the movement shape. When set to 0%, all fixtures are focused on the same point as they move around the shape. When set to 100% the fixtures are evenly spaced apart as they move around the shape. In between values vary the spread. Does not apply to the "Random" shape.

Scroll down for:
- Rotate (in degrees). Rotates the shape about its axis. Does not apply to the "Random" shape.
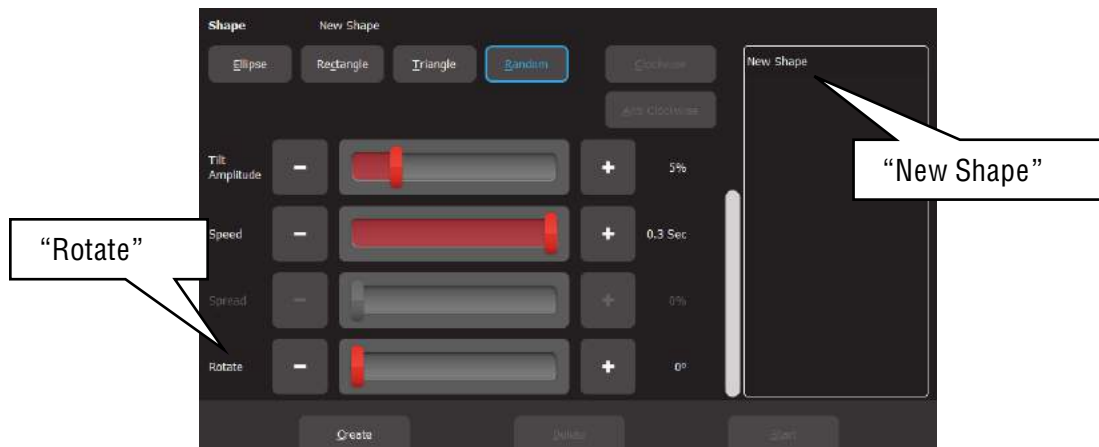
Shapes can be created on other fixtures by selecting **New Shape**, selecting the fixtures and repeating the procedure above.

10.3   RECORDING SHAPES

Recording the output of the Genesis as a cue will include any shapes that are running. Recording a shape will automatically clear that shape from the yellow faders. If the recorded Red fader to is at zero, this will stop the shape on the output. To keep the shape running on the output when it is recorded, fade up the red playback fader before recording the cue.

See section 11 **Error! Reference source not found.** for details on how to record cues.

10.4   DELETING SHAPES

To delete a single shape from the "Live Memory" of the yellow fixture faders, open the Shapes app then touch the shape (in the right side pane) then **Delete**.

To delete all shapes (and animations) and restore all fixture(s) to default settings (open, white, centred beam), from the "Apps" screen, touch **Clear** then **All** (trash can icon).

10.5   SHAPES IN A CHASE

A chase is cue-list that automatically steps from cue to cue. Any cue in a chase can contain shapes, so complex effects can be easily created by including shapes in a chase.

10.6   SHAPE SPEED

"Live Speed" overrides the speed of shapes. The changes are only a temporary offset applied to the settings saved in the cue or on the yellow faders. See section 13 for details.

11   RECORDING CUES

11.1   OVERVIEW

After adjusting the intensity and color of the fixtures and possibly animation(s) or shapes, the current output of the Genesis can be recorded into a red fader for later playback. This recording is known as a "Cue" and it contains the intensity and all other attributes such as color, position etcetera plus any animations that are currently running. It has a "fade in" time and a "fade out" time.

Recording a cue to a Red Playback that already contains a single cue and choosing "Add", will automatically create a "Cue-list".

11.2   MEMORIES / PAGES

There are 10 red playback faders and 10 pages of memory giving a total of 100 memories. Each memory can contain a single cue or a "Cue-list" that contains up to 250 cues. A maximum of 1000 cues can be recorded.

- Repeated taps of the [Page] button will step through the 10 pages of memory.
- To switch *directly* to a page number; HOLD [Page] and TAP a red fader button [1 to 10].

The current page number is shown in the top left corner of the "Home" screen and the contents of the red playback faders (for the current page) are shown along the bottom of the screen.
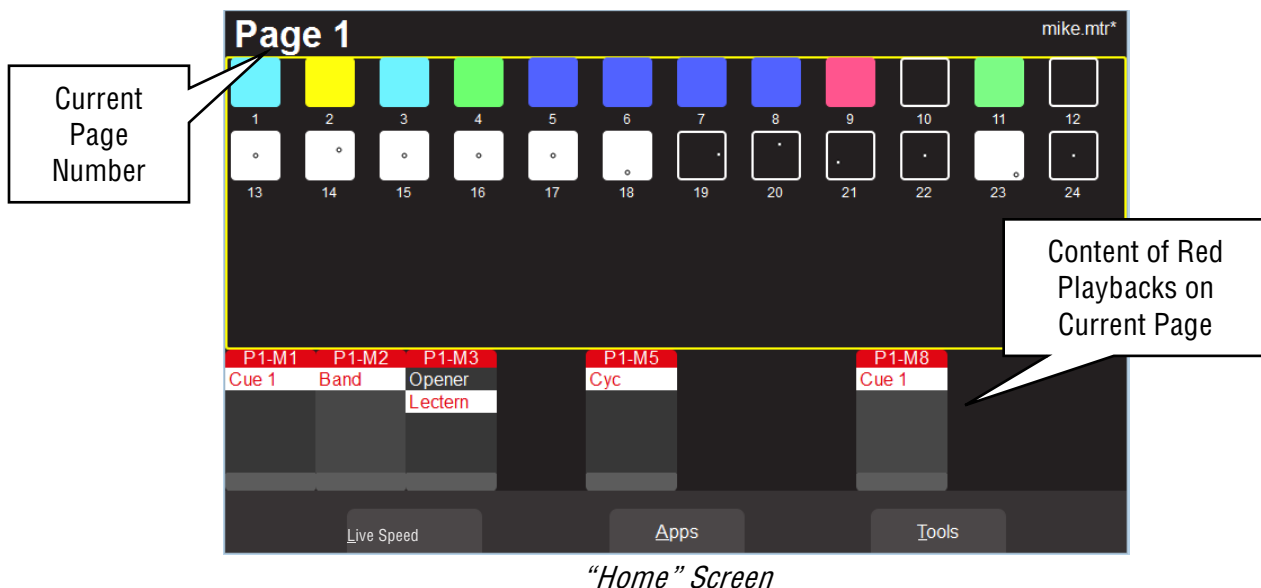
"Home" Screen

11.3   RECORD A CUE

To record the current output onto a Red Playback fader, tap [Record] then tap the button below the Red Playback fader of your choice [1-10]. The recording is made into the current page. The default fade time is applied to both the "Fade In" and "Fade Out" times. To change the default fade time see section 18.1.3. To set individual "Fade In" and "Fade Out" times see section 13.1.

All the attributes of any fixture with an intensity level greater than 0% will be included in the cue. See section 11.5 for details on how to include fixtures with no intensity.

The look on stage can now be played back from the recorded cue. See section 12.2. This frees up the yellow faders to create another lighting look and to record it into another cue.

11.4   RECORD A CUE-LIST (OR CHASE)

After a cue is recorded in a Red Playback fader, more cues can be recorded to it to create a cue-list. A cue-list can be played back by tapping the button below the fader that contains the list. Each time the button is tapped, Genesis will perform a crossfade to the next cue in the list. Each cue has its own "fade in" and "fade out" time settings.

To record a cue-list, record the first cue as described in section 11.3. Create the next lighting look on the output of Genesis then record to the same Red Playback fader. Genesis allows you to choose to either:

- **Overwrite**. This deletes the existing cue and replaces it with your new recording. (A cue-list is not created).
- **Add**. This creates a cue-list and adds the new recording to the list. Subsequent recordings to this memory location will automatically be added to the cue-list after the current cue.

If a cue-list has been recorded it can also be run as chase that automatically steps from cue to cue. See section 13.1

Subsequent recordings to this memory location will automatically be added to the cue-list after the current cue without the option to overwrite.

When a cue is recorded to a cue-list it is added after the current cue. The current cue is indicated by a grey bar if the cue is faded down or a red bar if the cue is faded up. To change the current cue, tap the button below its red fader.
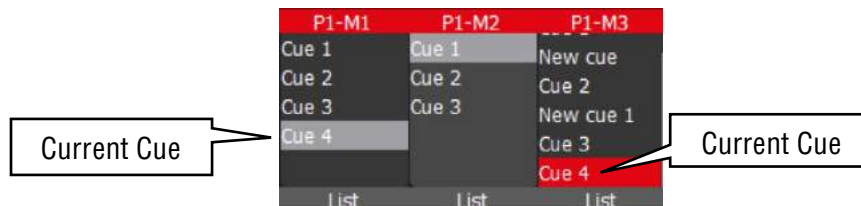
If the current cue is the last cue in the list, then the new cue is given the name "Cue #" where # is the next number.
If the current cue is not the last cue in the list, then the new cue is given the name "New Cue".

A cue-list is usually manually played back (see the next section), but it can also be run as chase that automatically steps from cue to cue. See section **Error! Reference source not found.**. Cues can also be given a "Link Time" that will automatically play the next cue in the cue-list. See section 12.3.2

Hint: It is good practice to regularly save your show.

11.5   RECORD FIXTURES WITH NO INTENSITY

It is possible to include selected fixtures that have an intensity of 0% when recording a cue. (Normally only fixtures with an intensity level greater than 0% will be recorded in a cue).

To include fixtures with no intensity, tap ⊙ [**Record**], then tap ⊕ [**Select**]. The buttons of all fixtures with intensity greater than 0% are lit. Tap (and light) the buttons of any fixtures with no intensity that are needed in the cue. Complete the recording in the usual manner by tapping the button below the Red Playback fader of your choice [**1-10**].

Playing back fixtures that have no intensity can be used for a "Move in Black" or for "Solo Cues" described below.

11.5.1   Move In Black

Playing back a cue that includes fixtures with no intensity is often used with pan and tilt fixtures to position the fixtures without seeing the move on stage. This is commonly called a "move in black".

A move in black requires two cues:

1. To program the first cue, fade up the fixtures and position them on stage. Fade them down then record the cue ensuring that you include these fixtures (with no intensity) as described in section 11.5.
2. To program the second cue that reveals the fixtures in position, fade them up and record the cue to the same cue-list.

When the first cue is played, the fixtures move into position but are not seen as they have no intensity. When the second cue (which has intensity and the same position) is played, it reveals the fixtures already in position.

11.5.2   Solo Cue

When a normal cue is faded up, it reveals the fixtures in that cue. Output from other fixtures that are not in the cue will not be affected.

If you want the cue you faded up to be the only output, you usually need to fade down all other faders. This can be difficult if you have multiple faders active.

It is possible to simplify this process by recording a "Solo" cue. A Solo cue has the fixture(s) that are needed but it also includes all of the fixtures that are not needed. These fixtures are recorded in the cue with 0% intensity. See section 11.5.

When a solo cue is faded up it will take control of all the fixtures that are recorded in the cue. Therefore, any fixtures will intensities of zero will fade out.

You can create some interesting effects by recording a "solo" cue that has an animation across several fixtures (with intensity) but also includes all other fixtures at zero intensity. Flashing (or fading up) this cue will reveal the animation and black out any other output. For example - highlighting a drummer during a drum solo.

12	PLAYBACK

12.1 OVERVIEW

Different looks can be recorded on different Red Playback faders so that you can easily change the entire look on stage by using the Red Playback faders. There are 10 red playback faders and 10 pages of memory giving a total of 100 memories. A memory can contain a single cue or a cue-list of up to 250 cues. (A maximum of 1000 cues can be recorded).
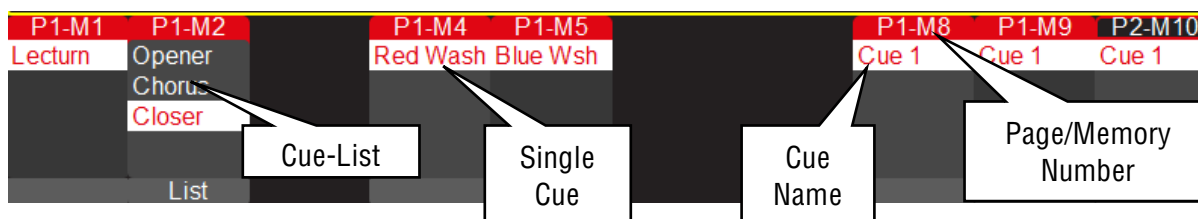
12.2 PLAYBACK A CUE

To playback a recorded cue, ensure that the Red Playback Master is at full and fade up the Red Playback fader where you recorded the cue (remember to select the correct page).

Select "clear all" (see section 8.9) or fade down the Yellow master (or all of the yellow fixture faders) before bringing up the Red playback, so that only the recorded look on the output is seen.

Unlike the Yellow Fixture faders that only control intensity, the Red Playback faders control all the attributes of the fixture that have been recorded in the cue. This allows for smooth crossfades from one Playback to another with a smooth transition of intensity, color and position. See Latest Takes Precedence below.

12.2.1 Cue Fade Times

Every cue has a separate "Fade In" time and a "Fade Out" time. When a playback fader is moved, the output level of that master will always progress towards the current physical position of that fader at a rate set by the fade times for that cue.

- On upwards movements of a fader the "Fade In" time is used.
- On downwards movements of a fader the "Fade Out" time is used.

When a cue is recorded it uses the default in and out fade times (2 seconds). To change the default fade time, see section 18.1.3. To change the individual fade times for a recorded cue, see section 13.1.

For example, if a "Fade In" time of 3 seconds has been set, then to execute the fade in exactly 3 seconds, the fader must be moved from bottom to top in less than 3 seconds. If the fader is quickly faded to the halfway position, the fade will take 1.5 seconds to reach this position and then stop. If the fader is then moved to the top of its travel, the fade will take another 1.5 seconds to complete. If you take longer than 3 seconds to move the master, then the fade will keep pace with the fader movement.

A double headed arrow beside the cue name indicates when a timed fade is in progress.

12.3   PLAYBACK A CUE-LIST

If a Red Playback contains a cue-list you can crossfade to the next cue in the list by tapping its playback button (below its fader).

To crossfade in the <u>reverse</u> direction HOLD the 🏠   [**Back**] button while tapping the playback button.
The current cue has a white background. A pointer indicates when a fade is in progress.
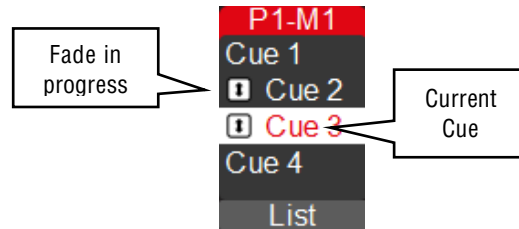
12.3.1   Cue-List Fade Times

Every cue in the cue-list has a separate "Fade In" time and a "Fade Out" time that are used when the playback button is pressed. These fade times are also used if the playback fader is moved. Therefore, the playback fader must be at the top position for the entire fade time to be used. Fade times can be overridden. See section 13.4.

12.3.2   Link Times

Every cue in a cue-list can contain a "Link Time" (0.1 seconds to 60 minutes) or "Link Time" can be set to "None".
- If a cue in a cue-list contains a link time, then when the cue is played, the link time starts counting down. When the time expires the next cue in the cue-list is <u>automatically</u> played.
- If the Link Time is set to "None", then the button below the red fader must be used to manually play the next cue.

<u>Hint</u>: If every cue in a cue-list has a "Link Time" value then the cue-list will run continuously in the same manner as a chase but with the difference that in a chase, the time between every step is the same whereas in a cue-list with linked cues, every cue can have a different link time. This allows you to make a chase that changes speed as it runs.
See section 13.1.3 for details on how to set a link time.

12.4   PAGE FREEZE

When you change pages, the Cues in the selected page are copied, in order, to their respective red playbacks. A "PAGE FREEZE" feature prevents the contents of a "live" red fader from being changed if its level is above 5% when a page is changed. The current contents are held until such time as that fader is faded down below 5% when it will be automatically updated with its **pending** assignment for the new page. This prevents Cues, "crashing in" on stage if their fader is contributing to the output when a different page is selected.

The bottom section of the "Home" screen shows the contents of the 10 Red Playbacks. A "live" playback containing a cue from another page is indicated by a black background.

Black background indicates a "Page Freeze"

Black background indicates a "Page Freeze"

12.5   LATEST TAKES PRECIDENCE

The value for each attribute of a fixture (intensity, color, position, etc.) could come from multiple places within the console. It might be from a yellow fixture control or it might be from any faded up red playback containing a cue that includes that fixture. The value for each attribute that appears on the output is determined by a method known as LTP (Latest Takes Precedence) <u>and</u> by fader position.

An LTP action occurs when a *red fader is raised above zero*. When this occurs, the fader will take control of its attributes and they will <u>fade to</u> their levels in that fader <u>following the fader movement</u>. When that fader reaches <u>100%, it fully overrides all other active faders</u> containing attribute values for the same fixtures. While this fader remains at full no previously active faders have any influence over its fixture attributes.

If another red fader is <u>raised above zero</u> it becomes the latest action and it will take control of the attributes. As this fader is moved, the existing attributes will <u>fade to</u> the new values provided by the incoming cue. When the fader reaches full it <u>fully overrides previously active faders.</u>

Genesis keeps a LTP list and remembers the order in which faders have been raised above zero. The latest fader (at the top of the list) will have total control while it is at full level. When a fader is faded down to zero it drops off the LTP list and has no influence on the output. If several faders are in the LTP list (faded up from zero but not yet faded down to zero) and the top of the list fader is faded back down to zero, the next LTP fader in the list will take back control.

The LTP rules apply to all attributes of a fixture: intensity, color, position, etc.
For example:

3 cues are recorded on the red playback faders 1 to 3 with a single LED fixture in each cue. In the first fader the fixture is red, in the second it is blue and in the third it is yellow.

- Fade up fader 1 to full and the fixture fades to red.
- Fade up fader 2 to full and the fixture fades to blue.
- Fade down fader 1 and nothing happens because fader 2 is the <u>latest</u> (LTP) and it is at <u>full</u>.
- Fade up fader 3 and the fixture fades to yellow because fader 3 is the latest.
- Fade down fader 3 and the fixture fades back to blue (the previous latest).

When the <u>latest red fader</u> to be raised from zero is at <u>full</u>, other faders controlling the same fixtures can be faded down without having an effect.

Yellow fixture faders operate slightly differently to red playback faders. Firstly, they only control the intensity of the fixture. Secondly, if the fixture that the yellow fader controls already has intensity on the output from a

cue on a red playback, then when its yellow fixture fader is raised above zero it has no effect on the intensity of its fixture until its yellow level matches the current level of that fixture. It then takes total (LTP) control of the fixture's intensity. See section 15.2 "Edit Cues".

12.6   ICPB ATTRIBUTES (FILTERS)

When a memory is recorded it includes all the **I**ntensity, **Color**, **P**osition and **B**eam (I C P B) attribute groups. It is possible to exclude (filter) attribute groups when a memory is played back. See section 13.1.6

13 EDIT MEMORY

13.1 EDIT MEMORY
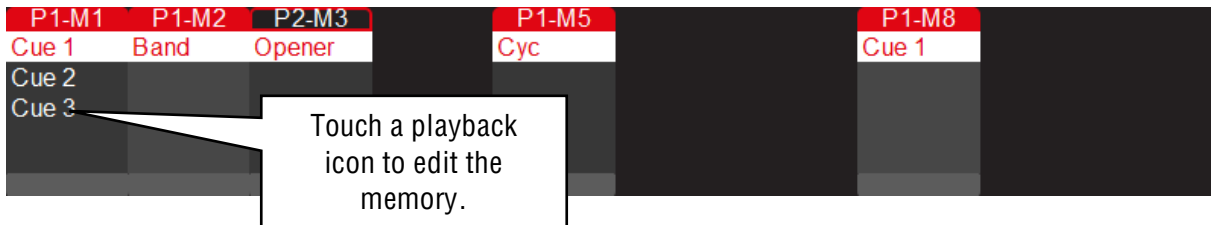
Touching any playback icon opens the "Edit Memory" screen.
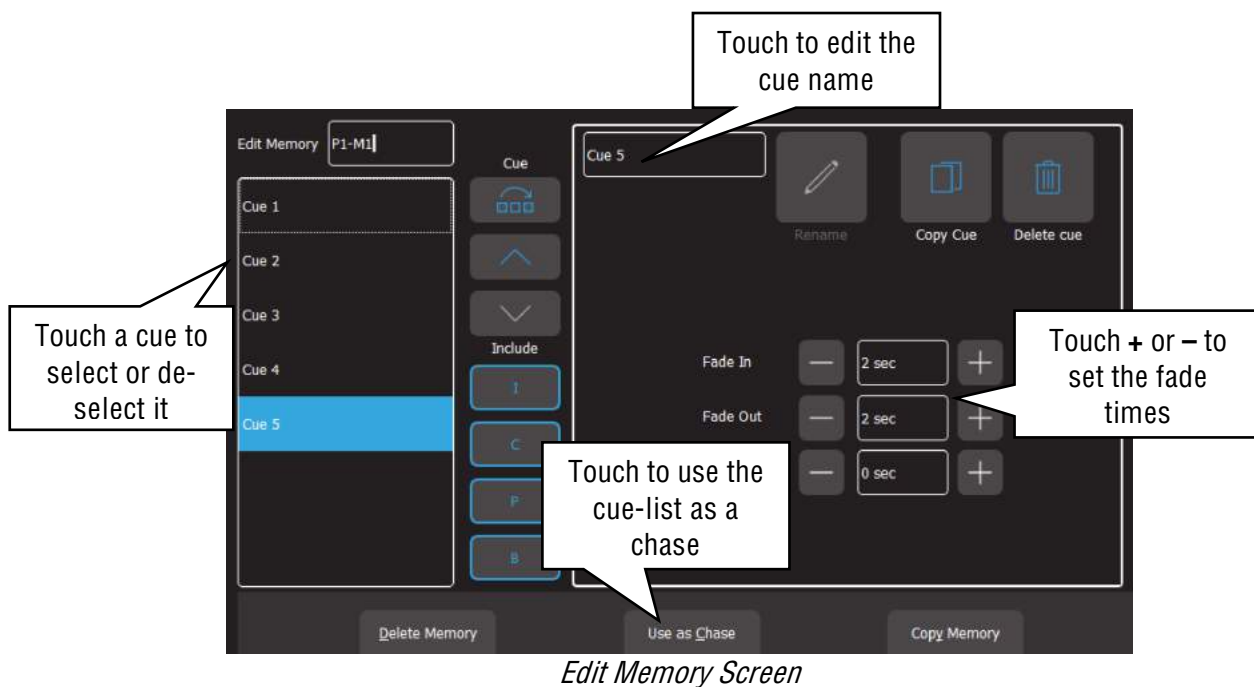
Edit Memory Screen

The pane on the left shows the contents of the selected memory. This might be a single cue or a cue-list, depending upon what you have recorded in that memory.

If the memory contains a cue-list you can touch a cue to select/de-select it. Multiple cues can be selected. This is useful when setting the same fade times to multiple cues.

Tapping the play button of the playback will advance to the next cue in the list and automatically select the currently active cue.

When a cue has been selected, the following functions are available:

13.1.1   Change Fade Times

Touch the **+** or **–** buttons to set the "Fade In" and "Fade Out" times. If you hold a button it will auto-repeat. See section 12.3.1 for more details on fade times.

13.1.2   Change Cue Name

To change the name of a cue, select that cue then in the "Cue Edit" pane touch the cue name. A pop up keyboard appears to change the name of the cue. Touch **Rename** (or **Enter** on the pop up keyboard) to finish.

13.1.3   Link Time

Each cue can contain a "Link Time" (0.1 seconds to 60 minutes). If a cue contains a "Link Time" when the cue is plated the "Link Time" starts counting down. When the time expires the next cue in the cue-list is automatically played.
To change a "Link Time". If you gold a button, it will auto repeat.
See section 12.2 for more details on link times

13.1.4   Memory Name

Memory names are by default the page number and the memory number. For example, P1-M1 (Page 1, Memory 1). You can change the default name to something more descriptive. To change the name of a memory, in the "Edit Memory" screen (see above), touch in the **memory name** box, delete the default name then type the new the name of the memory.
To restore the default name, click in the **memory name** box and delete the name then click🏠
Back/Home.
Note. OSC Remote Triggers always need to be entered in the form P#-M# even if the default memory name or cue name is changed

13.1.5   Jump To Cue

Tapping a playback's button will fade to the next cue in the cue-list. To bypass cues and fade directly to any cue in the list, select the cue required in the "Edit Memory" screen (see above) then touch **Jump To**. This function is useful for quickly playing back a cue in a long cue-list without stepping through all the intermediate cues.

13.1.6   Change Cue Order

To change the order of the cues in a cue-list select the cue(s) to be moved in the "Edit Memory" screen (see above) then move the selected cue(s) by touching the ∧ (move up) or ∨ (move down) buttons.

### 13.1.7   Include ICPB Attributes (Filters)

When a memory is recorded it includes all the **I**ntensity, **Color**, **P**osition and **B**eam (I C P B) attribute groups. It is possible to exclude attribute groups when a memory is played back. In the "Edit Memory" screen (see above), touching an attribute group (**I C P B**) excludes that group from the playback.

All attribute groups included (Default)

Only Color included
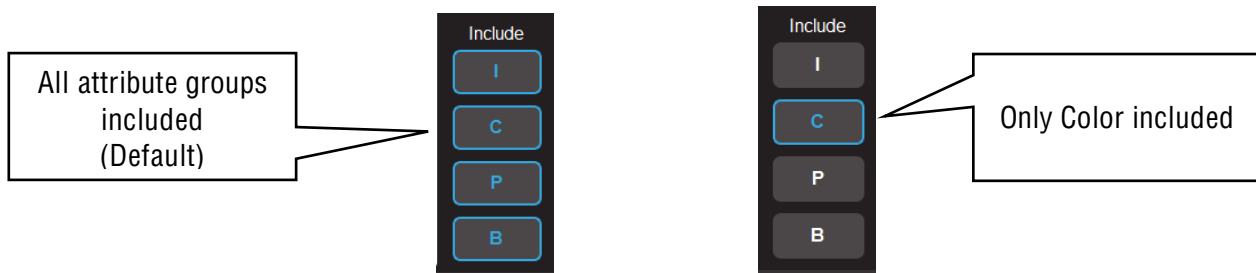
The selection applies to all cues in the cue-list.

For example, you have some fixtures that have intensity, color and position attributes.

- Record a cue-list that has 5 different color cues. Don't worry about the position of the fixtures in each cue. Edit the cue-list and touch **I**, **P** and **B** leaving only **C** (color) included. This is now a color only playback.
- Record a cue-list that has 5 different position cues. Don't worry about the color of the fixtures in each cue. Edit the cue-list and touch **I**, **C** and **B** leaving only **P** (position) included. This is now a position only playback.
- Record a cue-list that has 5 different position cues. Don't worry about
- Record a cue-list that has the intensity of the fixtures. Don't worry about the position or color of the fixtures in each cue. Edit the cue-list and touch **C**, **P** and **B** leaving only **I** (intensity) included. This is now a Intensity only playback.
- Fade down the Yellow master and fade up the Red master.
- Fade up the 3 cue-lists that you recorded.
- Tapping the button of the Color playback steps the fixtures through the 5 colors.
- Tapping the button of the Position playback steps the fixtures through the 5 positions.
- The **I** (Intensity) playback controls the intensity.

This provides 25 possible combinations of color and position from 10 cues.

⚠ <u>Note:</u> Instead of making the **I** playback a single cue you could add a cue that includes an intensity animation. That makes 50 possible combinations from 12 cues.

13.1.8   Duplicate Cue

To duplicate a cue in a cue-list select the cue in the "Edit Memory" screen (see above) then touch **Duplicate**. A copy of the selected cue is added to the end of the cue-list.

13.1.9   Copy Memory

A memory is the contents of a playback. It might be a single cue or a cue-list. To copy a memory, in the "Edit Memory" screen (see above), touch Copy Memory. The home screen opens and all playback displayers flash red. Touch a flashing red playback to make a copy. You can select a different Page if required, prior to touching a playback.

13.1.10   Delete Cue

To delete a cue(s) in a cue-list select the cue(s) in the "Edit Memory" screen (see above) then touch **Delete Cue**.

13.1.11   Delete Memory

To delete a memory, in the "Edit Memory" screen (see above) touch **Delete Memory**. If the memory contains a single cue or a cue-list the entire memory will be deleted.

13.1.12   Chase

If a memory contains a cue-list you can choose to use it as either a "List" where you manually playback the cues or use it as a "Chase" where it automatically steps through the list at a rate that you set.
To change a cue-list into an automatically stepping "Chase", in the "Edit Memory" screen (see above) select "Use as Chase". The list will automatically increment through the steps using the speed and crossfade settings that you set on the touch screen.
Traditionally chases will snap (instantly switch) from step to step but you may also set a "Cross Fade" value so that it will <u>fade</u> from step to step.

ALTMAN
L I G H T I N G
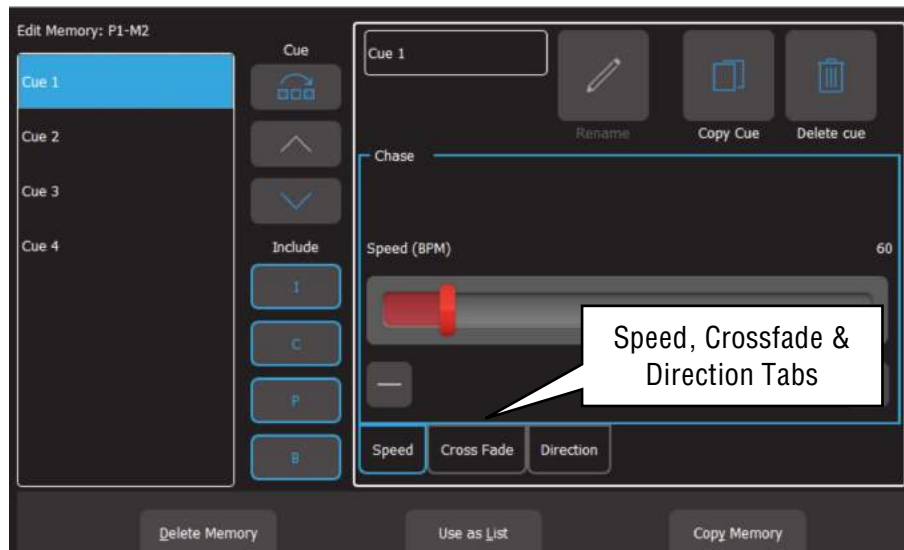
Speed Tab:
Use the slider or the **+** and **–** buttons to adjust the speed in BPM (Beats Per Minute).
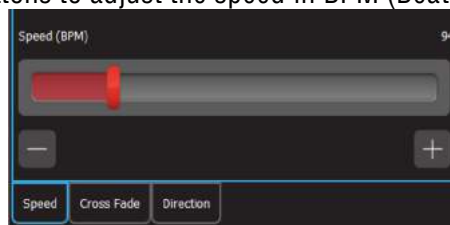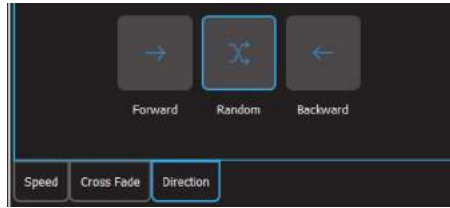
Crossfade Tab:
Traditionally chases will snap (instantly switch) from step to step but you may also set a "Cross Fade" value so that it will <u>fade</u> from step to step. Use the slider or the **+** and **–** buttons to adjust the % (percentage) ofthe step time that is used for the crossfade.
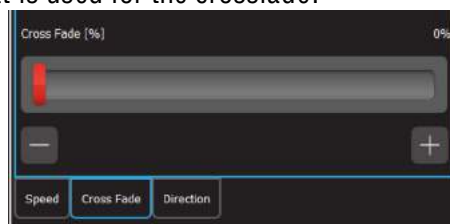
For example, if the chase speed is set at 60 BPM (which is one step per second), then with crossfade set at 0% (that is, no fade), the chase will wait for one second, then snap to the next step. None (0%) of the available speed time will be used for crossfading.

If the crossfade is set to 50%, then the chase will perform a 0.5 second crossfade to the next step, wait for 0.5 seconds and then perform the next crossfade. That is, 50% of the time is used to perform a crossfade and 50% of the time is spent waiting before starting the next crossfade. If the crossfade is set to 100%, then the Chase will use all the time performing a crossfade to the next step. When the crossfade is complete, the next crossfade will commence immediately.

Direction Tab:

The choices are, **Forward**, **Random** or **Backwards.**

You can manually step a chase by tapping its playback button (below its red fader).
Hint: Set a low speed if you want to manually step the chase.

Manually step a chase by tapping its playback button (below its red fader).
To manually step in the reverse direction HOLD the ⊙[**Back**] button while tapping the playback button.

⚠ Note: Set a low speed if you want to manually step the chase.

Chases automatically stop when their red fader is at zero.

To change a chase back to a cue-list touch **Use as List**.

13.2   EDIT CUES

To edit the intensity or attributes of a fixture in a cue, first bring down all yellow and red faders, then push up the red playback fader that contains the cue/cuelist and play the cue that you wish to edit. Fade up the Yellow master.

- To edit the intensity of a fixture, fade the fixtures yellow fader up from zero. When the fader matches the current level in the cue, the yellow fader will take control of the intensity. Set the intensity to the required level.
- To edit the other attributes of a fixture select the appropriate App (Color, Position, Beam / Other). Select the fixture(s) to be edited then use the App to make the change.

To update the cue press ⦿ [**Record**] then press and HOLD (for 1 second) the button below the Red Playback fader which contains the cue. The cue will be overwritten with the edited values.

13.3   EDIT ANIMATIONS AND SHAPES

Recorded animations and shapes cannot currently be edited (future feature).

If you need to change an animation or shape recorded in a cue, create a new animation or shape then overwrite the existing cue by pressing [**Record**] then press and HOLD (for 1 second) the button below the Red Playback fader which contains the cue.

14   LIVE SPEED

"Live Speed" allows for overriding the fade times and speeds of cues, chases, animations and shapes. The changes are only a temporary offset applied to the settings saved in the cue or on the yellow faders. The settings in recorded cues are not altered. Live Speed overrides are not saved when you save your show.

From the "Home" screen press **Live Speed**.
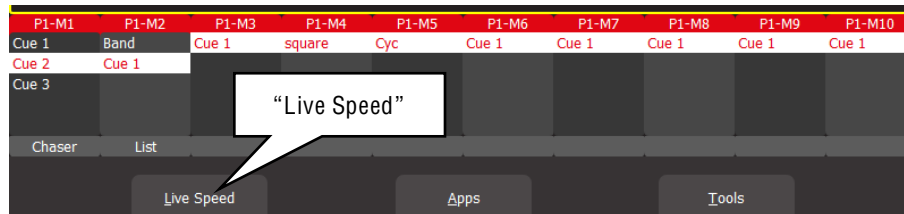
"Home" Screen

The "Live Speed" screen opens:
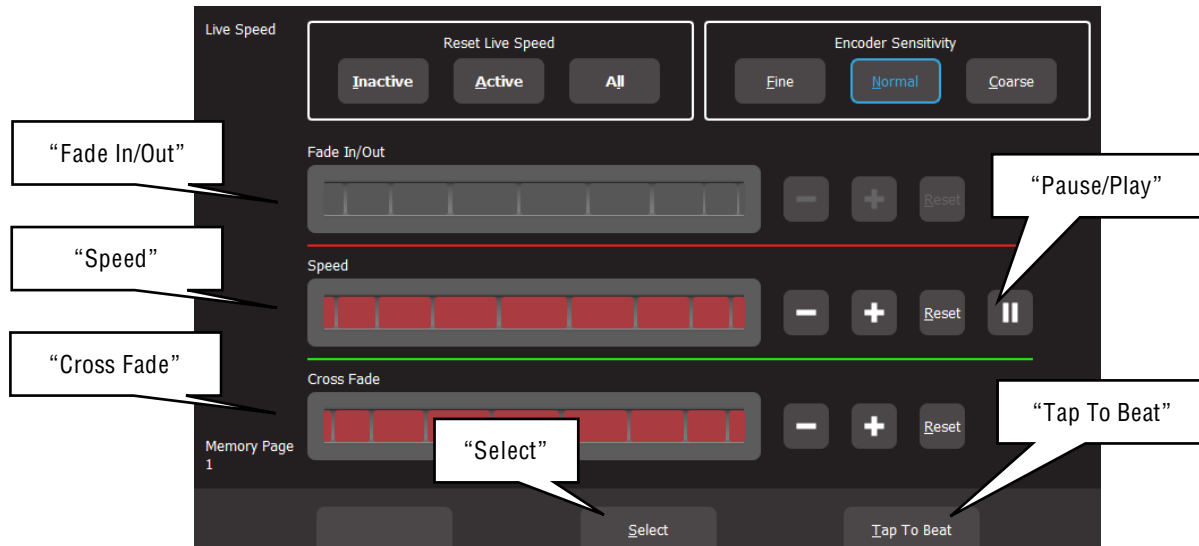
The "Live Speed" screen has controls to override the following parameters:

- "Fade In/Out" times of a cue.
- "Speed" "Pause/Play" of a chase, animation or shape.
- "Crossfade" of a chase or animation.
- "Tap To Beat" to set the speed of a chase, animation or shape.

Each set of controls only becomes active when one of the above parameters is either active on the output or "selected" as described below.

For example, if a chase is running on the output, then only the "Speed", "Crossfade" and "Tap To Beat" controls are active.

The **+** or **–** buttons can override fade, speed or crossfade. Touching **+** increases the value by multiplying the recorded value. Moving it to the left or touching **-** decreases the value by dividing the recorded value.

Therefore, if the recorded value is small it will take a large variation to see the change. If the recorded value is 0 then it cannot be changed.

14.1   SELECT

When the **Select** button is grey, the controls will override all live output.

If you touch **Select,** it turns <u>blue</u> and you can now choose which playback to override by tapping the buttons below the playbacks. Multiple playbacks can be selected and or deselected. The LED in the playback button lights to show it is selected. A playback does not have to be active on the output when you use "Select" allowing you to make blind changes.

Touch **Select** again to return to live output control.

14.2   TAP TO BEAT
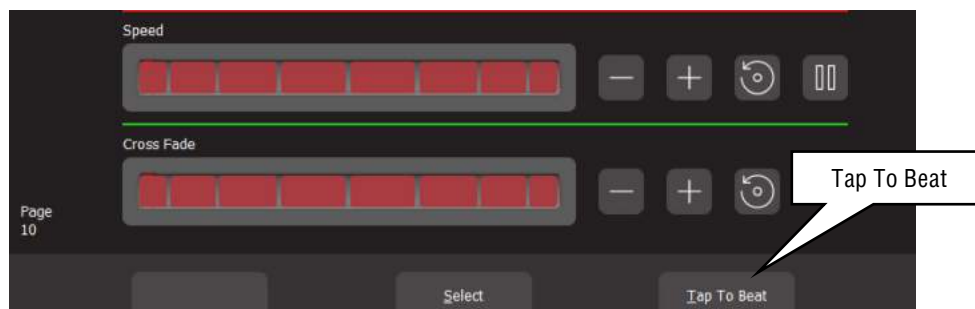
Setting the speed of a chase, animation or shape is possible by tapping the beat.

Play the chase, animation or shape on the output then from the "Home" screen press **Live Speed**.

Tap the **Tap to Beat** button at least 4 times at the desired rate. Genesis averages all taps to set the speed. If you have tapped a speed and then want to change it, pause for 2 seconds then start tapping again (at least 4 taps).

If you have multiple chases, animations or shapes running, you can use **Select** as described above to choose which ones you will affect when you **Tap To Beat**. This also allows you to set the rate if the red fader is down (not playing on the output).

14.3   PAUSE/PLAY

You can "Pause/Play" a chase, animation or shape.

Play the chase, animation or shape on the output then from the "Home" screen press **Live Speed**.
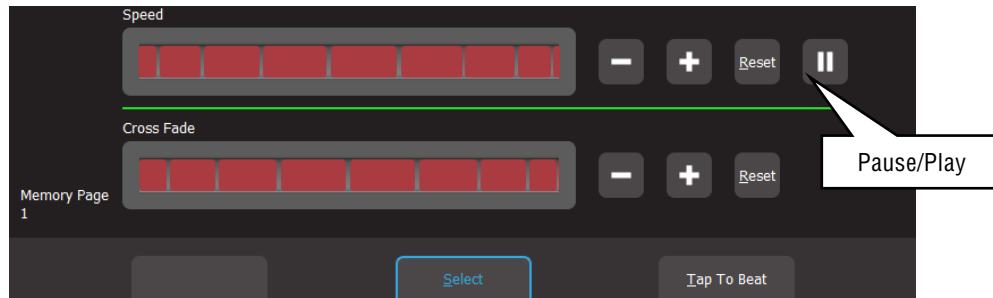
Pause/Play

Touch ‖ to pause. Touch again to play.

If there are multiple chases, animations or shapes running, use **Select** as described above to choose which ones you will affect when you **Pause/Play**.

14.4   OVERRIDE INDICATORS

The playback section of the home screen shows the following symbols when a playback has been overridden by the "Live Speed" controls:

- ">" indicates that the fade, speed and or crossfade has been overridden.
- "‖" indicates that the chase is paused.

"Live Speed" is overriding the cuelist.

"Live Speed" has also paused the chase. .the
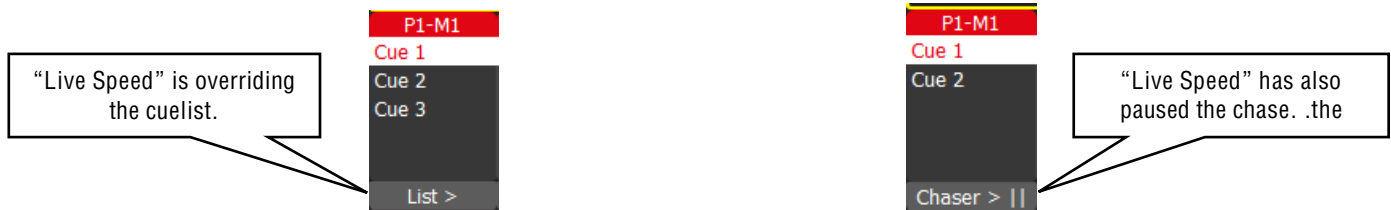
14.5   RESET LIVE SPEED

Any changes made by "Live Speed" can be reset to normal.

To reset "individual" parameters:

"Fade In/Out", "Speed" and "Crossfade" controls each have a **Reset** button.

You can reset all (Fade In/Out", "Speed" and "Crossfade) parameters:
- When the **Select** button is grey you can choose to reset "Inactive", "Active" or "All".
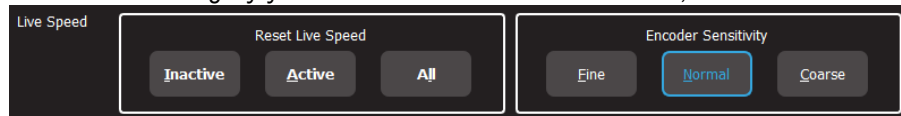
- When the **Select** button is blue you can choose to reset "Inactive", "Selected" or "All".

15   FLASH

It is possible to Flash any fixture or multiple fixtures, any Playbacks or any multiple combination of the above at the one time. The only limit is ability to hold down multiple buttons. The FLASH function is a momentary action, and all actions are instantaneous.

- The buttons below the "Yellow" fixture faders act as intensity [**Flash**] buttons ONLY when the "Home" screen is displayed. At other times they act as fixture select buttons.

- The buttons below the "Red" playback faders act as playback [**Flash**] buttons ONLY when a single cue is recorded in them. If a red fader contains a cue-list, its button acts as a "go" button to fade to the next cue in the list.

15.1   FLASH LEVEL

To set the flash level, from the "Home" screen press **Tools/Setup**. Drag the virtual "Flash Level" slider to set the level.

- For fixtures (yellow) it sets the intensity level of a fixture when it is flashed.

- For Playback (red) it sets the *percentage* of the intensity levels recorded in the cue. Fixture attributes (color, position etcetera) are always flashed to their recorded level.
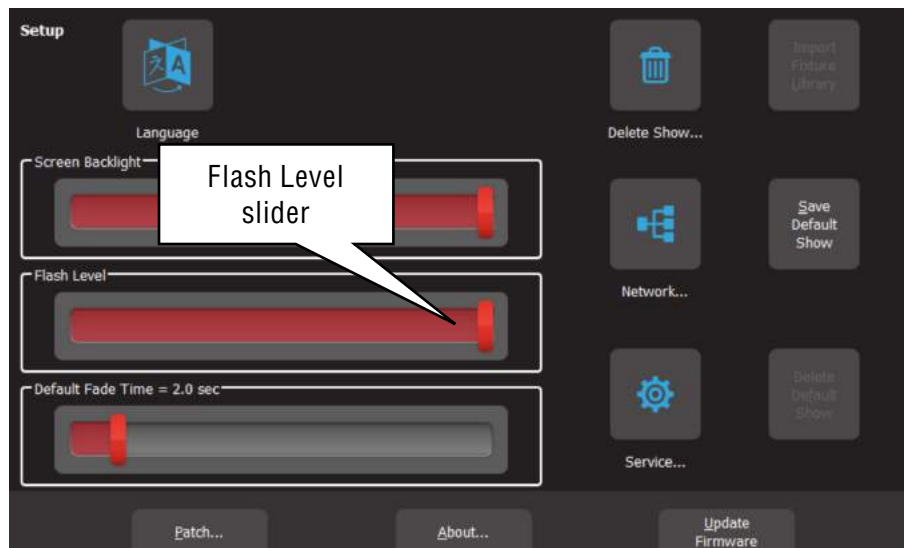
Setup

16   Remote Triggers

16.1   OVERVIEW

The Genesis can be controlled by "Remote Trigger Inputs" and it can also send messages to other devices by "Remote Trigger Outputs".
There are 3 "message types" of remote trigger <u>inputs</u> available:
- OSC (Open Sound Control)
- UDP (User Datagram Protocol)
- TCP (Transmission Control Protocol).

These message types can be used to perform any of the following "Actions":
- Play Memory (with the option to turn all "Other Cues Off). Plays the specified memory at the specified level and fade time
- Next Cue. Plays the next cue in the specified memory
- All Cues Off
- Override. Enable or disable the override input

There are 2 types of remote trigger <u>outputs</u> available:
- OSC
- UDP

Output remote triggers can be used to send a "Cue Change" message to another device. See section 16.4

16.2   ADD A REMOTE TRIGGER

To open the Remote Triggers screen, touch **Tools**, **Setup**, **Remote Triggers**.
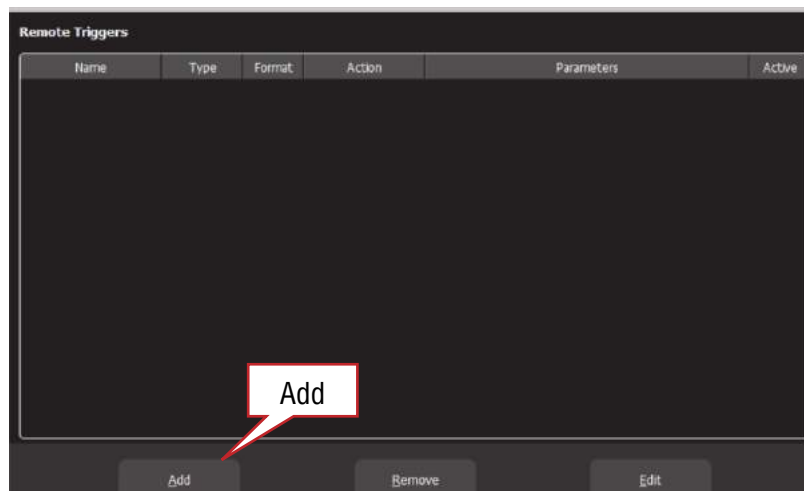
To create a new remote trigger touch, **Add**.

Trigger Name

Message Type
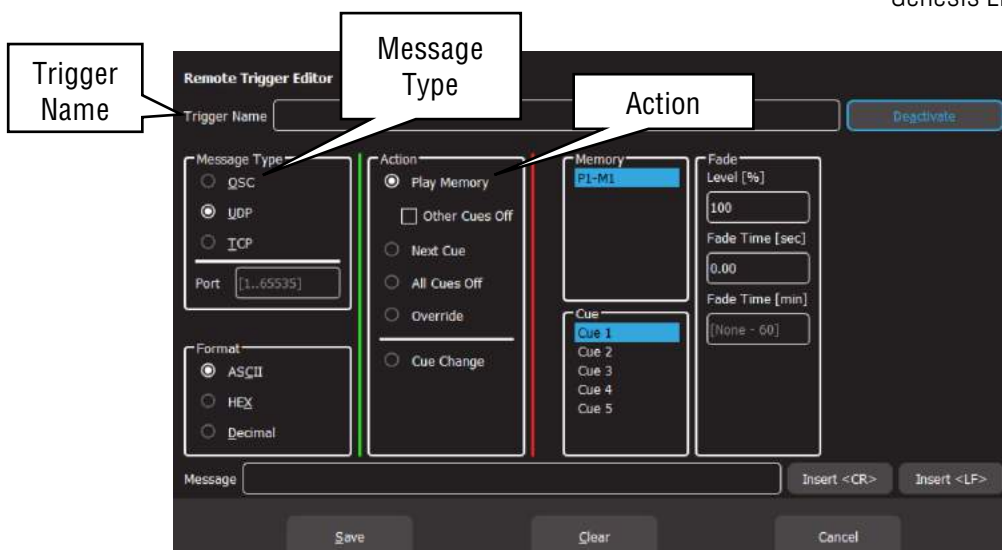
Action

Remote Trigger Editor

Enter a descriptive name for the trigger in the "Trigger Name" pane at the top.
Select the "Message Type" of remote trigger:

- OSC (Open Sound Control). See section 16.2.1
- UDP (User Datagram Protocol). See section 16.2.2
- TCP (Transport Control Protocol). See section 16.2.2

Select the "Action" that you want the message to perform:

- Play Memory. See section 16.2.1
- Next Cue. See section 16.2.1
- All Cues Off. See section
- Override (enable/disable). See section 16.3.1

Select or enter all of the parameters for the selected "Action" as described below then touch **Save**.

16.2.1   OSC Remote Triggers

OSC (Open Sound Control) is a protocol for real time control between computers and multimedia devices. OSC messages sent from an OSC controller can be used to control the Genesis.
Genesis can also send OSC messages to acknowledge whenever the level of any recorded cue changes. See section 16.4

In the "Remote Trigger Editor" screen (above), enter a descriptive name for the trigger in the "Trigger Name" pane at the top.

To use OSC, Genesis needs to know the "Port Number" that is used by the the device sending the OSC message. If the sending device uses a specific port number, then enter the same port number in the Genesis. If not, choose a random port number in the range 1 to 65535 and enter the same number in the sending device and the Genesis.

Genesis will respond to an OSC message and follow the instructions contained in the message to either "Play Memory", advance to "Next Cue", "All Cues Off" or enable/disable "Override". These actions are all described below and also in their own sections as referenced at the end of this section.
To assist you in programming the OSC messages into your OSC controller, when you select a type of "action", the Genesis shows you the message it needs to receive for that action. This allows you to simply copy that message into your OSC controller and edit the message if necessary, as described below.

"Play Memory" Action.
When you select a "Play Memory" action, the message pane at the bottom of the screen shows you a <u>template for the OSC message</u> that is required to play a memory with variables that you can replace with actual values.

The template is:
> /PlayMemory/Page=$p/Memory=$m/Cue=$c/Level=$l/Fade=$t

The variables are:

$p	Page Number (1-10)
$m	Memory Number (1-10)
$c	Cue Number (1-…)
$l	Level (0-100)
$t	Fade time in milli seconds (0-…)

The fade time is entered in milli-seconds. 1 second = 1000 milli-seconds.

In your OSC controller, enter the message as shown in the template but replace each of the "$variables" with the actual values that you require for the trigger.

For example, to play Page 1, Memory 2, Cue 3 at a level of 100% with a fade time of 4 seconds, the OSC message becomes:
> /PlayMemory/Page=1/Memory=2/Cue=3/Level=100/Fade=4000

To fade down the cue, send an OSC message with a level of 0%:
> /PlayMemory/Page=1/Memory=2/Cue=3/Level=0/Fade=4000

Note: Only one OSC "Play Memory" Remote Trigger is allowed to be saved but it can be used to play any memory to any level. When you have saved an OSC "Play Memory" Remote Trigger, Genesis listens for <u>all</u> OSC "Play Memory" messages. <u>Each received message</u> contains the <u>instructions</u> for the memory to play including its level and fade time so only one remote trigger is required.

Note: OSC messages always use <u>memory numbers</u> and <u>cue numbers</u>. Genesis allows you to rename memory numbers and cue numbers. If a memory or cue has been renamed, the OSC message must still use the original <u>memory number</u> and <u>cue number</u>.
For example;
If "Cue 3" was renamed "Blue Wash", the OSC message must still use the name "Cue 3".
If "P1-M1" was renamed "Act1", the OSC message must still use the name "P1-M1".

See section 16.2.1 for more information on "Play Memory".

"Next Cue", "All Cues Off" and "Override" Actions
When you select a "Next Cue" or "All Cues Off" action, then select a Memory or when you select the "Override" action and either "Enable" or "Disable", the message pane at the bottom of the screen shows you the <u>actual OSC message</u> that is required to trigger the action. Copy the exact message into your OSC controller.

- See section 16.2.1 for more information on Next Cue
- See section 4.11.4 for more information on Override
- See section16.4 for more information on Cue Change

16.2.2 UDP and TCP Remote Triggers

UDP (User Datagram Protocol) and TCP (Transport Control Protocol) are Internet protocols and can be used to send messages to control the Genesis. Many third-party control systems can send UDP or TCP messages and hence be used to control the Genesis.

Genesis can also send UDP or TCP messages to other devices to acknowledge whenever the level of any recorded cue has changed and hence that the received message has been executed. See 16.4

In the "Remote Trigger Editor" screen (see above), enter a descriptive name for the trigger in the "Trigger Name" pane at the top.
Genesis needs to know the "Port Number" used by the the device sending the message. If the sending device uses a specific port number, then enter the same port number in the Genesis. If not, choose a random port number in the range 1 to 65535 and enter it in the sending device and the Genesis.

UDP and TCP messages can be sent in different formats. Select the "Format" that is used by the sending device.
- **ASCII** (*American Standard Code for Information Interchange)*
- **Hex** (Hexadecimal)
- **Decimal**

The TCP or UDP message that is sent from the controlling device can be any combination of text or numbers. This can be any descriptive text that you like. The message does not define any parameters of the action such as Memory Number, Cue Number, Level or Fade time.

In the "Message" pane, enter the exact message that will be sent by the controlling device. When the received message exactly matches the message in the message pane, the action and parameters as set in the "remote trigger editor" screen will be triggered.

The actions that can be triggered are either "Play Memory", advance to "Next Cue" or enable/disable "Override". These actions are all described in their own sections.
- See section 16.2.1 for more information on Play memory

70

- See section 16.2.1 for more information on Next Cue
- See section 4.11.4 for more information on Override

For example, the message might be "House Lights On" and when received, it will trigger an action to "Play Memory, P1-M12, Cue 1 at 100% Level with a Fade Time of 10000.

Some sending devices will automatically include a <CR> (Carriage Return) or <LF> (Line Feed) at the end of each message. If the sending device ends the message with a CR or LF, you must also include these in the message pane because the message that you enter must <u>exactly match</u> the message that is sent by the transmitting device.

A <CR> or <LF> cannot be typed directly into the message pane. To insert a Carriage Return or Line Feed into the message pane, touch either **Insert <CR>** or **Insert <LF>**.
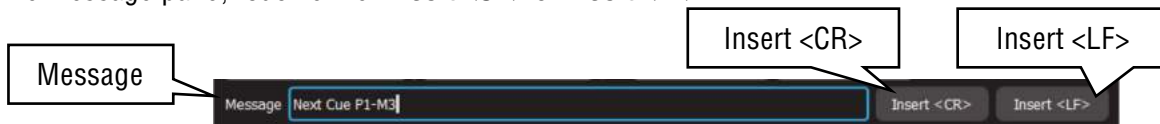
A CR or LF are also used to separate consecutive messages. This allows the Genesis to recognise each separate message and it can then use them in separate triggers.

<u>Hint</u>: Adding a <CR> or <LF> to end of each message is not mandatory but it is good practise. They allow the Genesis to always knows that the message has ended.

16.2.1   Play Memory.

"Play Memory" is an "Action" that can be triggered by any of the 4 "Message Types" (Contact, OSC, UDP, TCP). The 4 message types are described above. When the "Play Memory" action is triggered it will play the selected cue.

- OSC messages will play a memory/cue using the <u>parameters in the OSC message</u>. See section 16.2.1
- Contact, UDP and TCP messages will play the selected memory/cue using <u>the parameters in the remote trigger screen</u>. See section 16.2.2
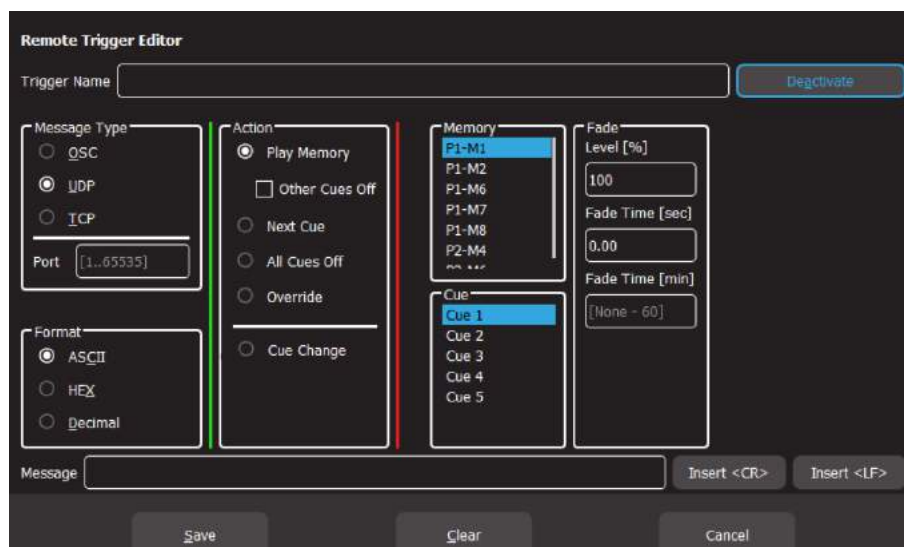
- To fully fade up a memory use a trigger with the Fade Level set to 100%
- To fade down a memory use another trigger with the Fade Level set to 0%

The "Fade Level" in the Play Memory trigger is the level for that playback (page/memory).

The "Fade Time" in the Play Memory trigger is the time for the playback (page/memory) to fade up or downwhen triggered by the message. This time should not be confused with the fade times of the cue(s) in the playback. Every cue has its own "Fade In" and "Fade Out" time as set when the cue is recorded or edited.

- If you want to play a memory using a Remote Trigger fade time, it is advisable to set the cues own "Fade In" and "Fade Out" times to 0 seconds so that the Remote Trigger fade time is the only time that affects the cue.
- If you want to play a memory using the cues fade time it is advisable to set the Remote Trigger fade time to 0 seconds so that the cue fade times are the only times that affects the cue.

See section 16.3 for information on the interaction between red playback faders and remote triggers.

Hint: Remote triggers can be used to play a single cue at different levels and with different fade times. For example, a memory might contain the cue for "House Lights". One trigger might fade up the cue to 100% level over 5 seconds. Another trigger might fade the same cue to 50% level over 20 seconds.

Hint: If a memory/cue-list is set to play as a chase, using a Remote Trigger fade time will fade up or down the running chase.

16.2.1 Other Cues Off

"Other Cues Off" is a tick box option that is available when a "Play Memory" action is selected. If "Other Cues Off" is ticked, playing the selected memory will also fade out all other active cues.

16.2.1   Next Cue

"Next Cue" is an "Action" that can be triggered by any of the 4 "Message Types" (Contact, OSC, UDP, TCP). The 4 message types are described above.

"Next Cue" plays the next cue in the selected memory.
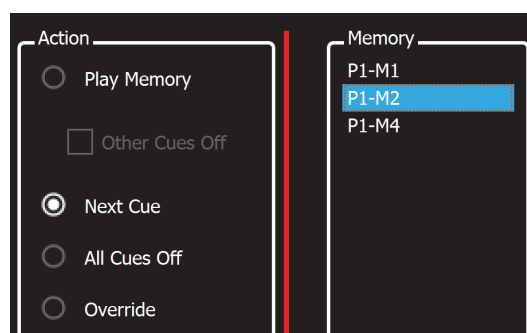
For example, memory P1-M2 (Page 1- Memory 2) contains a cue-list of 5 cues. Cue 2 is currently active. A "Next Cue" action on P1-2 will advance the cue-list to cue 3.

- If the memory is not currently faded up, "Next Cue" advance to the next cue and will fade it up to 100% level.
- If the memory is faded up, "Next Cue" will advance to the next cue and maintain the current fade level.

16.2.1   All Cues Off

"All Cues Off" is an "Action" that can be triggered by any of the 3 "Message Types" (OSC, UDP, TCP). The 3 message types are described above. When the "All Cues Off" action is triggered, it will fade out all active cues.

16.3   REMOTE TRIGGERS AND RED PLAYBACK FADERS

Cues can be played back by fading up their red playback faders or by "Remote Triggers". If you send a remote trigger, is sets the playback level as if you had moved the red fader (this includes the [AllCuesOff] message). Therefore, it is possible that the physical position of a red fader does not match the actual playback level of its cue on the output.

Red playback faders and Remote Triggers operate on a LTP (Latest Take Precedence) basis. If a remote trigger has been used to playback a cue, moving the red fader for that cue through its range causes the fader to take back control of the cue and set its level to the fader position.

A remote trigger can playback a memory from any page, therefore you can have up to 100 active cues (10 memories times 10 pages) and even more with wings connected if the cues have been played by remote triggers. Therefore, to get back to normal (with the red fader positions showing the actual levels) you need to step through all 10 pages and look for any active cues and then move their respective red faders through their range then set them to their required level.

16.3.1   Override Disable

"Override" is a function where an Art-Net or sACN input signal from another lighting console "overrides" the Genesis own output. Override is configured in the "Universes" screen. See section 4.11.4. Override can be prevented from occurring by a Remote Trigger "Action" that can be triggered by either OSC, UDP or TCP. It can be set to either "Enable" or "Disable".

- When "Override" is disabled, it will prevent override from occuring, even if it has been activated in the "Universes" screen
- When "Override" is enabled, it will allow override if it has been activated in the "Universes" screen

16.4   CUE CHANGE

"Cue Change" is a Remote Trigger Output.

Whenever the level of any recorded cue changes on the output, a message can be sent via OSC or UDP. This can be used to send a message back to a controlling device, confirming that the Genesis has responded to a remote trigger input.

Genesis needs to know the "Port Number" used by the the device receiving the message. If the receiving device uses a specific port number, then enter the same port number in the Genesis. If not, choose a random port number in the range 1 to 65535 and enter it in the receiving device and the Genesis.

In the "Destination Address" pane, enter the IP address to which the message is to be sent.

"UDP" Cue Change Messages have a flexible format and "OCP" Cue Change Messages have a fixed format. The different formats are described below.

<u>"UDP" Cue Change Messages.</u>

In the "Message" pane, type in the outgoing message. You can enter any message text that you like. The following "variables" can be included in the outgoing message:

$Variables	Parameter
$n	network name
$m	memory number [1…100]
$c	cue number
$l	level [%]
$t	fade time [ms]

When the message is sent, the "$variables" in the message will be automatically replaced with the actual values from the memory that changed level.
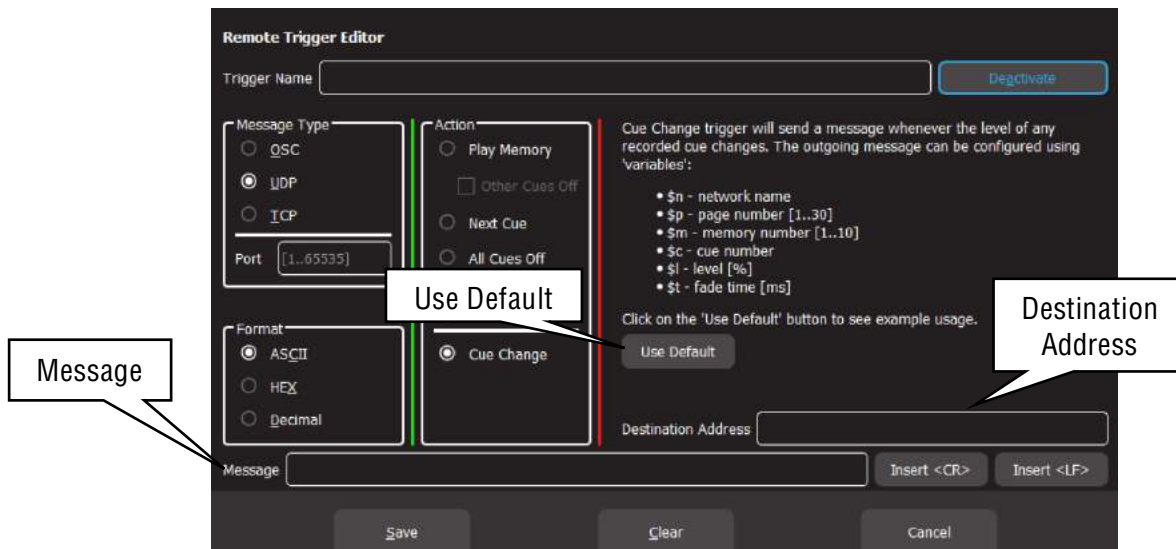
If you touch **Use Default**, the message pane will show a sample message.

Genesis:::CueInfo:::$n:::$m:$c:::l=$l%:::t=$tms

For example,

Memory 1, Cue 1 has the foyer lights at a level of 100%. If you define the "Cue Change" message as:

"Foyer/Memory=$m/Cue=$c/Level=$l".

When M1-C1 changes level to 100%, Genesis will send the message:

"Foyer/Memory=1/Cue=2/Level=100"

<u>"OSC" Cue Change Message.</u>
The message pane shows the message that will be sent.
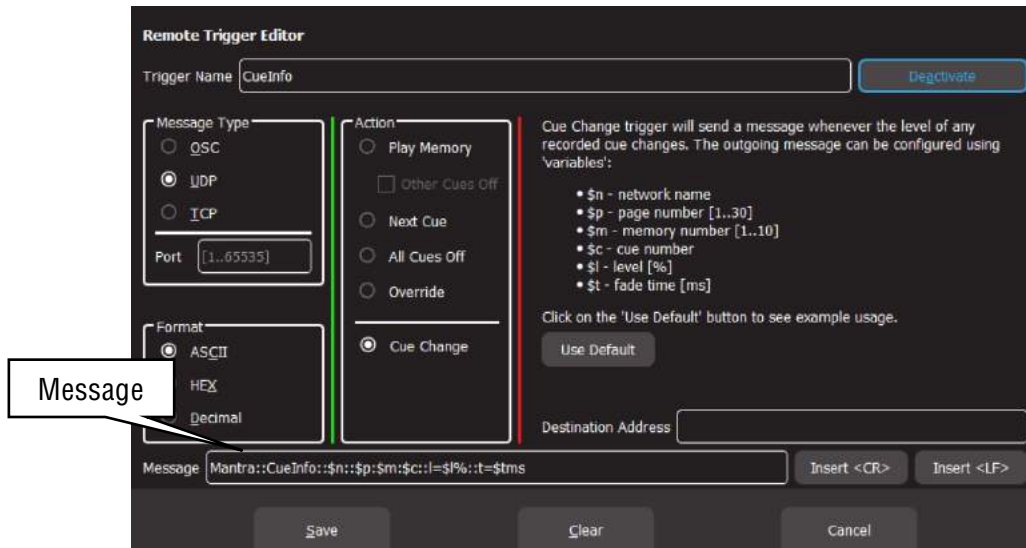
The message format is:

/CueChange/Page=$p/Memory=$m/Cue=$c/Level=$l/Fade=$t

When the message is sent, the "$variables" in the message will be automatically replaced with the actual values from the memory that changed level.

For example,
Memory M1-P1, Cue 1 has the foyer lights at a level of 100%. When M1-P1-C1 changes level to 100%, Genesis will send the message:
/CueChange/Page=1//Memory=1/Cue=1/Level=100/Fade=0"

16.5   DE-ACTIVATE A REMOTE TRIGGER

To de-activate a Remote Trigger, from the home screen touch **Tools**, **Setup**, **Remote Triggers**.
Touch the remote trigger to select it then touch **Edit**.

Name	Type	Format	Action	Parameters	Active
House Lites	UDP	ASCII	Play Memory	P3-M6 : Cue 1 to 100% over 0 sec	Active
Work Lites	OSC		Play Memory	Any Memory to any level	Active
Blue Wash	UDP	ASCII	Play Memory	P1-M1 : Cue 1 to 100% over 0 sec	Active

Edit

Add   Remove   Edit

To de-activate the Remote Trigger touch **Deactivate**, then **Save.**

Remote Trigger Editor
Trigger Name P1-M1 Cue 3   Deactivate

16.6   DEVICES THAT CAN SEND OSC REMOTE TRIGGER MESSAGES

Many third-party devices are available that can send OSC messages. Two are examples are,

Elgato StreamDeck ©

OSC

TouchOSC App

16.6.1   StreamDeck

Elgato StreamDeck © is an affordable and customizable USB button panel. When the StreamDeck is used with "Bitfocus Companion" software, it enables the StreamDeck to send OSC messages that can be used to control the Genesis via "Remote Triggers". See section 16.2.1 for more information on OSC remote triggers.

The Companion software is run on a computer that is connected to the same network as the Genesis. The StreamDeck plugs into a USB port of the same computer. The buttons on the StreamDeck are fully programable and each button can be configured to send an OSC message to the Genesis.

The OSC messages can be used to control the Genesis via "Remote Triggers" and can play any cue at any level with any fade time or play the "next cue" in a specified memory (cue-list) or enable/disable "override" mode.

Ethernet

ALTMAN
LIGHTING

76

StreamDeck

Companion Software
running on PC or MAC

Typical StreamDeck Setup
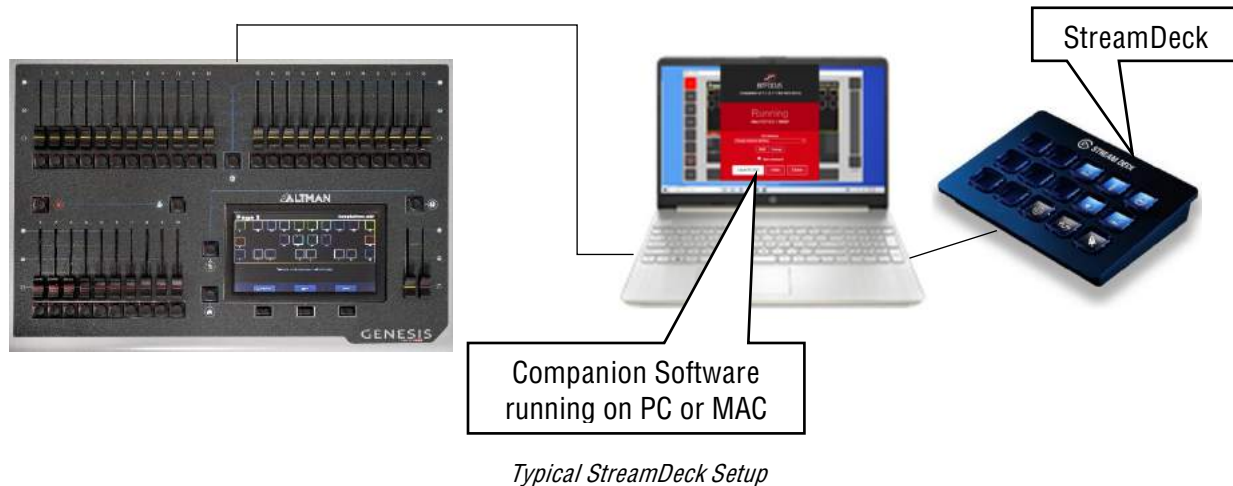
This description covers the basics in configuring a StreamDeck button to send an OSC message to the Genesis. You can find information online on how to setup a StreamDeck, how to customize StreamDeck buttons and also about advanced StreamDeck programming.

Companion software can be downloaded from: https://bitfocus.io/user/downloads
Run Companion. Check that the "GUI Interface" is set to "localhost / 127.0.0.1.

GUI
Interface
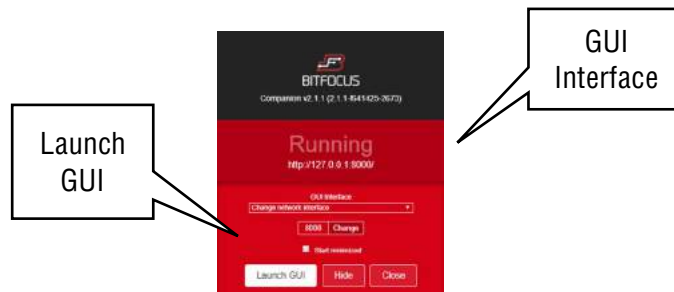
Launch
GUI

Click **Launch GUI**. The GUI opens in your WEB browser.
In the "Instances" tab select **Add by category** then click **Generic**, **Generic OSC**.
Click the "Config" tab. In the "Target Port" pane, enter a port number". Choose any random number in the range 1 to 65535. In the "Target IP" pane, enter the IP address of the Genesis to be controlled. The IP address can be found in the Genesis "System Settings", "Available Networks" screen.

On the Genesis, touch **Tools**, **Setup**, **Remote Triggers, Add.** Select **OSC**, **Play Memory**. Make a note of the message in the message pane so that it can be entered into Companion later on. Enter the same port number that was set in the Companion Config tab. Name the trigger then **Save**.

Back in the Companion GUI, click the "Buttons" tab, click the button that you want to configure. In the "Edit Button" tab on the right, click "Set Button Type" then choose "Regular Button".
In the "Text" pane, type the label for the button.
Click "Add key down/on action" then choose "Send message without arguments".
In the "OSC Path" pane, replace the text with the message previously noted from the Genesis but replace each of the "$variables" with the actual variables that you require for the OSC message.
For example:

ALTMAN
LIGHTING

The noted OSC message is:
      /PlayMemory/Page=$p/Memory=$m/Cue=$c/Level=$l/Fade=$t

To play Page 1, Memory 2, Cue 3 at a level of 100% with a fade time of 4 seconds, replace the variables with the required values……
      /PlayMemory/Page=1/Memory=2/Cue=3/Level=100/Fade=4000
Note: The fade time is entered in milliseconds. 1 second = 1000 milliseconds.

To program another StreamDeck button to send a different message, click on the button, set the type, text and enter the same message but replace the variables with different values. For example, to fade down the cue, send an OSC message with a level of 0%.

Hint: When programming keys for "Next Cue" or Override, the message generated by the Genesis does not have any variables so simply copy it directly into the Companion "OSC Path" pane without editing it.

Hint: It is very easy to make a flash key on the StreamDeck. Program the key down action to play the cue at 100% and the key up action to play the same cue at 0%.

16.6.1   Touch OSC

"Touch OSC" is a touch screen app for IOS and Android phones and tablets. It can send OSC messages over Wi-Fi to compatible devices such as the Genesis. The OSC messages can be used to control the Genesis via "Remote Triggers" and can play any cue at any level with any fade time or play the "next cue" in a specified memory (cue-list) or enable/disable "override" mode. See section 16.2.1 for more information on OSC remote triggers.

Touch OSC consists of two parts.

1. The first part is the "Touch OSC Editor". It is a program on a computer that is used to create the buttons and their commands that can be used in the "Touch OSC App" (see below). The buttons that you create on are fully programable and each button can be configured to send a different OSC message to the Genesis.
Touch OSC Editor can be downloaded from hexler.net/products/TouchOSC. Comprehensive help files are available on line for Touch OSC.

2. The second part is the "Touch OSC App". When the buttons, their OSC commands and their labels have been created in "Touch OSC Editor", the "current layout" is "Synced" via Wi-Fi to the "Touch OSC App" on the phone or tablet. The computer running the "Touch OSC Editor" and the phone or tablet running the "Touch OSC App" must be connected to the same Wi-Fi network for the "Sync" to occur. The computer running "Touch OSC Editor" is no longer required after syncing unless different buttons need to be programmed. The Touch OSC App is available for free download from your App store.

The phone or tablet running the "Touch OSC App" and the Genesis must be connected to the same Wi-Fi network so that the "Touch OSC App" can send the OSC commands over Wi-Fi to the Genesis. Genesis does not have in-built Wi-Fi so it must be connected via the ethernet connector to an either an existing network that is connected to Wi-Fi or to a Wireless Access Point.
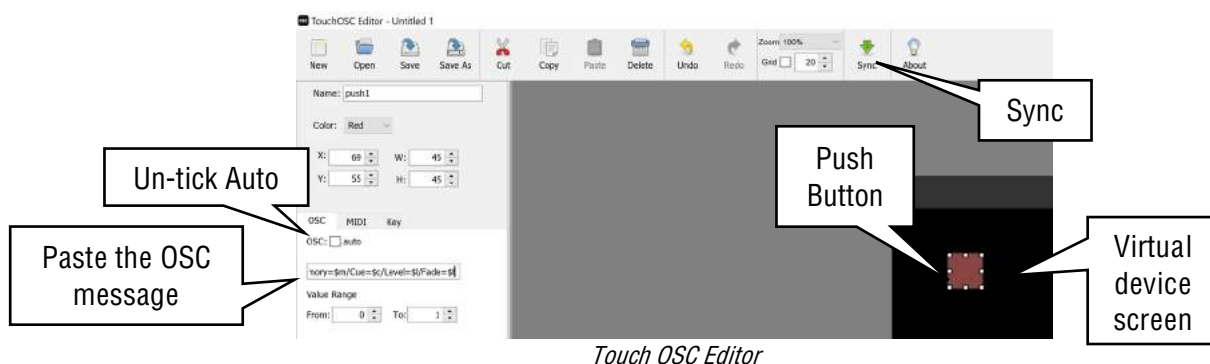
The following is a brief description of how to program one button to play a cue on the Genesis. Multiple buttons can be created and each can perform a different function.

Open the "Touch OSC app" on the phone or tablet. Select "Connections", "OSC" then enter the IP address of the Wi-Fi that is connected to the same network as the Genesis.

Take note of the "Port (outgoing) number in Touch OSC. This is usually 8000 but you can use any number as long as the same port number is entered in the Genesis remote trigger.

On the Genesis, from the home screen touch **Tools**, **Setup**, **Remote Triggers, Add.** Select **OSC**, **Play Memory**. Write down the message that appears in the message pane. This message will be entered into the Touch OSC Editor later on. Enter the same port number that was set in the Touch OSC App. Name the trigger, then touch **Save**.

Open the" Touch OSC Editor" program. Right click on the virtual device screen and select "Push Button". The button appears and can be resized, positioned and colored.

Touch OSC Editor

In the OSC tab, un-tick the "Auto" box then click in the message box and enter the OSC message that was copied earlier from the Genesis. In the message, replace each of the "$variables" with the actual variables that you require for the OSC message.

For example:

The copied OSC message is,

   /PlayMemory/Page=$p/Memory=$m/Cue=$c/Level=$l/Fade=$t

To play Page 1, Memory 2, Cue 3 at a level of 100% with a fade time of 0 seconds, replace the variables with the required values,

   /PlayMemory/Page=1/Memory=2/Cue=3/Level=100/Fade=0

A label for the button can be inserted by right clicking on the virtual device screen and selecting "Label H" (Label Horizontal) then entering "Text" for the label.

Save the layout and take note of the file name. This is the name that you will later select in the Touch OSC App.

Connect the computer running the Touch OSC Editor and the phone (or tablet) running the Touch OSC App to the same Wi-Fi as the Genesis.

In the "Touch OSC App" select "Layout", "Add".
In the "Touch OSC Editor" touch "Sync".
The layout will be transferred to the App via Wi-Fi.

Hint: If the transfer does not automatically work, in "Add Layout" select "Edit" then "+". Enter the IP address of the Wi-Fi.

In the "Touch OSC App" select "Layout", then select the layout name that you created in the "Touch OSC Editor". Select "Done". The layout appears on the screen of the phone or tablet. Touch the button that you created to send the OSC remote trigger via Wi-Fi to the Genesis.

17   SHOW FILES

17.1   NEW

To open a new show, from the "Home" screen tap **Tools**, **New**.

- If a "Default" show exists it will be automatically loaded whenever a "New" show is selected. The Default show includes the patch.
- If a "Default" show does not exist, selecting a "New" show will clear all memories and clear the patch.

See also section 18.8, "Save Default Show".

17.2   SAVE

To save a show, from the "Home" screen tap **Tools**, **Save**.

- If you are saving a "New" show, touch in the "File Name" box then enter a name for the show.
- If you are saving an already saved show, the existing show will be updated.

17.3   SAVE AS

To save an existing show with a new name, from the "Home" screen tap **Tools**, **Save As**.

By default, the existing show name will be automatically entered with "_copy" added to it. You can accept the name or touch in the "File Name" box then enter a new name for the show.

17.4   LOAD

To load an existing show, from the "Home" screen tap **Tools**, **Load**. Touch the show name then touch **Load**.

"Load"-ing a show replaces the entire contents of the Genesis memory with the show data that you load. This includes all Cues and the Patch.

17.5   EXPORT TO USB

A saved show can be exported to a USB stick. The USB stick must be formatted as FAT32. Insert a USB stick in one of the USB sockets on the rear panel. From the "Home" screen tap **Tools**, **Export**. The screen offers the current show name, but a different show can be chosen if you desire. Touch **Save** to complete the export.

17.6   IMPORT FROM USB

To import a previously exported show from a USB stick, insert a USB stick containing the show file in one of the USB sockets on the rear panel. From the "Home" screen tap **Tools**, **Import.** Select the show file by touching it. Tap **Load.**

18   SETUP

18.1   OVERVIEW

To select the "Setup" screen, from the "Home" screen touch **Tools/Setup**.
The Setup screen offers the following functions:

18.1.1   Flash Level

See section 14.

18.1.2   Touch Screen Backlight

To adjust the brightness of the touch screen, from the "Home" screen touch, **Tools/Setup** then use the "Screen Backlight" slider.

18.1.3   Default Fade Time

When a cue is recorded, the "Fade In" and "Fade Out" times will be the time value in the "Default Fade Time" setting. To change the default fade time setting, from the "Home" screen touch, **Tools/Setup** then use the "Default Fade Time" slider.

18.2   DELETE SHOW

To delete a show file, from the "Home" screen touch, **Tools/Setup**. All saved shows are displayed. Touch the icon of the show to be deleted than touch **Delete**. To confirm the action touch **Yes**.

Deleting a show cannot be un-done.

ALTMAN
LIGHTING

18.3   DELETE DEFAULT SHOW

To delete the "Default" show, from the "Home" screen touch **Tools**, **Setup**, **Delete Default Show**. If the default show is PIN protected, you must enter your PIN to delete the show.

18.4   SYSTEM SETTINGS

To select the "System Settings" screen, from the "Home" screen touch **Tools**, **Setup**, **System Settings**.
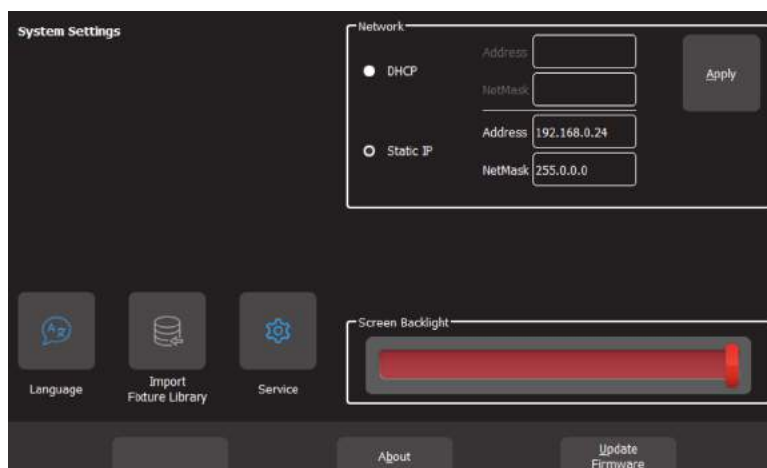
System Settings
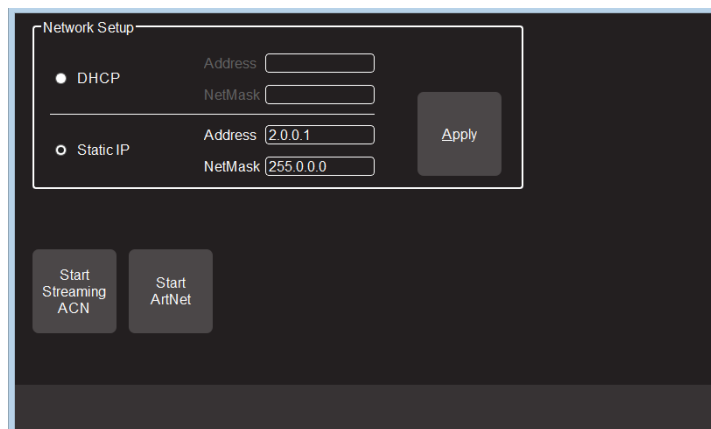
18.5   NETWORK

Genesis can transmit ArtNet and sACN protocols from the network connector on the rear panel. These protocols support multiple DMX universes over Ethernet LAN (Local Area Network) or WAN (Wide Area Network).

18.5.1   Network Setup

Network address are automatically assigned by the network or addresses can be entered manually.

- To have a network address automatically assigned select **Setup**, **Network**, then touch **DHCP**. Use this setting when connecting to the internet.
- To manually enter a network select **Setup**, **Network**, then touch **Static IP** and enter the Address and NetMask. Use this setting when streaming ArtNet or sACN over a dedicated lighting network. See below.

Network Setup

When Genesis is only connected to your lighting rig network, ALTMAN suggests that you use the following "Static IP" settings in Genesis:

Address: 2.0.0.1
NetMask: 255.0.0.0

Set every other device on the lighting network to a <u>different address.</u> For example: 2.0.0.2, 2.0.0.3, etc.

18.5.2   ArtNet

ArtNet is a streaming protocol to transport multiple DMX universes over a single cat 5 Ethernet cable/network. These are arranged in 16 sub-nets each containing 16 universes. To enable ArtNet output on the Genesis Ethernet connector, ensure that a static IP address is set (described above) then touch: **Setup/Network/Start ArtNet**.

18.5.3   sACN

Streaming ACN (sACN) is an informal name for the E1.31 streaming protocol to transport multiple DMX universes over a single cat 5 Ethernet cable/network. To enable sACN output the Genesis Ethernet connector, ensure that a static IP address is set (described above) then touch: **Setup/Network/Start Streaming ACN**.

18.6   SERVICE

No user functions are in this menu. It is for factory use and is PIN protected.

18.7   IMPORT FIXTURE LIBRARY

The Genesis uses the Carallon fixture library. This provides over 5,500 fixtures, most with multiple operating modes, all included as standard with the console. Updates for this library are released from time to time by ALTMAN and can be downloaded and imported into Genesis.

To update the fixture library, perform the following steps:

1. Download the latest Genesis fixture library from www.altmanlighting.com.
2. Create a folder named "ALTMAN" on a blank USB memory stick.
3. Copy the library file into the "ALTMAN" folder on the USB stick.
4. Insert the USB Stick into the Genesis.
5. From the "Home" screen touch **Tools/Setup/Import Fixture Library.**

Note: Genesis software updates also include the latest version of the fixture library.

18.8   SAVE DEFAULT SHOW

If Genesis is to be used in a permanent installation or in a touring setup where the same patch is regularly used, then ALTMAN recommends creating and saving a "default show". The "Default" show <u>includes the patch</u>, your rig view arrangement and any cues that you choose to include. If a "Default show" has been saved it will be automatically loaded whenever a "New" show is selected so that re-patch fixtures is not needed.

If a default show does not exist then selecting a "New" show will <u>delete the patch</u> and all memories.

When saving a default show, a "PIN Protect" feature can be chosen so that it cannot be easily changed or deleted.

To save a "Default" show, ensure the patch is correct then from the "Home" screen touch **Tools/Setup/Save Default Show**. You will be asked if you want to PIN protect the default show. If you answer "Yes" you must enter a 4 digit PIN.

18.9   DEFAULT SHOW EMERGENCY PIN

If you have forgotten your PIN for the default show you can always access it with the emergency PIN 3175.

18.10 DELETE DEFAULT SHOW

To delete the "Default" show, from the "Home" screen touch **Tools/Setup/Delete Default Show**. If the default show is PIN protected you must enter your PIN to delete the show.

18.11 ABOUT

ALTMAN has a policy of continuous improvement of its products. As the Genesis is a computerized lighting desk, its software is subject to this policy as new features are added and existing features improved.

To display the software version in Genesis, from the "Home" screen touch **Tools/Setup/About**.

See below for details to upgrade the firmware in the Genesis.

18.12 UPDATE FIRMWARE (SOFTWARE)

To install a software update, perform the following steps:

- Download the latest Genesis software from Altmanlighting.com.
- Create a folder named "ALTMAN" on a USB memory stick.
- Copy the software file (file named Genesis_v1.nn.img where 'nn' is the software version number) into the "ALTMAN" folder on the USB stick.
- Insert the USB Stick into the Genesis.
- From the "Home" screen touch Tools/Setup/Update Firmware.
- If your current show has unsaved changes you will be prompted to save.
- The update process takes about 20 seconds.
- Once complete you will be prompted to restart Genesis.
- Switch off, wait for 15 seconds then switch on.

19   FIXTURE EDITOR

19.1   OVERVIEW
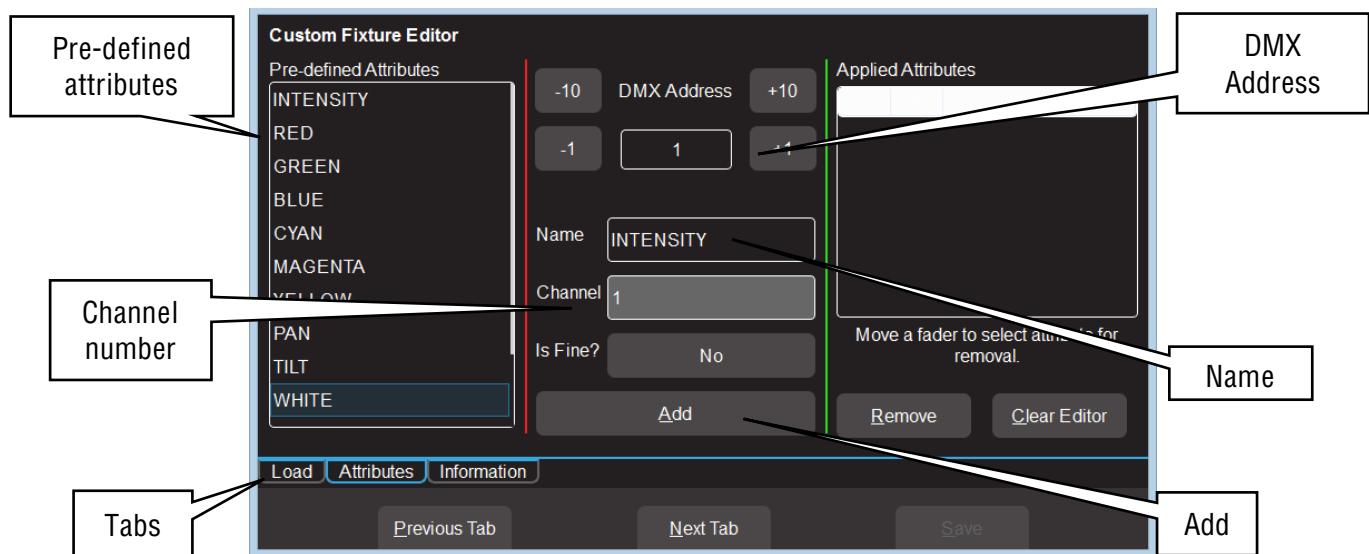
If a fixture is not listed in the Genesis fixture library, a template can be created for it, even if functions of its DMX channels are unknown. The Genesis Fixture Editor allows use of the yellow faders to directly control the DMX channels of the fixture and thus <u>discover the function of each channel</u>. Then, select an attribute name for each channel, then name and save the new template.

The Fixture editor can also edit an existing fixture template.

19.2   CREATING A FIXTURE TEMPLATE

In normal operation (not in the "Fixture Editor"), the yellow faders control the intensity of the fixtures that are patched to them. When "Fixture Editor" is opened, they change and become individual DMX channel control faders starting from the DMX address that you specify in the editor. For example, if you enter a DMX address of 1 in the fixture editor, yellow fader 1 controls the level of DMX channel 1, yellow fader 2 controls DMX channel 2, yellow fader 3 controls DMX channel 3 etcetera. If you now connect your new fixture to the DMX output of Genesis and set the fixtures DMX address to 1, yellow fader 1 controls its first channel, yellow fader 2 controls its second channel, yellow fader 3 controls its third channel etcetera. You can now use the yellow faders to discover the function of each channel of the new fixture.

To open the Fixture Editor, from the "Home" screen press: **Setup/Patch/Fixture Editor**:

Custom Fixture Editor (Attributes Tab)

There are 3 pages that are selected by the "Tabs":

- Load.
- Attributes
- Information

The editor opens on the "Attributes" Tab. Connect the new fixture to the Genesis DMX output. Ensure that the Fixture editor and the new fixture are set to the same DMX address.

Fade up channel 1 fader. When a fader is moved, its number is automatically entered in the Channel number box. Observe the operation of the fixture. Select the appropriate Attribute name for this channel from the list in the "Pre-defined Attributes" box. Swipe to scroll the list of names. If no suitable name exists either choose "Unknown" or touch the "Name" box and enter a descriptive name. To create the attribute for this channel tap **Add**.

Fade up channel fader 2. Notice that whenever you move a fader, that number is automatically entered into the Channel Number box. Observe the operation of the fixture when you move fader 2 and repeat the above procedure to add the attribute. If an attribute is used for fine control of a function, tap the **Is Fine?** field. It will toggle to "Yes". Typically this will be where 2 channels are used for movement. One channel will be the course control and the other will be for fine.

If a mistake is made on a channel, move the fader to automatically select it then touch **Remove**.

When all attributes have been identified and added touch **Next Tab** (Information).

Custom Fixture Editor

Manufacturer			1	196	INTENSITY
Model			2	196	RED
			3	170	GREEN
			4	188	BLUE
DMX Footprint	7		5	208	PAN
			6	192	TILT
			7	255	EFFECTS

Before saving, move all faders to 'Home' positions, and ensure DMX footprint is correct.

Attributes | Information

Cancel | Previous Tab | Save

Custom Fixture Editor (Information Tab)

Enter a Manufacturer and Model name. If you don't know the manufacturers name, enter "Unknown" or you can use any name that helps you organize your fixtures.

Check the specifications of the fixture and determine the quantity of DMX channels that it needs. This is known as the fixtures "DMX Footprint". Every time you "Add" an attribute in the fixture editor it automatically increments the count in the "DMX Footprint" field. Some fixtures provide DMX channels for functions that you do not require and hence you might not have added Attributes for these channels. If this is the case you must manually enter the correct number of DMX channels actually used by the fixture in the "DMX Footprint" field. This ensures that Genesis will not overlap DMX addresses when patching multiple fixtures.

19.2.1   Home Positions

Home positions for Gobos, Zoom/Focus, color and shutter/strobe attributes are saved in the template. Set all the faders to the values required for the fixtures "Home" position. The recommended "Home" attribute settings are:

- All Gobos set to open.
- Zoom/Focus at 50%.
- No color.
- Shutter/Strobe fully open.

! Note: The Intensity, RGB/CMY colors and Pan/Tilt attribute faders are ignored when setting the Home position. These attributes are always set to the same Home values:

- Intensity = zero. This is because intensity is always controlled by the yellow fader.
- RGB/CMY Color = white. RGB are at 100% and CMY are at 0%.
- Position = center.

So despite what the fixture information shows for both factory and user created templates, the "default" values for intensity, RGB/CMY and Position (Pan/Tilt) will not be what is shown in the fixture information window nor what is set in the fixture editor.

These Home values are applied to the fixture when the fixture is "cleared". See section 8.9.

Press **Save** to create the new template.

19.3   EDIT A FIXTURE TEMPLATE

If you want to edit an existing fixture, from the "Home" screen press: **Setup/Patch/Fixture Editor** then select the "**Load**" tab.
Select the fixture template that you want to edit then touch **Load**.

Edit the fixture settings in the "Attributes" and "Information" tabs as described in section 19.2 and then save the edited template.

20   VISUALIZER

Genesis comes with a "Sample" show that you can load so that you can familiarize yourself with the controls before patching your own fixtures. It is perfect for training and demonstration of the console.

If you would like to see a simulation of the fixtures in the Genesis sample show working on a virtual stage on your computer, you can download a 3D visualizer lighting program called "Genesis Visualisation show" from www.altmanlighting.com

There are versions for PC and Mac.

Note: The visualizer programme requires a 3D graphics card with OpenGL support to run. If your computer does not have a compatible graphics card the software will report an error when you run it and it will close.

If you have changed or deleted the sample show that shipped with the console it can also be downloaded from the above site. Save it to a USB drive then insert the drive into the Genesis console and touch **Tools/Import**.

To setup the visualizer, connect a network cable from the Ethernet connector of the Genesis to the Ethernet connector of your computer. See section 2 "Getting Connected".

Setup the network as follows:

From the "Home" screen touch **Tools/Setup/Network**. The network setting of Genesis need to be set to:
Static IP
Address 2.0.0.1
NetMask 255.0.0.0
Touch **Apply**.

Set the IP address of your computer to:
Address 2.0.0.2
NetMask 255.0.0.0

Note: If you are unsure how to set the IP address of your computer ALTMAN suggests performing an internet search.

On the Genesis, from the "Home" screen touch **Tools/Setup/Network/Start ArtNet**.

Run the visualisation program on your computer. The computer now shows the fixtures in the sample show working on a virtual stage on your screen under the control of your Genesis.

21   TROUBLESHOOTING

21.1   FREQUENTLY ASKED QUESTIONS

Q. Some of my fixtures still have colors selected.
A. Clear the fixtures. From the "Home" screen touch **Apps/Clear**. Select the fixtures to be cleared by tapping their buttons then touch **Color**.
You can also clear all animations and all attributes of all fixtures. From the "Home" screen touch **Apps/Clear/All** (trash can icon).

Q. Some of my moving fixtures are still moving, even when their yellow the faders are down.
A. Clear the animations on those fixtures. From the "Home" screen touch **Apps/Clear**. Select the fixtures to be cleared by tapping their buttons then in the "Animations/Delete" pane touch **Position**.
You can also clear all animations and all attributes of all fixtures. From the "Home" screen touch **Apps/Clear/All** (trash can icon).

Q. I can't see some of my channels animating on the output.
A. Fade down all red playbacks. One of them might contain some of the channels you are animating and the red playback has precedence.

Q. I can't get any intensity output from some of the yellow faders.
A. There might be an intensity animation still running and it has priority. Delete the animation. From the "Home" screen touch **Apps/Clear**. In the "Animations/Delete" pane, touch **Intensity**.
You can also clear all animations and all attributes of all fixtures. From the "Home" screen touch **Apps/Clear/All** (trash can icon).

Q. My animation is running strangely.
A. Animations respect you fixture selection order. Make sure you have selected your fixtures in the desired order. You can see the selection order in the animation App.

Q. I created an animation set to "center in" but only half the fixtures are animating.
A. Center in and center out animations work best with an odd number of fixtures so that the pattern is symmetrical around the center fixture. If you have an even number of fixtures there is no center fixture because the center is the gap between fixtures. You must therefore program a symmetrical static look with at least one different setting on both sides of center.

Q. I tried to record a cue but the screen said "There is nothing to record".
A. Recording a cue only includes fixtures that have intensity greater than zero. Fade up the fixtures to be recorded. Also see section 11.5

Q. I have broken the touch screen.
A. If the touchscreen still displays images correctly you can plug in a USB mouse and use it to make your selections.

21.2   RESCUE FILE

In the unlikely event that you have saved a default show and the default show gets corrupted, the console will not be able to load the show at power up, resulting in it failing to start operating. You can restore normal operation by following these instructions:

On a computer with internet access navigate to www.altmanlighting.com

- Download the file called "Genesis-rescue".
- Save the file onto a USB memory stick.
- Turn off the Genesis console.
- Plug the memory stick into the Genesis then turn the console back on.
- The default show will be deleted, allowing the console to start normally.
- Ensure that the USB stick is then removed.
- If you were previously using a "Default Show" you should create and save a new one.

Note: Information contained herein subject to change without notice. For latest product specifications, features, and accessories, refer to the product specification sheet or visit the Altman Lighting web site at www.altmanlighting.com.

	Genesis	Genesis + 1 Wing	Genesis + 2 Wings
Number of Fixtures	24	36	48
Control LEDs, moving lights & generic fixtures	✔		
Number of Playback Faders	10	20	30
Masters	1 x Playback (Red) and 1 x Fixture (Yellow)		
Number of Cues/Animations	1,000 cues/animations across 100 cuelists/chases	1,000 cues/animations across 200 cuelists/chases	1,000 cues/animations across 300 cuelists/chases
DMX outputs on XLR connector	1 x DMX512-A (E1-11)	2 x DMX512-A (E1-11)	3 x DMX512-A (E1-11)
DMX output on sACN or Art-Net	1	2	3
RDM ready	✔		
Color Touchscreen with simple and intuitive navigation	✔		
Touchscreen	18cm capacitive with 5-point multi-touch		
Internal storage	4GB flash memory		
Data Backup	via USB memory stick		
Power brownout protection	Internal UPS providing 5 seconds of power for Auto show save		
External Power Supply	Nominal 100-240 Volts, 50-60Hz Operating range typically 90-260V, 45-65Hz.		
	External UL certified power supply with IEC to Edison input connector		
Power Input Connection	MAX 1.5A @ 12v DC - 2.5mm jack.		
Construction	Corrosion resistant steel finished in powder coating with hard-wearing polycarbonate front panel Lexan		
Product Dimensions - W x D x H	19.56 x 13 x 3.2 inches 490 x 330 x 80 mm		
Product Dimensions - W x D x H Shipping Dimensions - W x D x H	19.3 x 13 x 3.2 inches	245 x 330 x 80 mm (Wing Only)	
	530 x 380 x 130 mm	9.65 x 13 x 3.2 inches (Wing Only)	
Shipping Dimensions - W x D x H	20.9 x 14.75 x 5.0 inches	290 x 380 x 130 mm (Wing Only)	
Product Weight:	4.9 kg / 10.8 lb	11.42 x 14.96 x 5.0 inches (Wing Only)	
Product Weight (Packed): Internal PSU External PSU	6.1 kg / 13.4 lb	2.5 kg / 5.5 lb(Wing Only)	
Product Weight (Packed): Internal PSU	6.3 kg / 13.67 lb	3.5 kg / 7.7 lb(Wing Only)	
External PSU Shipping Weight (Australia)	8 kg	N/A	
Shipping Weight	7 kg / 15.5 lb	7.0 kg / 15.5 lb (Wing Only)	

23   TERMINOLOGY

23.1   OVERVIEW

The following Terms are commonly used in this Genesis Operator Manual. These Terms have been adopted by ALTMAN as the best descriptions for functions and operations performed on the Genesis and may not be terms universally adopted on similar equipment.

23.2   FIXTURE

A multi-color LED light, moving light, dimmer or any other DMX controlled device is known as a fixture. As you patch each Fixture you give it a unique Fixture Number. A yellow fixture fader (number) controls its intensity and the touchscreen controls its attributes.

23.3   DMX ADDRESS

Every Fixture has a selectable DMX starting address and this is patched to that same DMX address number on the Genesis. The Genesis will then automatically patch all the remaining DMX addresses for that Fixture according to the information in that Fixture's Template.

23.4   TEMPLATE

A Fixture Template is a file that tells the Genesis the function of each DMX address for that fixture and it defines the touchscreen Apps controls and labels for that Fixture. Every different type of Fixture that you control requires a Template.

23.5   FIXTURE LIBRARY

The Genesis stores its fixture templates in a library. The templates are organized in the library by manufacturer and model. When you want to use a particular model of Fixture, you select its Template from the library.

23.6   ATTRIBUTE

Each brand and model of Fixture has a specified number and order of control channels. An attribute is one or two DMX control channels (two channels used for higher resolution) that uniquely controls one of the physical motions of the Fixture. The manufacturer's specification of a Fixture lists each attribute and its control channel number(s). Attributes are sometimes referred to as "Parameters".

23.7   LTP. (LATEST TAKES PRECEDENCE)

See section 12.5

23.8   LOOK

A lighting "look" is the current output of the Genesis. A "look" may be made up of a collection of fixtures or one or many cues or a combination of cues plus fixtures. It may even be a single fixture.

23.9   CUE

A Cue is a memorized look of fixtures (at their respective levels, colors and positions) plus any animations that were running when the cue was recorded. The cue can be given a name. It can be played back on a red playback.

23.10 DMX512A

DMX512A is the industry standard for the transmission of digital control signals between lighting equipment. It utilises just a single pair of wires on which is transmitted the level information for the control of up to 512 DMX slots.
As the DMX512 signal contains the level information for all slots, each piece of equipment needs to be able to read the level(s) of the slots(s) that apply only to that piece of equipment. To enable this, each piece of DMX512 receiving equipment is fitted with an address switch or menu. This address is set to the slot number to which the equipment is to respond.

23.11 DMX CABLES

Only use specific DMX cable (available from your lighting supply company). Never use audio cable. If you want to make your own cables ALTMAN recommends using Belden 9842 (or equivalent).

DMX 5 pin XLR Pinouts

Pin Number	Function
1	Ground
2	- Data
3	+ Data
4	Not Used
5	Not Used

The end of the DMX line must be terminated (120 Ω) to prevent the signal reflecting up the line and causing possible errors.

23.12 DMX UNIVERSES

If more than 512 DMX slots are required, then more DMX outputs are required. The slot numbers on each DMX output are always 1 to 512. To differentiate between each DMX output, they are called Universe1, Universe 2 etc. Genesis provides one DMX universe.

The optional wings provide additional DMX universes.

23.13 ARTNET

ArtNet is a streaming protocol to transport multiple DMX universes over a single cat 5 Ethernet cable/network.

23.14 SACN

Streaming ACN (sACN) is an informal name for the E1.31 streaming protocol to transport multiple DMX universes over a single cat 5 Ethernet cable/network.

The new features added to Genesis in each new software release are listed below:

Release: v 3.0
Remote Triggers. You can now control the output of the Genesis from other devices such as touch phones or third-party button panels.
New chase patterns of reverse and random added.
Copy memory added.
Name memory added.
Fixture intensity levels are now displayed on home screen.
View DMX output screen added.
Art-Net and sACN output can be set to any universes.
The output can be overridden by an Art-Net or sACN input.
Color Sliders are now located on the Apps screen. Color Gels are now accessed from the Color Picker screen.
The Apps screen can only be selected by tapping the Apps button. Previously Apps could also be accessed by tapping anywhere on the fixture section.
Updated "Select" screen. [Set] button removed.
The free "Genesis Editor" software can be used to off-line edit a show from a Genesis.
The Sample Show does not automatically load on first use.

Release: v2.05
No new features. Bug fixes only.

Release: v2.04
Link times added. Each cue in a cue list now has a Link Time. These are used to allow the next cue to automatically play after the programmed time.

The playback displayer can now be used to record cues. Press the [Record] button and then tap the playback displayer where you want the cue recorded. The old method of pressing [Record] and the button below a red fader still works, users can use whichever method they prefer.

Systems settings are now global. Network settings, screen brightness and language were stored in the show files. They are now stored in a separate configuration file on the console, making them global and independent of the loaded show.

New Systems Setting screen added. Changes have been made to the layout of the Setup window to allow for new features being added for the forthcoming installation version of the Genesis (the Genesis). This has necessitated the addition of a new Systems Settings window and some items have been moved from Setup to the new window.

Release: v2.03
Support for new touchscreen hardware. A new touchscreen controller is used in consoles shipped after mid-December 2019. This requires new hardware driver firmware. The firmware auto-detects which controller is installed and activates the correct driver to suit. Installing any software prior to v2.03 will render new consoles unusable as the touch screen will not respond. A one-time warning is issued if the user tries to downgrade the software to an earlier incompatible version.

Improved Playback displayer. The playback displayer now shows the cue/s fading. This is achieved by the red highlight bar 'growing' from the left to the right side of the displayer.

Release: v2.01

The underlying operating system has been updated. This results in faster boot times, improved show load/save and easier to read fonts and graphics.

The firmware for the hardware interface has been updated. This reduces jitter on faders and provides smoother fader control. Flash button response is also considerably faster.

You can now patch more than one identical fixture to a yellow fader.

It is now possible to search the fixture library.

It is now possible to set the default fade time.

Genesis now supports non-Latin character sets (e.g. Chinese & Japanese).

A larger easier to read font is now used on the touch screen.

The fixture library now updates in less than 2 seconds.

"QX1" USB to DMX512A adaptor support added.

All color faders (color wheels, Cold White, Warm White, etcetera) are now located in the sliders window of the color picker app.

A cursor has been added to text edit windows for easier editing.

RGB colors of compound (multi-cell) fixtures are now controlled from the color picker.

Release: v1.36

An 'Are you sure?' screen has been added to the 'delete cuelist' button functionality.

Release: v1.35

The bottom left button below the Home screen, which was previously unused, is now used to access the Live Speed controls. Three encoders are provided for Fade Time, Chase Rate and X-Fade. Other controls allow for configuring whether changes affect all active playback/s (global) or selected playback/s, resetting the adjusted times and setting the sensitivity of the encoders.

The Live Speed controls also features a Tap To The Beat button, to allow easy synchronization of chase/s to the beat of the music.

The Genesis now uses the Carallon fixture library (as used in LSC Clarity consoles). This provides over 5,500 fixtures, most with multiple operating modes, all included as standard with the console. A fixture request service is available via the LSC web page, to enable end users to request new fixtures for addition to the database. This process takes at least one month from the date of request. Users requiring an urgent template can continue to use the inbuilt Fixture Editor.

The Shapes App has two additional shapes (Square and Triangle) and Shapes can now be rotated, to set the apex to any orientation.

Release: v1.30

IPCB (Intensity, Position, Color, Beam) filtering added for playback. Cues are still recorded with all parameters.

Text fields (e.g. CueName) now have all the text highlighted when selected, allowing typing to instantly replace the existing text. Two new buttons on the pop-up keyboard allow the cursor to be moved back and forth in the text edit window.

Release: v1.23

The Export function confirmation button is now labelled Export instead of Save, to avoid confusion. Help is now available in Dutch.

Release: v1.22
The Software Upgrade process now updates the firmware in the surface and wings.
Fader selection of fixtures is now disabled in the Patch window, to allow testing of fixtures that have been patched without re-selecting them.
Additional parameters (e.g. Gobo, Zoom, Focus) have been added to the list in the Fixture Editor to make fixture creation faster.
The Fixture Editor can create fixtures of up to 48 DMX channels with or without Wings connected. There are now [-1] & [+1] buttons to increment/decrement the selected DMX slot to add the parameter to, as well the old method of moving a fader.

Release: v1.10
Cue Lists and Chases have been added.
The Fixture editor now has a clear function.
Custom fixtures are now saved with the show when it is exported.
The help menu is now available in Italian.
The behaviour of cue fading has been changed. Playbacks no longer fade back to the Live (yellow) Memory when faded out. They now retain their color, to prevent the color fading out to white.

Release: v1.05
Fade times on Cues are now possible.
Unwanted Custom Fixtures can now be deleted.
There is now a clear function in the Fixture Editor.
The Fixture Editor now prevents more than one attribute of the same name and type.

Release: v1.04
The Fixture Editor can now load existing fixtures as a starting point for new ones. It can edit existing custom fixtures.

Release: v1.2
Expansion Wings are now supported.
A Shapes App allows easy creation of Circles, Fig8, Ballyhoos and other effects on the Pan & Tilt of any moving light.
It is now possible to record a blank cue in a cuelist. This is commonly required at the start and end of a cuelist, to enable a blackout.

Release: v1.11
The crossfade engine for cuelists is now totally Dipless for all parameters.
It is now possible to record a blackout memory.
A [Clear All] button has been added to the Centre soft button on the Apps screen, for quicker access to this feature.

Release: v1.04
Fixture Editor can now load existing fixtures as a starting point for new ones. Or it can edit existing custom fixtures.

-END-