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QUICK START GUIDE

grandMA3



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1. Welcome to the Quick Start Guide

This guide is a quick tour of some of the most used elements of the grandMA3 software. This guide has been written for version 1.8. If you are on a different version, then there might be elements that function slightly differently. The general functions and principles are the same. We will try to keep this guide updated to the latest version.

It is meant to be a more personal and loose reading experience than the main manual. It is a collection of tutorials where you (the reader) follow the steps I (the author) explain as we, together, go along. The main manual is a better choice if you are looking for short explanations on how to do a specific thing. This guide has a lot of text and description behind the steps - hopefully, it is also a little fun to read.

It is highly recommended that you read the numbered chapters in order.

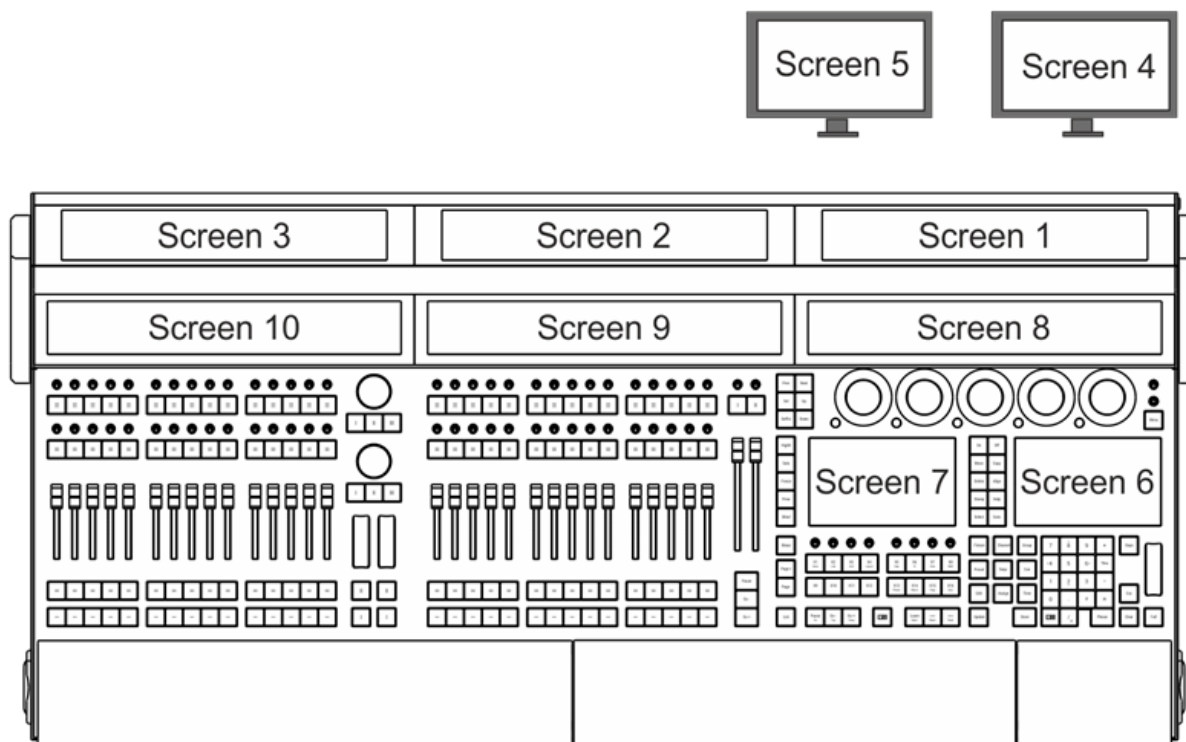
We will create a new show with some fixtures with standard functions. We will create something with a cue sequence and some busking setup that can be used for a more dynamic live playback.

Preface

This guide is written using the grandMA3 onPC primarily. The thought is that most users that go through this are on the onPC platform. If you have a grandMA3 console or a grandMA3 onPC command wing, it can be used in this guide. It will be explained if there is any difference in how to operate the onPC or console. The primary difference is that you do not need to open windows with virtual keys and executors if you have real hardware.


A mouse/trackball is recommended. Often the guide will say something like "click the button". This is the same as tapping it on a console or a touch screen. In rare cases, we might need to "Right-click" something with the mouse. It is the same as first pressing the **Edit** key and then tapping the object on a console. You can use an external mouse/trackball on the console, it is all up to you, but the interface is built to be touched.

If you are using the onPC, then you are going to work a lot on the "virtual displays". The screens on the console are numbered like this.



The grandMA3 onPC is a little different:

- Display 1 is a combination of console screens 1 and 8.
- Display 2 is a combination of console screens 2 and 9.
- Display 3 is a combination of console screens 3 and 10.
- Display E4 is an external screen 4.
- Display E5 is an external screen 5.
- Display S6 is console screen 6.
- Display S7 is console screen 7.

The displays can be toggled using the **Display** pop-up found in the **Control Bar** on the left side of the displays. It is the button with a screen icon (). It is not possible to turn off Display 1.

The **Control Bar** also gives access to virtual controls. There is the virtual **Command Section**, the **Master Controls**, the **Playback Controls**, and the **Custom/Master Section**. These can also be toggled using F3, F4, F5, and F7 keys on a keyboard. We will come back to all these controls later.

It is recommended that you read this online since it is the most up-to-date version. But you can also create this as a PDF and maybe print it. You could save the paper and maybe take the PDF with you and read it on your favorite electronic device instead. One favorite device could be the console or onPC, where this guide is available in the help system - and then you do not need to create a PDF.



The Quick Start Guide is meant to be read from start to finish, and it is meant for beginners. If you are looking for help on a specific topic, you should try the main manual.

To get the best result, you should try to do precisely what is written. If you change something that is not described, you might get a different result.

Markup in the Quick Start Guide

In this guide, there are different markups in different situations.

Even though this is written using an onPC, there will be some (virtual) key presses. If you should press or click keys, then it is displayed like this: `Store Cue 1 Please`.

If we are just talking about a key, then it will be written in single quotes like this: The 'Store' key.

If it is an area on the screens you need to click or press, it is written like this `Internal`. This could be tabs in menus or a button on the screen.

If we are talking about a term, it will look like this: **Store** is a function to save something.

If you need to use a keyboard and write something in the command line (we are going to look at what this is later) then it will look like this:

```
MA Admin[Fixture]> Store Cue 1
```

All input like this should be executed with an Enter on your keyboard. The Enter is not displayed. It is the same as the `Please` key. It is not a visible command - it is the key that executes the typed command. There is a default keyword displayed in the command line input above. It is the word inside the square brackets. You do not need to write this; it is already there - it might be different than the one displayed above.

Feedback from the system is displayed like this:

```
OK : Store Cue 1
```

Notice that the Please or Enter is not displayed. The feedback can be seen in the Command Line Feedback window (more on this later).

If you need to write something on the keyboard that is not for the command line, then the keyboard input will look like this: Store Cue 1. This could, for instance, be a name.

There might be hints, important information, or restrictions throughout the guide. These are written in boxes with icons and a small headline showing what type of information it is.



Hint:

This is what a hint would look like.

Recap

Each chapter ends with a short recap of what we did. It might also include links to relevant topics in the main manual. These links are meant as guides to relevant locations in the manual where you can get more detailed information about specific topics touched on in the guide chapter. You can take a break from the guide and read the manual topics if you want to, but you do not need to read it to continue to the next chapter.

For this chapter and introduction, I could add the following links:

Learn how to install the onPC in the [Installation of grandMA3 onPC topic](#).

For details about setting up the console have a look at the [First Steps section](#).

If you want to learn more about the command line input, then read the [Command Line Topic](#).


At the end of the recap, there is a link to [the next chapter](#) - go ahead and click it when you are ready.

2. Create a New Show and Initial Setup

A Fresh Start

There might be a running show when you open the onPC or console. It always boots up with the last loaded show. We are going to build our show from scratch.

This starts with the **Backup Menu**. This is where we store, load, or delete show files.

Locate and tap the gear  icon in the left menu (the Command Bar) on the onPC. This menu is not visible as a default on the consoles. On the console, you need to press the **Menu** button. Another way to get to this menu in the future is by pressing the 'F2' key on the keyboard.

Now the menu pop-up appears. This gives access to several important menus and settings. We will come back to some of them in later chapters. It is an important pop-up that gives you access to many menus and system settings.

For now, we need the backup menu, so click the **Backup** button.

This opens the backup menu. This is used to create, load, and save shows. It refers to a selected drive (hard drive, USB, or another external storing device). The drive can be changed by tapping the drive button in the title bar. The default drive is "Internal". This is where you can select a USB flash drive as the selected drive.

Select the internal drive or a flash drive (if you got one). Now tap or click the **New Show** button. The software gives a suggested name that includes the current date and time.

The name pop-up can be expanded to include an on-screen keyboard. This might be useful on some devices, for instance, Compact consoles. Tap the down-pointing arrow icon (▼) in the left corner of the name input pop-up to show or hide the keyboard - try it out.

When you are happy with the look of the name pop-up, name the show **QuickStart**.

If you are on a console or computer that you share with others, it might be a good idea to add your name in front of the show name. This makes sure you are creating a new show and do not mess with others' show files.



Hint:

It is always a good idea to store your show in multiple locations. For instance, have a USB flash drive with the show file, and remember to always have the drive with you. Then you have the original file, and if it is changed in the console, you can always load the original. Hardware might also be destroyed or stolen. But that should not mean that your show is lost.

Create the show by pressing 'Enter' or **Please**.



Now you might be asked if you want to save any changes to the currently active show file. The options are **Save** or **Do Not Save** - selecting **Cancel** will cancel the new show creation.

I do not know the answer to this question in your case. But if I am in doubt, I often choose not to save. It must be the responsibility of the programmer to store their show before leaving it. If you are employed in a company, there might be a policy regarding this. If not, then this might be a good opportunity to get one.

Select the option you are most comfortable with.

Now we have created a new completely empty show.

Log in as Admin

We might be logged in as a guest user. But we need to have administrative rights to make any changes to the show. So the first thing we might need to do is log in as the Admin.

The current user can be seen in the Command Line input. It could look like this:



In this example, we can see that the user is **Guest** and the default keyword is **Fixture**. The default keyword is the one the console assumes we will use if we do not specify anything else. More on this later.

The grandMA3 is a command line console. This means that most things can be done using commands written in the command line input. This might not be the most useful method, but simple operations can be faster to type on a keyboard. Especially when working with the onPC. The command line system also gives us very powerful macro and plugin tools - more on this in later chapters. It is very helpful to know the most common commands and their short versions. A short version means that you do not have to type (and correctly spell) the entire command. There is often a shorter version of the command.

Now we are going to log in as Admin. This user exists in all shows, and the username and password cannot be changed. We need to use the **Login** keyword followed by the user name and the password. Login is a short word, so I prefer to write the entire word, but the short version is **Log**.

Type and execute the following command:



If a user has a password, it needs to be added after the login name, and be aware that the password is case-sensitive.

Now we should have the following command line input:





Recap

In this chapter, we created a new empty show and logged in as the default administrator user. It lays the foundation for everything following it.

It is not necessary in order to proceed to the next topic, but if you want to read details on some of the things we did, then these are some suggestions:

The backup menu is described in the [**Show File Handling topic**](#).

Every keyword in the console is described in more detail. Here is a link to the [**Login**](#) keyword. Any keyword can be found by searching for it. If you want to browse through the keywords, then have a look at the [**All Keywords topic**](#).

The grandMA3 is made to accommodate multiple users working together in the same show. This is one of the reasons to have different users. Read more about users and how to create them in the [**Single User and Multi User Systems topics**](#).

When you are happy, then move on to the [**next chapter**](#).



3. First Patch with Simple Fixtures

The new show file we created is empty!

We need to add some devices to our patch to be able to do something meaningful with the grandMA3.

We are going to create a mock-up festival rig. It will not be the perfect rig, but it will give us a very diverse and flexible rig that we can use to try some of all the features in the software.

The setup will have 7 "pods" each with the same fixtures. But before we are going to add a lot of complex fixtures, we are going to start with the conventional fixtures in our setup.

The conventional fixtures will be front light, some sidelight, and blinders. We will start with these simple fixtures, to get a basic understanding of the workspace and how to structure the patch and show file.

Everything about fixture setup is done in the patch. Some tools might give us easier access to fixture properties (we will get back to these in future chapters), but every fixture property ultimately lives in the patch.

Fixture properties include the fixture type and mode, the DMX patch address, the fixture position in a 3D space, etc.

There are different tools available to us for organizing the fixture setup. I am going to explain some of them before we start adding fixtures.

Grouping Fixtures

A fixture is typically represented as a single row in a **Fixture Sheet**. This makes it possible to see all the different values a fixture might have. If we have a lot of fixtures, then it might be a very long list of fixtures.

Fixtures can be grouped inside a special grouping fixture. This is especially nice for fixtures that often do the same thing. The grouping fixture is a virtual fixture that can have an ID number. Using this ID to select fixtures actually applies the values to the fixtures inside. The grouping fixture itself does not contain any values. Fixtures inside a grouping fixture must have their own ID and can be accessed individually using their ID number.

Having fixtures inside grouping fixtures creates a hierarchy. There are many hierarchies in grandMA3, and they can have many layers. Two terms often used with hierarchies are **Parent** and **Child**. When talking about grouping fixtures, the actual fixtures are the children inside the parent (the grouping fixture). The child fixtures can be selected using their own unique ID as mentioned above, but they can also be selected using the parent ID and a Child index number. We'll explore this more in chapter 4.



Sub-fixtures

Some fixtures have sub-fixtures. This is often the case when a fixture has multiple elements that do the same. For instance, an LED fixture with multiple LED cells which can be controlled individually. There would be a parent fixture with all the shared functions, for instance, pan and tilt. And then there would be a child or sub-fixture for each LED element. These sub-fixtures are addressed as a sub-ID from the parent fixture ID. The parent and child IDs are separated by a dot (.).

For example, a Clay Paky A.leda B-EYE K10 can have the LEDs separated into 19 different individually controlled LEDs (Standard RGB mode). If the fixture has ID 17, selecting 17 would only select the main parent fixture. If the main and all the sub-fixtures need to be selected, then you need to select "17." - that is the ID followed by a dot. Selecting fixture 17.1 would only select the first LED element - the first sub-fixture.

IDTypes

The fixtures can be organized in different **IDTypes**. There are eight different types that we can use. Two of those are **Fixture** and **Channel**. The other six can be renamed to match our needs. The default names are **Houselights**, **NonDim**, **Media**, **Fog**, **Effect**, and **Pyro**.

Each IDType has its own number range from 1 and upwards.

A fixture can have two different ID numbers. The first one is always the **Fixture** IDType, which is called **FID**. The second can be one of the other IDTypes and is called **CID**. A fixture needs to have at least one ID for us to be able to select and ultimately control the fixture.

Enter the Patch

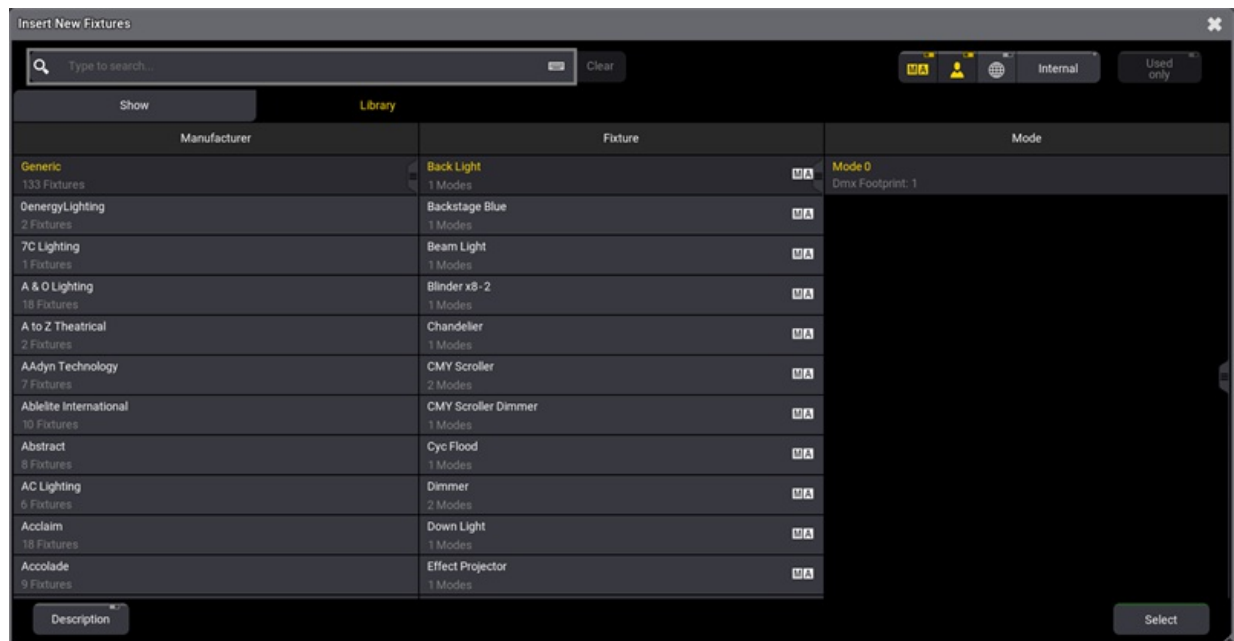
Here is the goal for this chapter:

- Add 14 standard dimmer channels that we can control.
- Add another 14 dimmer channels that are the audience blinders.
- Organize the blinders in a Grouping fixture.

We need to get to the patch. Press **Menu** (or the Gear Icon  in the onPC) and then click **Patch**.

Insert New Fixtures Wizard

The first time we open the patch, it is empty, and we are presented with the **Insert New Fixture wizard** that helps us provide the needed information to add the fixtures.



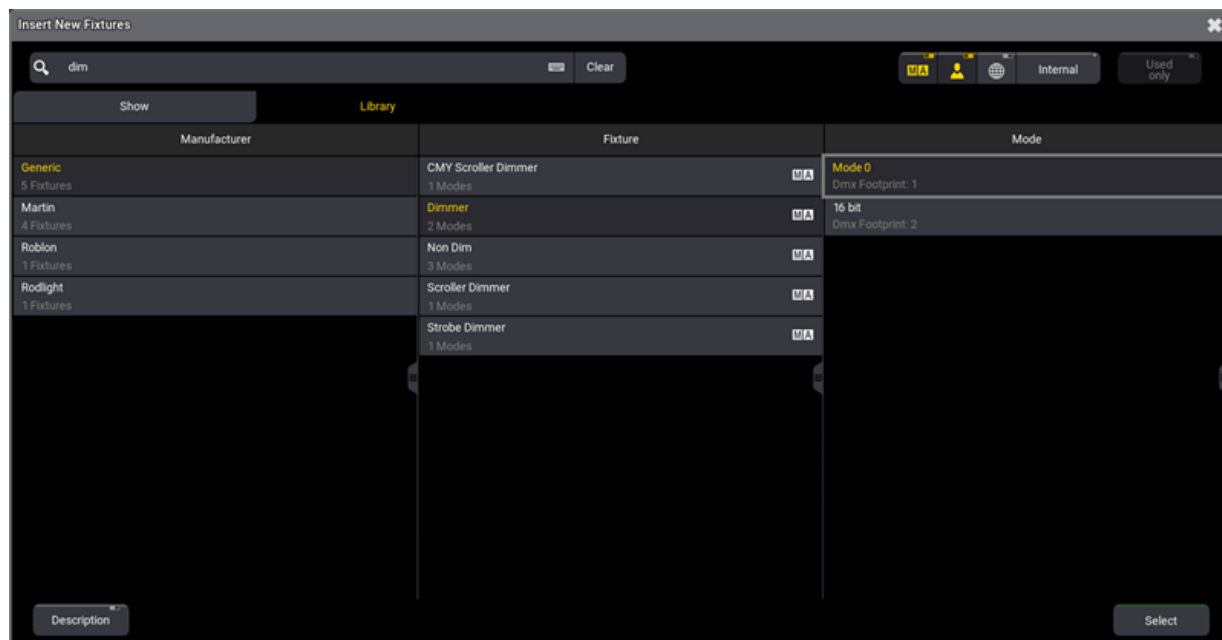
The cursor is ready in the **Filter** input field and can be used to filter the list presented to us.

The list is the **library**. The default is the grandMA3 and user fixtures on the local hard drive (Internal). Other libraries can be chosen, but this is fine for the first fixtures.

We need dimmers, so type **dim** in the filter.

Now the list is limited to only showing fixtures that have **dim** somewhere in the manufacturer name, the fixture name, or the fixture mode.

It might look like this:



The library has three columns. The left column shows the different manufacturers. The center column is the fixtures models from the selected manufacturer. The right column lists the different modes available for the selected fixture model.

We need the Generic Dimmer in "Mode 0". Make sure the correct elements are selected (darker gray background as in the image above) and click **Select** in the lower right corner.

Now you can give the fixtures a name. If the name ends with space and number, the fixtures are automatically numbered starting from the number you type.

Just leave it as the default "Dim 1" and click **Please**.

Next is the quantity, meaning how many fixtures we want to add.

Type **28** and click **Create !** in the lower right corner (not the 'Please' in the number input).

Now we have 28 dimmers named "Dim" followed by a number. They are patched to DMX address 1 in DMX universe 1 and upwards.

They have an FID from 1 and up to 28.

This solves some of our goals for this chapter. Next, we need to add the grouping fixture.

Scroll to the end of the list and select the cell called "New Fixture" and click **Insert new Fixture** in the menu. Now we are back at the **Insert New Fixture wizard**.



Now we look at the tab called "Show," and there is only the generic dimmer, which is nice if we wanted to add more dimmers, but we need to add a new fixture type to our show.

The idea behind this is that there are different libraries of fixture types and we import a copy of the fixture type from the library into our show.

We need the grouping fixture, and this is in the Library, so click the **Library** tab below the filter input.

Now type **group** in the filter input and select the Generic Grouping fixture in "Default" mode and click **Select**.

Name the fixture **Blinders**. We only need 1, but we want it to have FID 20 - type **20** in the FID input. This gives us a red background in the FID input to show us that there is a problem:

| Insert New Fixtures | |
|---------------------|----------|
| Fixture Type | Grouping |
| Mode | Default |
| Dmx Footprint | 0 |
| Name | Blinders |
| Quantity | 1 |
| FID | 20 |
| Please | |

Del Backspace

| | | |
|---|---|-------|
| 7 | 8 | 9 |
| 4 | 5 | 6 |
| 1 | 2 | 3 |
| 0 | . | Clear |

Ignore the problem for now and click **Create!**.

The problem was that we already had a fixture with FID 20 and since we can only have unique FIDs the previous fixture 20 now has "None" in the FID column.

We need to fix this and will renumber all the blinder fixtures. The blinders are the last 14 dimmer fixtures on the list. We need to select the FID for these fixtures.



Left-click and hold the FID 15 and drag down to FID 28 and release. it should look like this:

| Patch | | | | | | | | | | |
|-----------------------|------|----------|-------------|-----------|-------|----------------|-----------------|----------------|-----------------|--|
| Patch | FID | Name | FixtureType | Mode | Patch | Pan DMX Invert | Tilt DMX Invert | Pan Enc Invert | Tilt Enc Invert | |
| Fixture Types | 15 | Dim 15 | 2 Dimmer | 2 Mode 0 | 1.015 | | | | | |
| | 16 | Dim 16 | 2 Dimmer | 2 Mode 0 | 1.016 | | | | | |
| | 17 | Dim 17 | 2 Dimmer | 2 Mode 0 | 1.017 | | | | | |
| Attribute Definitions | 18 | Dim 18 | 2 Dimmer | 2 Mode 0 | 1.018 | | | | | |
| | 19 | Dim 19 | 2 Dimmer | 2 Mode 0 | 1.019 | | | | | |
| | None | Dim 20 | 2 Dimmer | 2 Mode 0 | 1.020 | | | | | |
| Parameter List | 21 | Dim 21 | 2 Dimmer | 2 Mode 0 | 1.021 | | | | | |
| | 22 | Dim 22 | 2 Dimmer | 2 Mode 0 | 1.022 | | | | | |
| | 23 | Dim 23 | 2 Dimmer | 2 Mode 0 | 1.023 | | | | | |
| DMX Universes | 24 | Dim 24 | 2 Dimmer | 2 Mode 0 | 1.024 | | | | | |
| | 25 | Dim 25 | 2 Dimmer | 2 Mode 0 | 1.025 | | | | | |
| | 26 | Dim 26 | 2 Dimmer | 2 Mode 0 | 1.026 | | | | | |
| Stages | 27 | Dim 27 | 2 Dimmer | 2 Mode 0 | 1.027 | | | | | |
| | 28 | Dim 28 | 2 Dimmer | 2 Mode 0 | 1.028 | | | | | |
| | 20 | Blinders | 3 Grouping | 1 Default | | | | | | |

Now we need to edit this. Easy to do with a mouse; just right-click in the blue area. On the console, you can press **Edit** and then tap in the blue area.

A number pop-up appears where we need to click **2 1** and confirm with **Please**. Now the fixtures are renumbered. We also need to move them to be children of the grouping fixture.

Keeping the selection simply click **Cut**, to cut them from the list into the clipboard. The result is that they are now marked with a red background in the fixture list.

We need to paste them to the new location.

Click the triangle arrow next to the Blinders fixture so it unfolds and select **New Fixture** inside the "Blinders". Like this:

| | | | | | |
|----|---|-------------|------------|-----------|-------|
| 33 | | Dim 27 | 2 Dimmer | 2 Mode 0 | 1.027 |
| 34 | | Dim 28 | 2 Dimmer | 2 Mode 0 | 1.028 |
| 20 | ▼ | Blinders | 3 Grouping | 1 Default | |
| | | New Fixture | | | |
| | | New Fixture | | | |

It is important that you do not select the lowest **New Fixture** as this is outside the "Blinders".



Now click **Paste**. The fixtures are now children of the blinder grouping fixture.

These were all the goals for the chapter, but there is one more thing we should do now that we are here.

The fixtures have a shape in a 3D virtual space. This shape is defined by the fixture type we select. Let us change the fixture for the blinders and find another fixture.

Select the 14 fixtures again, but this time in the **FixtureType** column and edit the value with a right-click.

Now we are back to the fixture finding pop-up. Here we need to select the **Library** tab and type **blinder** in the filter.


Select "Briteq" manufacture and the "COB Blinder 2x100W" and select the "1 channel" mode. Confirm the choice by clicking **Select**.

Finally, let us change the name of the blinders.

Select all the blinders in the name column and edit the name. Type **Blinder 1** and confirm with **Enter** / **Please**.

The patch should look something like this:

| FID | Name | FixtureType | Mode | Patch |
|-----|------------|----------------------|-----------|-------|
| 1 | Dim 1 | Dimmer | Mode 0 | 1.1 |
| 2 | Dim 2 | Dimmer | Mode 0 | 1.2 |
| 3 | Dim 3 | Dimmer | Mode 0 | 1.3 |
| 4 | Dim 4 | Dimmer | Mode 0 | 1.4 |
| 5 | Dim 5 | Dimmer | Mode 0 | 1.5 |
| 6 | Dim 6 | Dimmer | Mode 0 | 1.6 |
| 7 | Dim 7 | Dimmer | Mode 0 | 1.7 |
| 8 | Dim 8 | Dimmer | Mode 0 | 1.8 |
| 9 | Dim 9 | Dimmer | Mode 0 | 1.9 |
| 10 | Dim 10 | Dimmer | Mode 0 | 1.10 |
| 11 | Dim 11 | Dimmer | Mode 0 | 1.11 |
| 12 | Dim 12 | Dimmer | Mode 0 | 1.12 |
| 13 | Dim 13 | Dimmer | Mode 0 | 1.13 |
| 14 | Dim 14 | Dimmer | Mode 0 | 1.14 |
| 20 | Blinders | Grouping | | |
| 21 | Blinder 1 | COB - Blinder 2x100w | 1 Channel | 1.15 |
| 22 | Blinder 2 | COB - Blinder 2x100w | 1 Channel | 1.16 |
| 23 | Blinder 3 | COB - Blinder 2x100w | 1 Channel | 1.17 |
| 24 | Blinder 4 | COB - Blinder 2x100w | 1 Channel | 1.18 |
| 25 | Blinder 5 | COB - Blinder 2x100w | 1 Channel | 1.19 |
| 26 | Blinder 6 | COB - Blinder 2x100w | 1 Channel | 1.20 |
| 27 | Blinder 7 | COB - Blinder 2x100w | 1 Channel | 1.21 |
| 28 | Blinder 8 | COB - Blinder 2x100w | 1 Channel | 1.22 |
| 29 | Blinder 9 | COB - Blinder 2x100w | 1 Channel | 1.23 |
| 30 | Blinder 10 | COB - Blinder 2x100w | 1 Channel | 1.24 |
| 31 | Blinder 11 | COB - Blinder 2x100w | 1 Channel | 1.25 |
| 32 | Blinder 12 | COB - Blinder 2x100w | 1 Channel | 1.26 |
| 33 | Blinder 13 | COB - Blinder 2x100w | 1 Channel | 1.27 |
| 34 | Blinder 14 | COB - Blinder 2x100w | 1 Channel | 1.28 |

Exit the patch by clicking the  in the upper right corner. Now you are asked if you want to keep the changes. Confirm this by clicking **Save and Exit**.

Finally, save the show. Let us do this by using the command line.

Type the following keyword shortcut:

```
MA Admin[Fixture]>sa
```



And execute the command with 'Enter' / **Please**.

Now the show is saved with the same name. We used the short version of the **SaveShow** keyword.

Recap

In this chapter, we have added simple dimmer fixtures to the patch and we can now start learning how to control the dimmers.

There are some places in the manual you could look at to learn details about the patch.

The topic called **Add Fixtures to the Show** covers what we did and has detailed information. We will return to the patch in a later chapter and look closely at some of the functions there.

If you want to learn about fixture types, there is a whole section called **Fixture Types**.

We used one keyword in the command line - follow this link to learn a little more about it: **SaveShow Keyword**.

I suggest simply continuing to the **next chapter** in this guide.

4. View and Window Setup

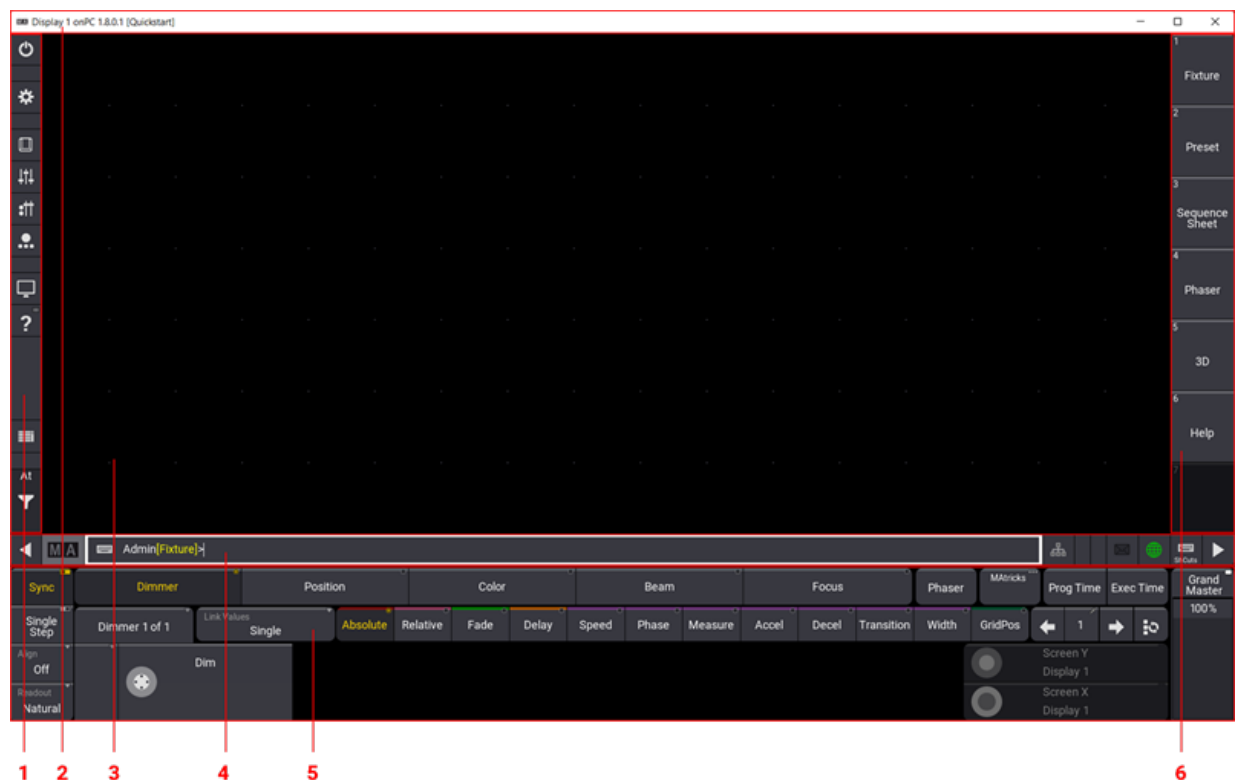
In the previous chapter, we added some dimmer fixtures.

We need to see the fixtures and set up our screens to show the relevant windows.

Quick Interface Introduction

First, we need to have a quick look at the interface.

This is display 1 on the grandMA3 onPC:



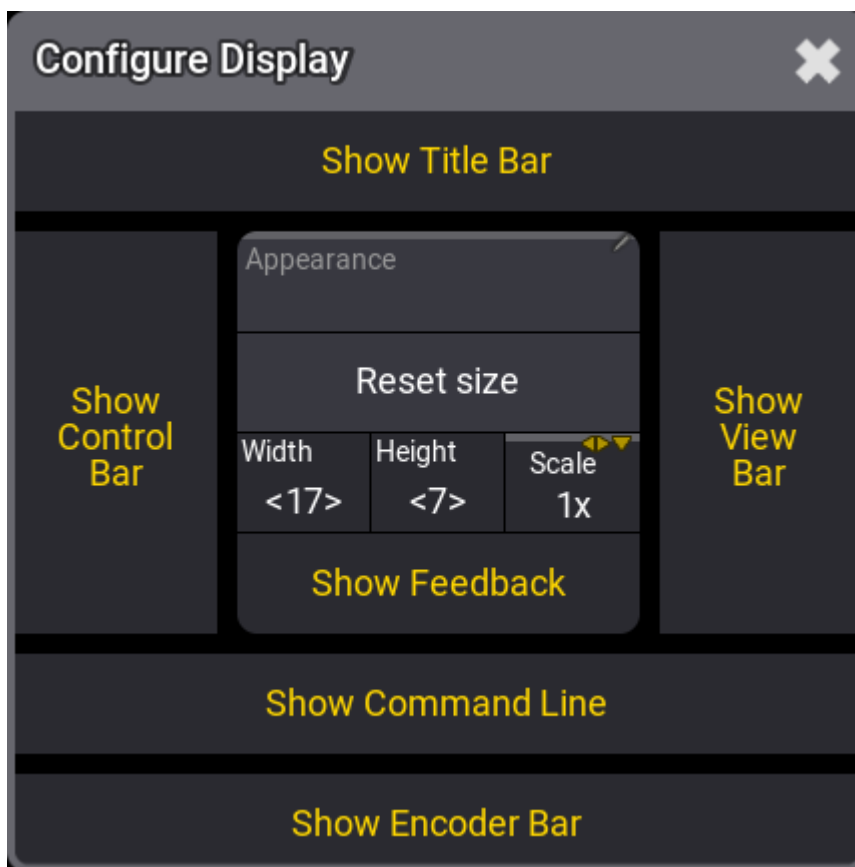
There are six different areas indicated in the picture above. The areas have different purposes:

1. **Control Bar** - Very useful when using the grandMA3 onPC. It has shortcuts to different windows and menus.
2. **Title Bar** - This is the Windows title bar (Mac OS has a similar title bar). It shows the display number, the software version, and the name of the show file.
3. **User-defined Area** - This area is where you can create views with different windows.
4. **Command Line** - This row has different indicators and buttons with quick access to different menus. The center part is the **Command Line Input**. Here you can write commands to the software.
5. **Encoder Bar** - This area is often used to apply values to the different attributes of the fixtures. The right side has controls for the **Grand Master** for the console. On the full-size and light consoles, this area is on the letterbox screen 8.

6. **View Bar** - This bar has buttons, called ViewButtons, where we can store and recall different views.

The interface dynamically adjusts when you are using a grandMA3 onPC. The user-defined area can expand and contract based on the display size.

It can also be configured to hide some areas or scale the interface. This is done using the **Configure Display** pop-up. This can be accessed when the Menu selection pop-up is visible. Do this by clicking the gear icon (⚙️) in the control bar. Then click **Configure Display**.



Here the different areas can be toggled On or Off. When something has a yellow text color, it is On or selected.

Width and Height define how many square fields the user-definable area has. Scale can be used to visually scale the entire interface.

Predefined Views

When we talk about a **view**, it is the set up of **windows** in the user-defined area. These views can be stored and recalled. They can be assigned to the buttons like the one in the **View Bar** on the right side of the interface.

If you make a change to a view that you would like to keep, then you simply store the view again.

A new show file has some predefined views that can be very useful.


Click the one called **Fixture**.

Depending on your display size, you might see a view that is cut off on the bottom or on the right side. This is because the stored view is bigger in width and height than the current size of the user-defined area.

A brown thin frame indicates that the view is bigger. Scroll bars appear allowing you to scroll to other parts of the view. If you have touch screens, then a three-finger touch and scroll also move the view inside the user-defined area.

Fixture Sheet

We are going to create our own view. So the first thing we need to do is to get an empty user-defined area.

Again we can use the Menu selection pop-up. Click the gear icon () or press the **Menu** key.

All screens now have a small pop-up in the lower right corner. Click **Delete This Screen** in the small **Display** pop-up.

Now the user-defined area is empty again.

We want to create a window that shows us the dimmer values of the fixtures in our show. So far we only have fixtures with dimmers.

Click the upper left corner in the user-defined area.

An **Add Window** pop-up appears. This pop-up gives access to all the different windows in the system. They are organized into different tabs. One of the tabs is called "All", this has all the windows in one alphabetically sorted list.

We need the window called **Fixture Sheet**. This can be found in the **Common** tab. Click **Common** and then **Fixture**.

Now we have a fixture sheet filling the entire user-definable area.

This window shows us the fixtures in rows and the attributes (in this case maybe only the "Dimmer") in columns.

The **Blinders** fixture is collapsed and does not show the child fixtures. This can be changed by clicking the white triangle arrow either at the top of the left column or the arrow next to the **Blinder** name.

There might be a **Universal Fixture** in the list. Just ignore this for now. I will explain it later in this chapter.


When we are only interested in looking at the dimmer values, then we can change how the window looks. This is done in the **Settings** for the window. All windows have an MA logo in the upper left corner. Click this to open the settings for the window.

Different windows have different settings. Some are common settings, and some are individual for a specific type of window. The settings are often organized into different tabs. We want to change a setting called **Sheet Mode**. It is found in the **Display** tab. Click **SheetMode** until it says **Channel**.

The settings should look like this:



Now the Fixture Sheet is changed, and it only shows tiles with the FID and the dimmer value.

Close the setting by tapping the  in the upper right corner of the settings pop-up.

This fixture sheet window is much bigger than it needs to be and we can adjust it to match our needs. The lower


right corner of the window looks like this: . This can be used to resize the window.

Click and hold the resize corner and move it to a new location in the user-defined area. Release the mouse button (or screen) on a location where the window looks nice to you.


Store the View

We want to store the new view on one of the **ViewButtons** on the right side.

Let us begin by clearing a button for our new view.

We need to press the 'Delete' key. If you use a grandMA3 onPC, then there is an on-screen version of the physical keys of the **Command Area** of the consoles. This can be opened by clicking the  icon in the command bar on



the left or by pressing **F3** on a keyboard. It can be closed again by clicking the  in the upper right corner or pressing **F3** again. I am going to write "press" a key. This might mean that you open this on-screen representation of the command keys and click the representation of the key. But I will write about them as if you had the physical keys on a console.

So, Press **Delete** and then close the Command Area pop-up, and then click the top ViewButton on the right. Now the ViewButton should be empty.

Next is to store the current look of the user-defined area on the empty ViewButton.

Instead of pressing the 'Store' key, we will use the command line input.

Click the command line input where it says "Admin[Fixture]>". Now write **Store**, so the command line looks like this:



Now click the empty ViewButton.

This opens a **Store View Options** pop-up.



Here we can see that we are currently storing the windows on display "Internal 1" and we can give the view a name or label. Write Dimmer as the name/label and click **OK**.

The view is now stored on the button, and it can be recalled anytime by clicking the view button.

Command Line History

Another view that can be useful to have visible is the **Command Line History** window.

Often it can be an advantage to see how the console reacts to your input. The **Command Line History** window continually gives you a lot of information. It shows how our user input is interpreted by the software, and it shows if the input is not understood or gives an error.

Do not be confused about all the information. We will go through it when needed.

Let us create the window.



When we made the fixture sheet, we clicked in the upper left corner, and the window took all the available space. Now we are going to try a different technique.

Click and hold below the fixture sheet and drag a square of the size you want the window to be. Now release the mouse/screen.

Now the **Add Window** pop-up appears again and in the **Common** tab click **Command Line**.

Now you have a **Command Line History** window.

You can still adjust the size if you are not happy with the size you made.

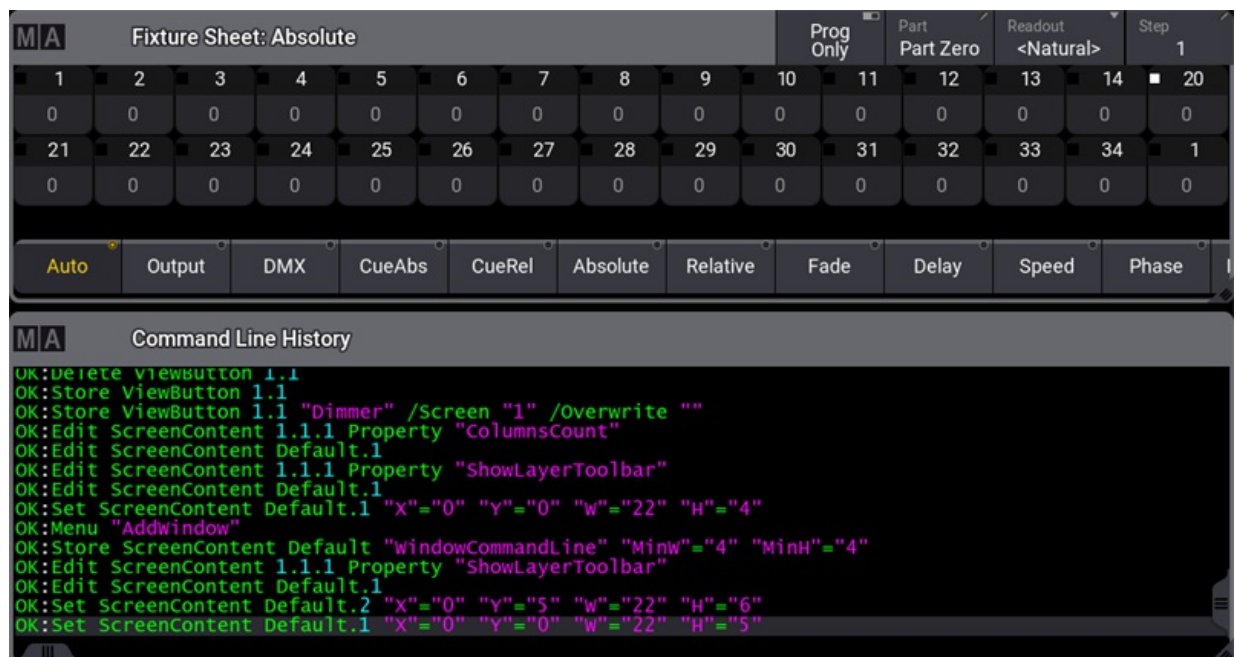
A window can be moved around by clicking and holding the title bar and dragging the window around. If there is not enough space, the window will resize automatically on the right and bottom sides.

Update the View

When you are happy with the size, location, and look of the windows, you can store the view on the view button again.

Use any of the methods you have learned to get the **Store** command in the command line and then tap the view button. Confirm the name and the store action by clicking **OK** in the **Store View Options** pop-up.

Here is my result. I have changed the **#Columns** option in the fixture sheet settings to 15. This makes the fixtures align nicely in the sheet.



When you look at this, you might wonder "Why are there two fixtures 1 in the sheet". The one in the lower right



corner is the virtual universal fixture that the system automatically creates. It is not "Fixture" 1; it is "Universal" 1. The universal fixture contains some of the most generic functions in fixtures. For now, all you need to do is ignore it and not worry about it.

You should save your show.

Recap

In this chapter, we had a brief introduction to the user interface and the command line input.

We also looked at creating windows in the user-defined area and storing the windows, their settings, and their arrangement on a view button.

The manual has an entire section with details about the windows and view. It is called **Windows, Views, and Menus**.

The fixture sheet is described in detail in the **Fixture Sheet** topic.

The command line and the **Command Line History** window are described in detail in the **Command Line** topic.

In the **Next Chapter**, we are going to control the dimmers.

5. Control Simple Fixtures

In this chapter, we will look at controlling the dimmers we patched in chapter 2.

The grandMA3 system uses a **Programmer** as a temporary memory to hold values until they are stored or released.

To do something with a fixture, we need to select it first. Click one of the fixtures in the **Fixture Sheet**.

Fixtures with a yellow ID text are selected fixtures.



Fixture 1 is selected in the image above.

Selected fixtures can get a dimmer value using a lot of different methods.

If you have grandMA3 hardware for example from the console range or a grandMA3 onPC command wing model, there is a level wheel on the right side. This can be scrolled up and down to adjust the dimmer value.

A value can also be typed using the numeric keys. Type this: `At 50 Please`.

Now the fixture's dimmer value is 50%.

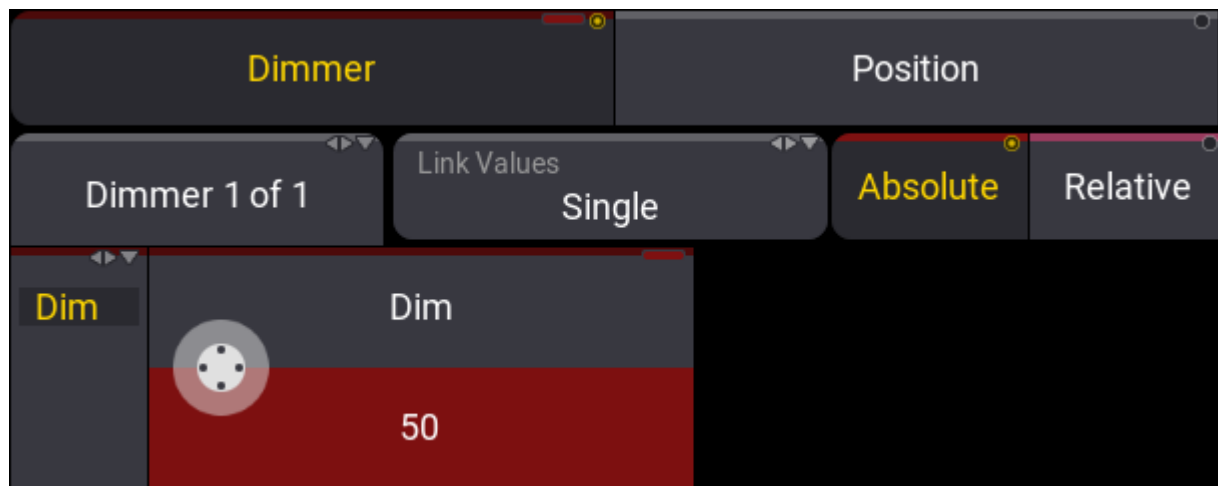
Other physical keys can be used to set a value. For instance 'Full'. This will take the dimmer value to 100%.

Pressing 'At' twice takes the dimmer to a defined value called **Normal**. The default for this is also 100%, but it can be modified. Double pressing '.' (dot) takes the dimmer to **Zero**. Pressing the 'MA' key and the '.' (dot) simultaneously puts the **Default** keyword in the command line; this can be executed by 'Please'. The Default value is often 0% for dimmers.

Try these keys and see the result in the fixture sheet and the command line history.

Another control option is the encoders. There are five dual encoders on the control hardware.

The **Encoder Bar** we saw in the last chapter shows us what the encoders are controlling. It should look something like this:



There are three rows in the encoder bar. In the top row, there are the different **Feature Groups** - we will return to these when we have fixtures with more than dimmers. The important part is that **Dimmer** is selected (yellow text).

We will also return to the second row in later chapters. It has buttons that do different things and a row of layer selection buttons.

At the bottom is the encoder labels. We also call this **Attribute Control** because it can be used to control the different attributes in fixtures. Our current fixtures only have dimmer.

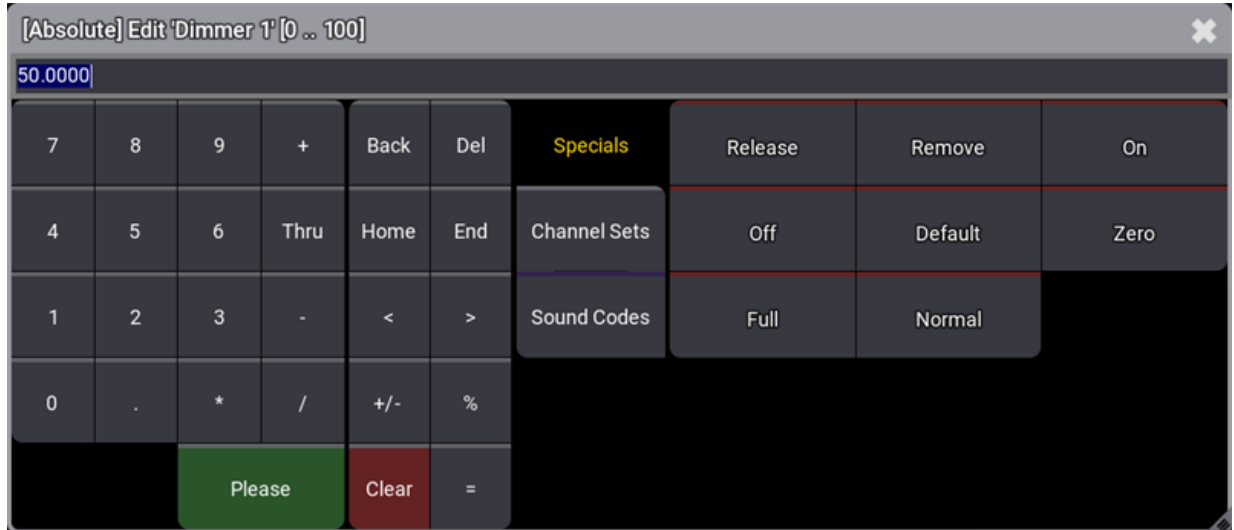
We can use this to control the dimmer value. If you have the physical hardware, you can turn the left-most encoder to change the value. The inner encoder changes the value in larger steps than the outer encoder.

If you use grandMA3 onPC, there are different ways to mimic the hardware.

You can place the mouse pointer in the white encoder icon and then scroll the mouse wheel (if you have one).

Another option is to use a kind of invisible on-screen encoder. You can also click and hold the encoder icon and while keeping the mouse button move the pointer to another area of the screen. This is now the center of the encoder. While holding the mouse button, you can now draw circles around the center of your invisible encoder. The further away from the center, you draw the circle, the finer resolution you have. Small circles close around the center make the value change faster (smaller resolution). You can release the mouse button when you are happy with the value.

Finally, you can click the red area or shortly press the inner encoder. This opens the **Calculator** pop-up.



The calculator pop-up gives access to type a value on the on-screen keypad.

There is also access to "Specials" (button in the middle of the calculator) where there are buttons for the keys we learned about above - 'Full', 'Default', 'Normal', and 'Zero'.

Fixture types might also have **Channel Sets**. These are named values defined in the fixture type. Dimmers often have 'Open' and 'Closed' representing 0% and 100%.

This pop-up is named calculator because we can do some arithmetic with this. In my example, the dimmer is at 50%. If I click **+ 1 0 Please** then I add 10 to the current value. We can also subtract, divide, and multiply.

If we have selected more than one fixture, we can even type a value range using 'Thru'. Clicking 'Please' closes the pop-up. You can also close it without making any change by clicking the 'X' in the upper right corner of the pop-up.

Try to select multiple fixtures either by clicking and dragging in the fixture sheet or by typing. For instance, **1 Thru 1 0 Please**.

Now open the calculator and click **1 0 Thru 1 0 0 Please**.

The result should be a nice range of values from 10% to 100% across the selected fixtures.

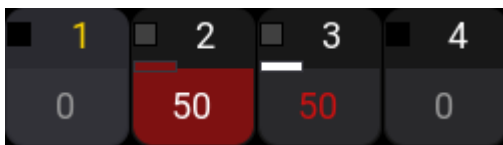
This is also where the fixture selection order matters. The value is spread out across the fixtures in the selection order. So if we selected the same fixtures in a different order - for instance, 10 thru 1 - and then applied the same value range then the result would be reversed.

The programmer has three levels of information. It is the **selected** fixtures, **active** values, and **inactive** values. We can remove each level by pressing 'Clear'. A long press clears all three levels at once, and all values in our programmer are gone.

If we on the other hand just press 'Clear' once then we release the selection of fixtures. This means that we do not have any selected fixtures and trying to give a value does not change anything.

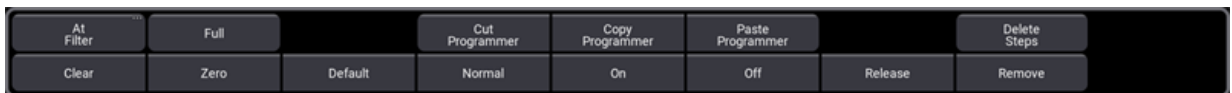
If we do not have a fixture selection and we press 'Clear', then we make active values inactive. This means the value is still sent to the output, but it is typically not stored if we try to.

If we press 'Clear' without a fixture selection and with no active values, then the inactive values are cleared from the programmer.



The image above shows the programmer levels. Fixture 1 is selected. Fixture 2 has active values. Fixture 3 has inactive values. Fixture 4 does not have anything in the programmer.

A final programmer tool I will introduce you to is the **At Overlay**. This is very useful especially when you are using the grandMA3 onPC.



It can be opened by clicking the **At** in the Control Bar or pressing **F1** on a keyboard. It can also be opened using a command: **Menu "AtOverlay"**

The overlay has buttons with access to many useful commands including Clear, Zero, Full, and Normal.

Selecting Fixtures

We discussed selecting fixtures in the fixture sheet, but they can also be selected using the keypad in the command section.

When we look at the command line it should look like his:



The fixture part of this is the default keyword. This means that if we do not define a different beginning keyword, it assumes we want to begin our command with **Fixture**.

Fixtures can be selected using their ID numbers. You can select fixture 1 simply by writing **1** in the command line and executing the command.

If you look at the **Command Line History** window. It says



OK: Fixture 1

You can add a fixture to the selection by writing **+ 2** and executing the command.

Removing a fixture from the selection can be done using minus.

A range of fixtures can be selected using thru. Write the following in the command line and run the command:

9 Thru 14

As long as we have not given the fixtures a value, we keep adding fixtures to our selection. If you give the selected fixtures a value by any of the methods described above, the system assumes that the next fixture selection means that you are done with the previous selection and clears it before selecting the new fixtures.

A single 'Clear' will clear the fixture selection.

If numbers are left out on the sides of the "Thru" keyword, then the range will go as far as possible. This means that **Fixture Thru** selects from the lowest to the highest number. This is often all fixtures.

The 14 blinders have their own individual FID numbers, but they are also children of the **Blinders** grouping fixture. We also call these **Sub-fixtures**.

This means that they can also be selected using a sub-fixture index number. **Fixture 20.11** is the same as **Fixture 31**.

There are a lot of different combinations of commands that allow you to use this recursive selection of sub-fixtures. We will explore a few of them. Start by clearing the programmer completely.

Now do **Fixture 20.** (remember the dot at the end).

Adding the dot at the end will select the main fixture 20 and all the sub-fixtures. Clear the programmer again.

Now type **Fixture 20.2 thru 10**

This selects sub-fixtures 2 thru 10 in fixture 20.

Try other combinations of fixture selections until you are comfortable selecting fixtures and sub-fixtures.

Finish this chapter by clearing the programmer.

Recap

In this topic, we learned about the programmer, fixture selection, and how to assign dimmer values.



The primary manual has a section called **Operate Fixtures**. This section of topics has information about the programmer and fixture control.

Noteworthy keywords from this chapter are **Fixture**, **Thru**, **Clear**, **ClearAll**, **-[minus]**, **+ [plus]**, and **At**.

In the next chapter, we will look at the 3D virtual space.

6. 3D Fixture Setup

3D Window

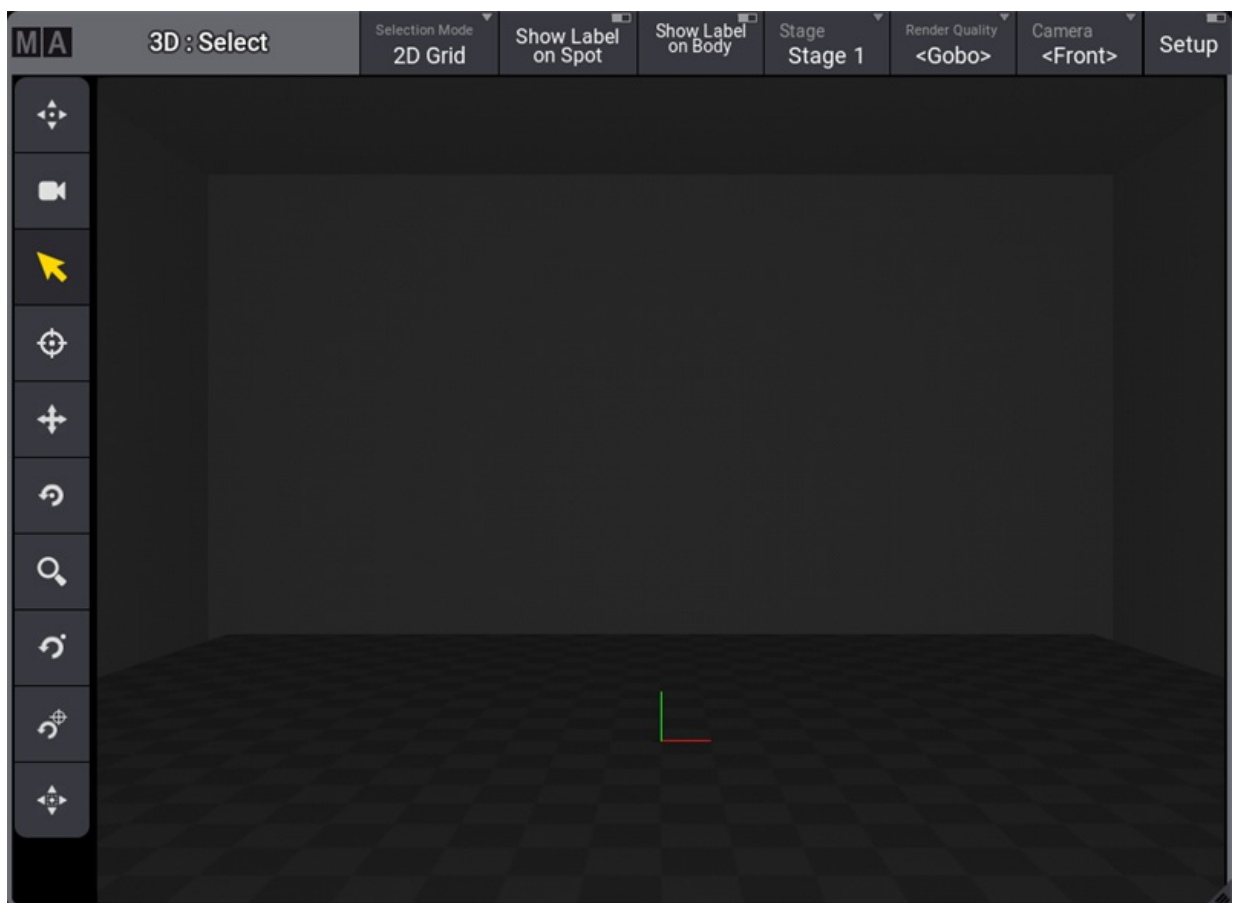
The grandMA3 software has a virtual 3D stage area.

The fixtures we patched exist in this environment, and other elements can be imported to match the stage and set elements.

It is a visualization tool where the fixtures can be positioned to match the real-world positions, and the fixtures can be rotated to point in the correct direction.

You can create a new window to see the 3D stage area. The window is found in the **Common** tap in the **Add Window** pop-up. It is called **3D**.











This is what it currently looks like:



When the fixtures are patched, they are positioned at the zero position. This is where we can see a green and red line in the image above. As a default, it is on the floor in the middle of the stage area.

We are looking at the stage area through a virtual camera. There are several default cameras, but for now, we are just gonna use the one called **Front**. You can see what camera we are using in the 'Camera' button in the title bar.

The toolbar on the left side of the window has different tools that allow for fixture selection and view manipulation. From the top they are:

-  **Zoom to Fit** - moves the virtual camera to fit all elements.
-  **Camera Reset** - moves the virtual camera to its default position.
-  **Select** - for selecting fixtures or other objects.
-  **Follow** - we are not gonna cover this function in this topic. It is used to point moving lights at the position you click in the window.
-  **Move** - This moves the camera around.
-  **Rotate Center** - This rotates the camera around the center (0,0,0) position.
-  **Zoom** - Zooms in and out from the position clicked.
-  **Rotate Pivot** - Rotates the camera around a set pivot point.
-  **Set Pivot** - Sets the pivot point for the rotate function above.
-  **Fit Selected** - Moves the camera to fit the selected fixtures.

If the window you created is less than six squares high in the user-definable area, then the menu is split into two columns.

Try out the different tools and get comfortable moving the camera around.

Did you notice that the fixtures appear to be under the floor?

This is because the fixture's insert point is usually its hanging point.

For this to be useful, we need to position and rotate fixtures to match our setup.

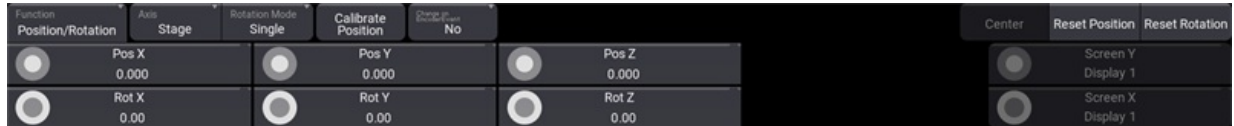
The 3D window has a mode called **Setup**. Setup is turned Off when you do not want to change the fixture position and rotation but simply want to use the window. Setup is turned On when you want to change the fixture setup.

The mode can be changed by toggling the "Setup" button in the 3D windows title bar.

Turn the setup mode On.

Select fixture 1.

Now the encoder toolbar has changed to allow you to use the encoders to change the fixture position and rotation.




The 3D axes are X, Y, and Z. They can be positive or negative numbers. The X-axis is usually set up to be stage left and right. Stage right will be negative numbers if 0 is on the centerline. The Y-axis is usually downstage and upstage. Positive numbers are upstage. The Z-axis is the height. Positive numbers are typically above the floor.

The inner encoders move the fixture around, and the outer encoder ring changes the fixture rotation. Try moving and rotating the fixture. Notice that when you are changing one of the rotation values, it may also change the values for the two other rotation axis.

On the right side of the encoder bar, there are buttons to reset the fixture position and rotation.

The position and rotation values are actually a part of the patch information. Changing the values using the 3D window writes the values to the setup. If you are changing a lot of fixtures and you know the values, then it might be easier to make the changes in the patch.

Click the  icon in the control bar (or **Menu**) and click **Live Patch**.

Live Patch is a version of the patch menu where you can make live changes that can be done without changing the show configuration. This means that you, for instance, cannot add or delete fixtures to the show, but we can change what DMX address a fixture is patched to. And we can change the fixture position and rotation.

The patch menu has two different column modes. They are **Condensed** and **Full**. Condensed only shows a few common columns. Full shows all the different columns and settings available for the fixtures. The mode can be changed by toggling the "Columns" button in the patch menu title bar. Change it to **Full**.

Now you can see all the different fixture settings that belong to the patch.

There are position and rotation columns for the fixture.

Change the numbers to match the following table. You can select multiple cells with lasso selection or by holding **Ctrl** on a keyboard while clicking cells.

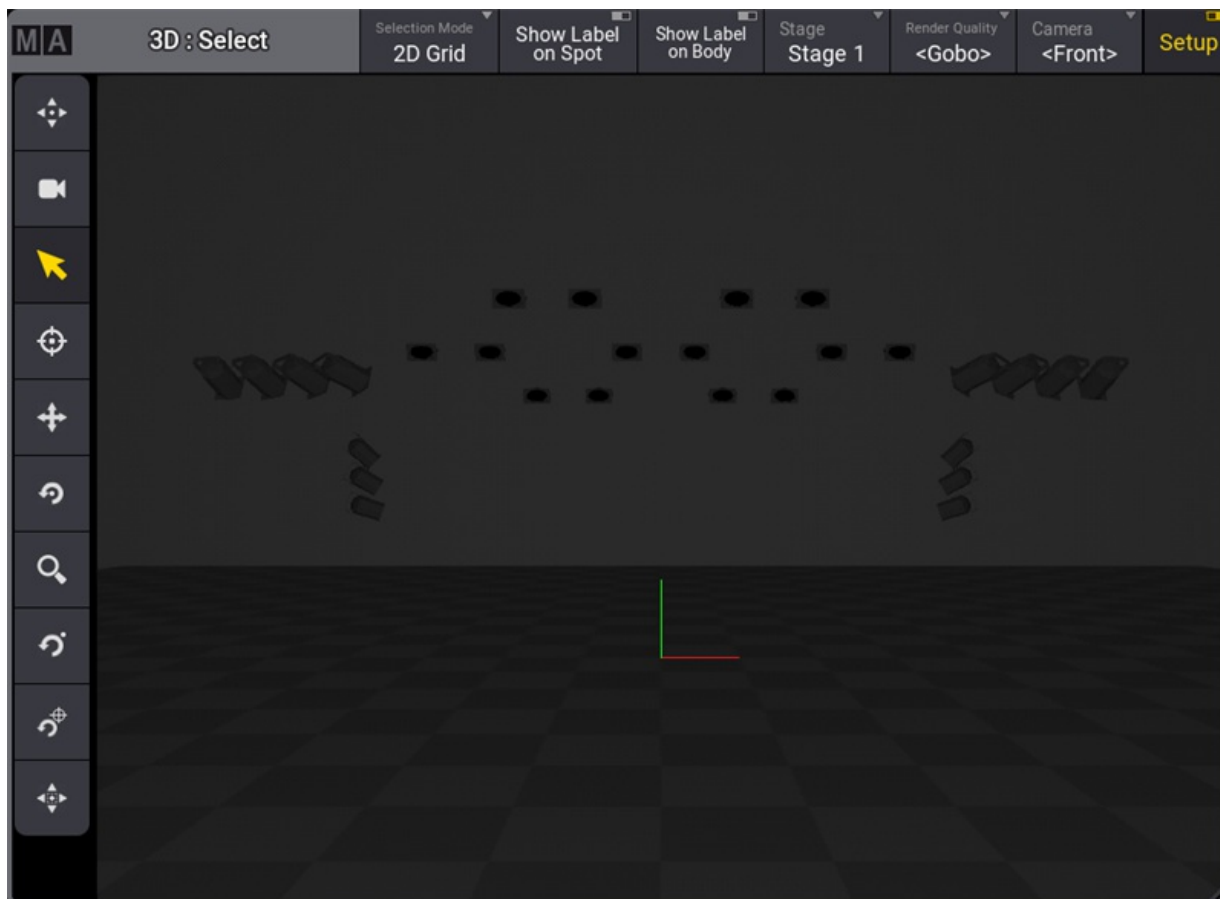
| FID | Name | Type | Patch | X-Pos | Y-Pos | Z-Pos | X-Rot | Y-Rot | Z-Rot |
|-----|-------|-----------------|-------|--------|--------|-------|-------|--------|--------|
| 1 | Dim 1 | Dimmer - Mode 0 | 1.1 | -4.00m | -4.00m | 3.30m | 60.20 | -3.50 | -6.00 |
| 2 | Dim 2 | Dimmer - Mode 0 | 1.2 | -3.67m | -4.00m | 3.30m | 61.25 | -9.00 | -15.75 |
| 3 | Dim 3 | Dimmer - Mode 0 | 1.3 | -3.33m | -4.00m | 3.30m | 63.20 | -14.00 | -25.65 |
| 4 | Dim 4 | Dimmer - Mode 0 | 1.4 | -3.00m | -4.00m | 3.30m | 66.14 | -18.75 | -36.00 |
| 5 | Dim 5 | Dimmer - Mode 0 | 1.5 | 3.00m | -4.00m | 3.30m | 66.14 | 18.75 | 36.00 |
| 6 | Dim 6 | Dimmer - Mode 0 | 1.6 | 3.33m | -4.00m | 3.30m | 63.20 | 14.00 | 25.65 |
| 7 | Dim 7 | Dimmer - Mode 0 | 1.7 | 3.67m | -4.00m | 3.30m | 61.25 | 9.00 | 15.75 |



| FID | Name | Type | Patch | X-Pos | Y-Pos | Z-Pos | X-Rot | Y-Rot | Z-Rot |
|-----|------------|-----------------------------|-------|--------|--------|-------|--------|--------|-------|
| 8 | Dim 8 | Dimmer - Mode 0 | 1.8 | 4.00m | -4.00m | 3.30m | 60.20 | 3.50 | 6.00 |
| 9 | Dim 9 | Dimmer - Mode 0 | 1.9 | -4.00m | 0.00m | 2.80m | 16.00 | -45.00 | 0.00 |
| 10 | Dim 10 | Dimmer - Mode 0 | 1.10 | -4.00m | 0.00m | 2.40m | 16.00 | -57.50 | 0.00 |
| 11 | Dim 11 | Dimmer - Mode 0 | 1.11 | -4.00m | 0.00m | 2.00m | 16.00 | -70.00 | 0.00 |
| 12 | Dim 12 | Dimmer - Mode 0 | 1.12 | 4.00m | 0.00m | 2.80m | 16.00 | 45.00 | 0.00 |
| 13 | Dim 13 | Dimmer - Mode 0 | 1.13 | 4.00m | 0.00m | 2.40m | 16.00 | 57.50 | 0.00 |
| 14 | Dim 14 | Dimmer - Mode 0 | 1.14 | 4.00m | 0.00m | 2.00m | 16.00 | 70.00 | 0.00 |
| 20 | Blinders | Grouping | | | | | | | |
| 21 | Blinder 1 | COB - Blinder 2x100w - 1 ch | 1.15 | -2.00m | 0.50m | 4.70m | -73.00 | 0.00 | 0.00 |
| 22 | Blinder 2 | COB - Blinder 2x100w - 1 ch | 1.16 | -1.00m | 0.50m | 4.70m | -73.00 | 0.00 | 0.00 |
| 23 | Blinder 3 | COB - Blinder 2x100w - 1 ch | 1.17 | 1.00m | 0.50m | 4.70m | -73.00 | 0.00 | 0.00 |
| 24 | Blinder 4 | COB - Blinder 2x100w - 1 ch | 1.18 | 2.00m | 0.50m | 4.70m | -73.00 | 0.00 | 0.00 |
| 25 | Blinder 5 | COB - Blinder 2x100w - 1 ch | 1.19 | -3.50m | 2.00m | 4.20m | -73.00 | 0.00 | 0.00 |
| 26 | Blinder 6 | COB - Blinder 2x100w - 1 ch | 1.20 | -2.50m | 2.00m | 4.20m | -73.00 | 0.00 | 0.00 |
| 27 | Blinder 7 | COB - Blinder 2x100w - 1 ch | 1.21 | -0.50m | 2.00m | 4.20m | -73.00 | 0.00 | 0.00 |
| 28 | Blinder 8 | COB - Blinder 2x100w - 1 ch | 1.22 | 0.50m | 2.00m | 4.20m | -73.00 | 0.00 | 0.00 |
| 29 | Blinder 9 | COB - Blinder 2x100w - 1 ch | 1.23 | 2.50m | 2.00m | 4.20m | -73.00 | 0.00 | 0.00 |
| 30 | Blinder 10 | COB - Blinder 2x100w - 1 ch | 1.24 | 3.50m | 2.00m | 4.20m | -73.00 | 0.00 | 0.00 |
| 31 | Blinder 11 | COB - Blinder 2x100w - 1 ch | 1.25 | -2.00m | 3.50m | 3.70m | -73.00 | 0.00 | 0.00 |
| 32 | Blinder 12 | COB - Blinder 2x100w - 1 ch | 1.26 | -1.00m | 3.50m | 3.70m | -73.00 | 0.00 | 0.00 |
| 33 | Blinder 13 | COB - Blinder 2x100w - 1 ch | 1.27 | 1.00m | 3.50m | 3.70m | -73.00 | 0.00 | 0.00 |
| 34 | Blinder 14 | COB - Blinder 2x100w - 1 ch | 1.28 | 2.00m | 3.50m | 3.70m | -73.00 | 0.00 | 0.00 |

When the numbers match, you can close the patch menu and accept the changes if the software asks.

Now the fixtures are positioned and rotated, and the 3D window should look something like this:



Try to turn on the fixtures to see the light from the fixtures and try to move the camera around to see it from different positions.

When you are happy, remember to turn the 3D window "Mode" back to **Standard** by turning Off the **Setup** button. You can store this as a new view or store it on top of the default "3D" view.

The 3D window has a lot of different settings that allow you to adjust the window to match your wishes. For instance, it can be set up to have priority and run on a grandMA3 onPC on a powerful graphics computer, giving you high-quality real-time visualization. Or the quality can be scaled down to run on a console, where the user interface and cue control are prioritized.

For now, we are just gonna use it with the default settings.



Recap

In this chapter, we looked at the 3D window and positioned the fixtures in the 3D virtual space.

If you want to learn details about the 3D window, read the [3D Window](#) topic.

The [Position Fixtures in the 3D Space](#) topic explores fixture positioning in more detail.

In future chapters, we will add more interesting fixtures to our patch and 3D space.

The [next chapter](#), however, is about groups.

7. Groups

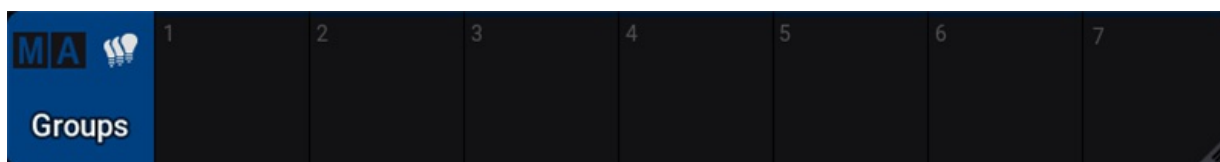
Fixture selection can be made using the methods we explored in chapter 4, but when there are fixtures we often use together and need to select together, there is another option called **Groups**.

In a **Group**, we store the fixture selection and the fixture selection order.

Groups are organized in a **Group Pool**. This can be created as a window for easy creation, overview, and selection.

Make room in a user-defined area to create a group pool window. The **Groups** window is created like other windows and can be found in the **Pool** tab in the **Add Window** pop-up.

The pool looks like this when empty:



The square on the left is the **Title Field**. All pools have one of these. It tells you what kind of pool it is and the MA logo is used to access the settings - just like the logo in the left corner of other windows' title bar.

Pools often have fewer settings than more complex windows like the fixture sheet.

The other squares in the pool window are where we can store pool objects. The objects we store in the group pool are groups. A lot of the things we create are stored in pools. For instance, the views we have stored and modified are stored in a **View** pool.

Create Group


We are going to create a few groups with our current fixtures.

The first group is going to be the front lights.

Make sure to start with an empty programmer and then select fixtures 1 thru 8. You do not need to give them a dimmer value.

Now click and hold the first group field until a group object appears.

Looking at the **Command Line History** window, you can see feedback like this:



```
OK: Store Group 1
```

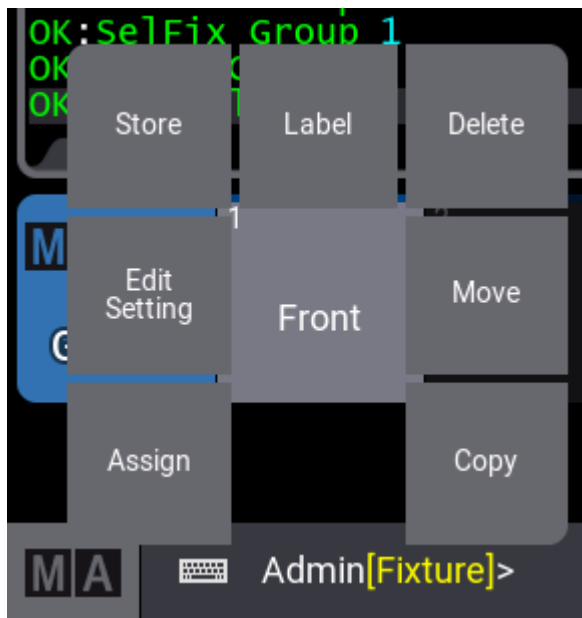
Try to clear your programmer and then click the group. Now you have reselected the fixtures.

The group does not have a name, but we can label the group easily. The last thing we give focus to has a white frame. When a pool object has focus, and we start writing on our keyboard, the system assumes we give it a label.

So you can just start to type: **Front** - this opens the "Edit Name" pop-up. Complete the labeling by pressing 'Enter' on the keyboard.

Now the group has a name. There are other ways to do this.

Pool objects have a special **Swipecy** menu that gives access to some common functions. The menu is accessed by clicking and holding the group and then moving the pointer out of the group pool object.



The menu has seven buttons that appear around the pool object. The top center button can be used to give the group a new label. The menu is visible as long as you hold the mouse button pressed or as long as you touch the screen. Move the pointer/finger to the desired button and release. You can release it outside the buttons if you do not want to do anything.

Create a second group with fixtures 9 thru 14. Label it "Sides". Make sure it only contains the desired fixtures.

Our third group is all the blinders (fixtures 21 thru 34).

We are going to make two more groups. It is two selections of blinders. These two groups are all blinders, but we will make two symmetrical selections.

Group four is fixtures 21, 24, 25, 27, 28, 30, 31, and 34 - label this "Even Blinders". It is not strictly the even numbers but just ignore this.

The last group is fixtures 22, 23, 26, 29, 32, and 33 - label this group "Odd Blinders".



Now we have the groups we need.

Recap

In this chapter, we looked at groups as a selection tool. And created some useful groups.

Groups are described in detail in the **Groups section** of the main manual.

The **next chapter** is about Appearances.

8. Appearances

Appearances are a defined look that can be applied to most objects. In this chapter, I will introduce you to appearances, but we will not create specific appearances that we will use later. You are, however, very welcome to continue to add appearances to objects in future chapters.

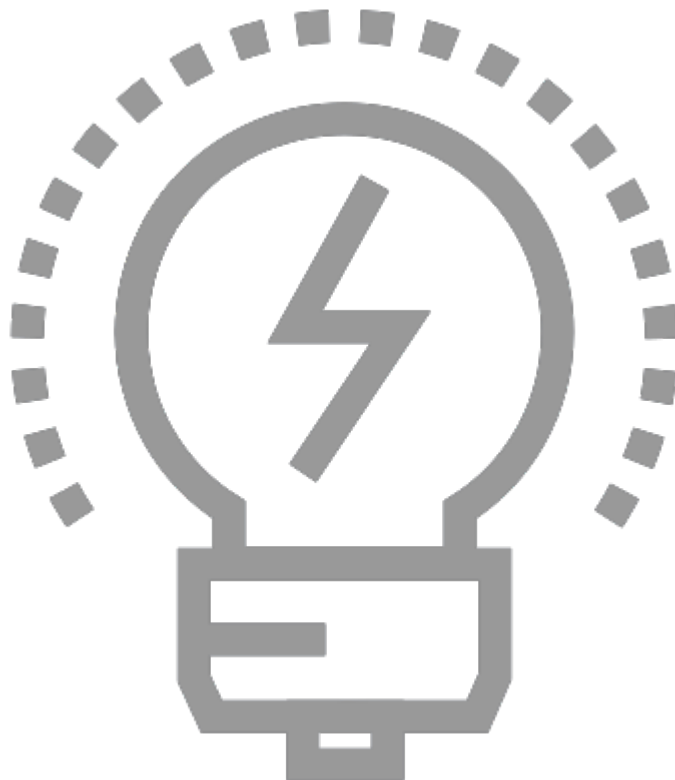
The appearances are organized in an **Appearance** pool. A new show already has some appearances in the pool. These can be used like any other appearance you create.

Most objects in the grandMA3 have the option to add an appearance. The purpose is to customize the look of the objects. This can be used as indicators of different fixture types, special cues, or to add icons or images to elements for faster identification.

Images

Images can be used in appearances. There is a separate pool for images. Images can be imported into the pool.

I am going to import and use this image:



Hint:

Right-click the image above and save it on your computer if you want to follow the example.



The image needs to be stored at a specific location for the grandMA3 to be able to find it.

It is easiest to have a USB flash drive that you use to import, export, and store show. The drive needs a specific file structure for the grandMA3 software to find specific files. The file structure is created when you use the flash drive with the software. You get the needed structure if you insert a stick and save the show to the USB flash drive.

The image needs to be saved in **\grandMA3\gma3_library\media\images**

If you do not use a USB stick, you need to locate where the program data is stored on your computer.

On a windows machine where it is stored at the default drive, it is located at
C:\ProgramData\MALightingTechnology\grandMA3\gma3_library\media\images

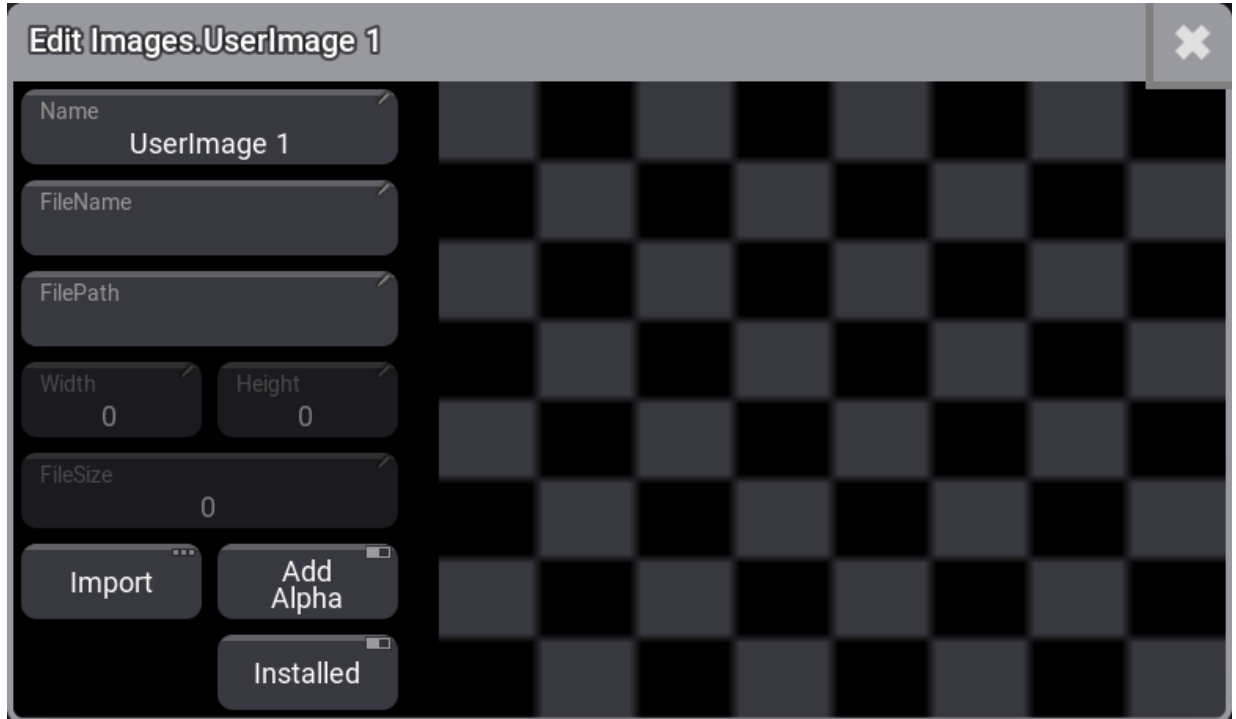
On Apple Mac machines it is located at **[System HD]/Users/[User Name]/MALightingTechnology/grandMA3/gma3_library/media/images**

Again, I will recommend using a USB stick for all imported, exported, and saved files. It makes it easier to move files between consoles and on PC.

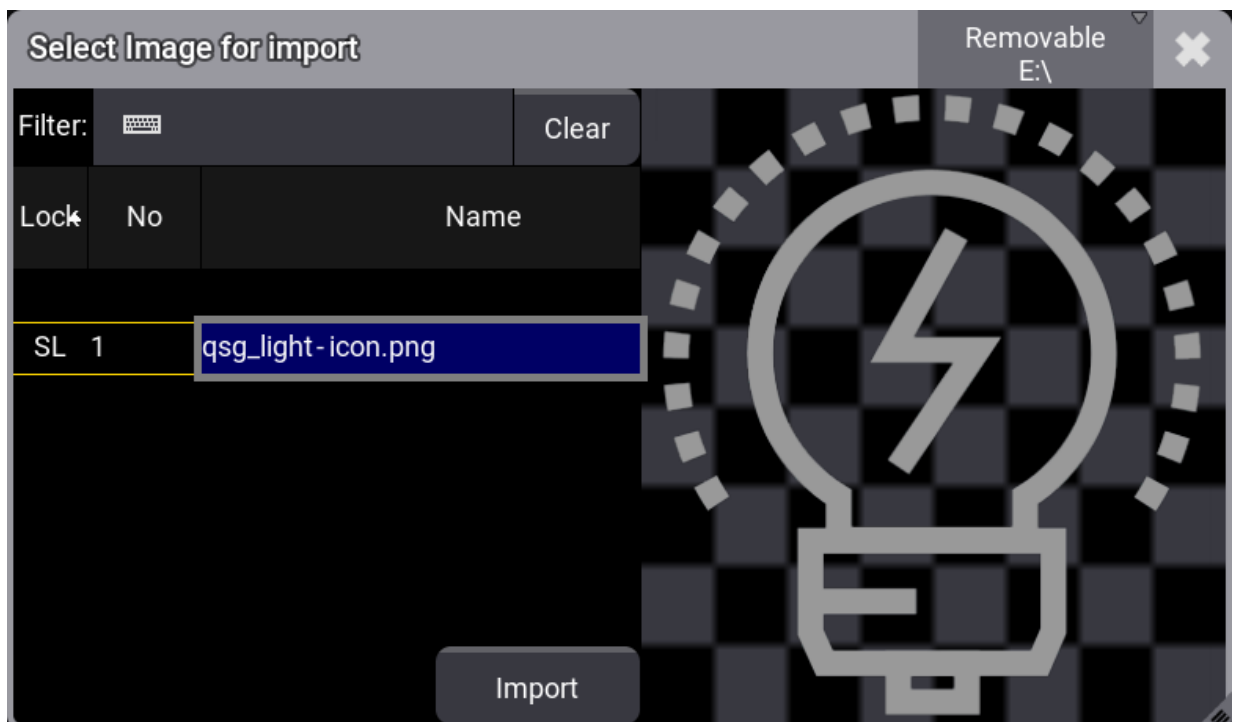
With the image at the correct location on a USB flash drive or hard drive, we can import it to the image pool.

Create the image pool in the user-defined area.

Right-click the first empty pool object. This opens the image editor:




Click **Import**, and now we get a new pop-up used to import an image:



Change to the drive where the image file is stored. I have changed to the USB flash drive in the drive selection in the title bar. Then you should be able to select the image.

Click **Import**.

Now close the image editor by clicking the  in the upper right corner. Now the image is in the image pool and can be used in appearances.



Hint:

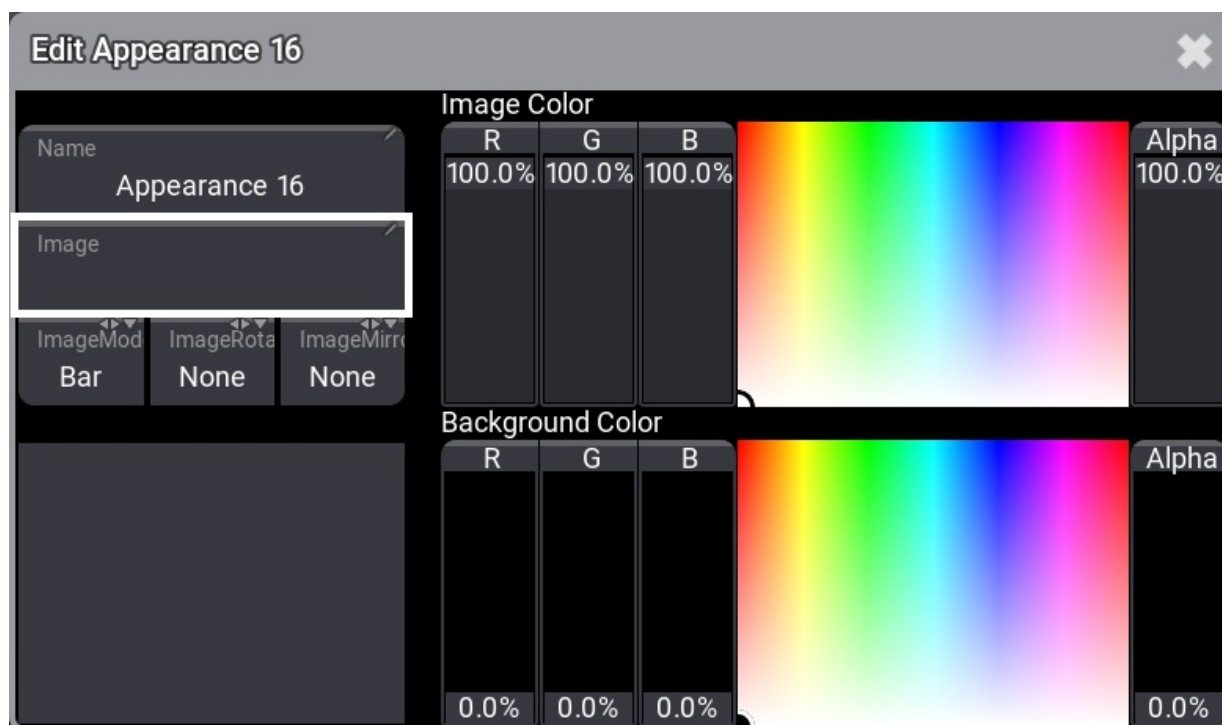
If you want to use custom image icons, it is a good idea to use a png file with a transparent background and a white icon. Then a colored background can be added to the appearance, and the icon can be colored to create different appearances using the same icon.

Back to Appearance

You create an appearance by editing an empty appearance object in the Appearance pool. There are already some predefined appearances, so you might need to scroll the pool to find an empty pool object.

Edit an empty appearance pool object.

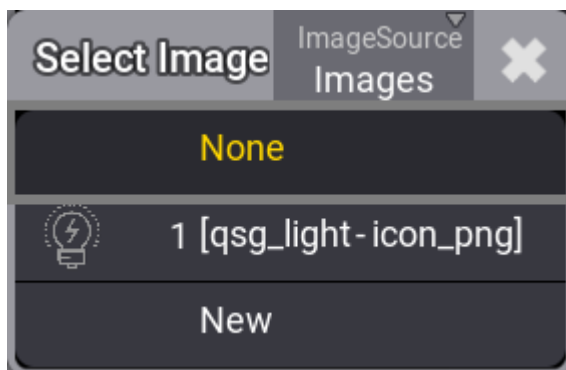
The editor looks like this:



The left side allows you to change the name, add an image, control how the image is adjusted to the size and see a preview.

The right side is two sections with color selection. The top one adjusts the image color. The bottom one adjusts the background color. It can only subtract existing colors from the image. It can, however, add color to a transparent background.

Click **Image**.



Select the image we imported.

Now adjust the colors to match your needs.

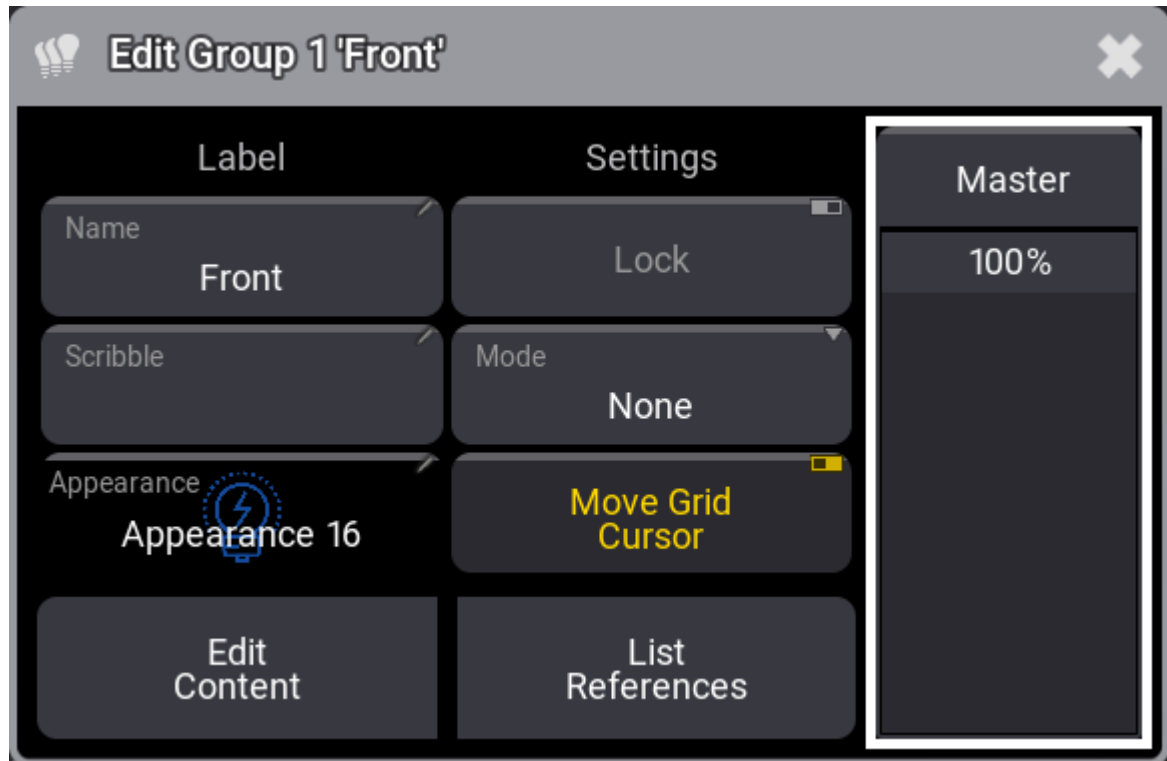
Close the editor when you are happy.

The appearance can be assigned to a lot of different objects.


In the previous chapter, we looked at the Swipecy menu. One of the options here is 'Assign'. This can be used to assign the appearance. Let us try to assign the new appearance to the first group. You need to have the Appearances pool and Groups pool visible.

Open the Swipecy menu on the appearance and select the **Assign** option. Now click the first group. This assigns the appearance to the group.

Use the Swipecy menu on the group and select the **Edit Settings** option. This opens the editor for the group pool object.



Many editors have an appearance setting that can be used to select an appearance.

Tap the **Appearance** button. This opens a small select pop-up with all the appearances and the options to select 'None' and 'New'. Select the desired appearance - this closes the select pop-up. Close the **Edit Group** pop-up by clicking the  in the upper left corner.

You cannot assign an appearance to other appearances or any image.

Recap

In this chapter, we looked at appearances and Images as tools to create custom indications and marking of objects.

The main manual also has a section for [Images](#) and [Appearances](#). They have more details on the different functions.

We will not talk more about appearance, but feel free to add more and use them in the rest of the chapters.

The [next chapter](#) is about another useful customization tool - Scribbles.

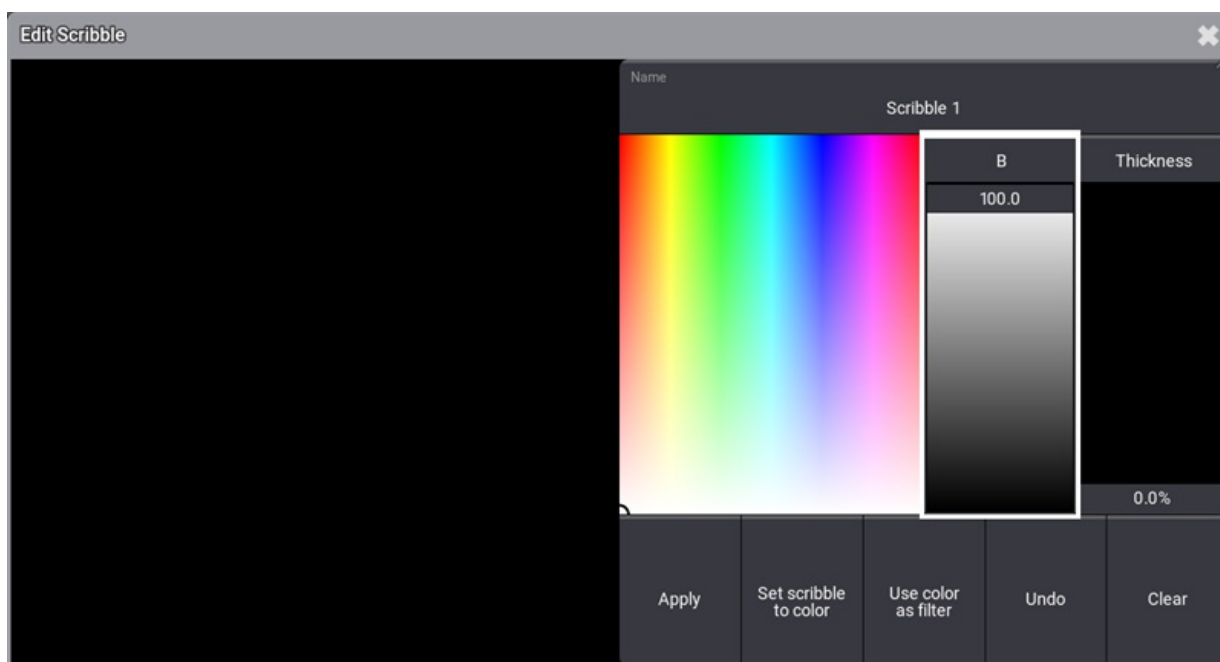
9. Scribbles

Scribbles are another way to add a custom indication to different objects.

These are small simple drawings that you can create and use. They also live in a pool.

Create the Scribble pool in your user-defined area and edit the first empty pool object.

This is the scribble editor:



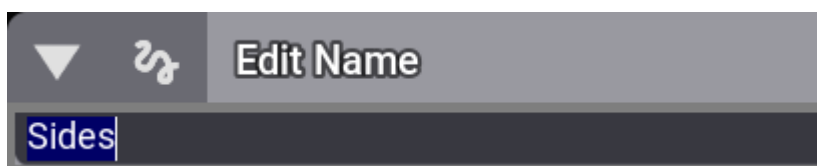
The left side is the drawing area. The right side is used to select a drawing color and line thickness. You can also give it a name, and there are buttons to clear, undo, change some color, and apply (or save) the drawing to the pool.

Try the different drawing options.

When you are happy with your drawing, you can save it by clicking **Apply**.

Scribbles are applied like appearances. They are mostly applied to pool objects, where appearances can also be applied to a wider range of elements such as backgrounds, windows, or the user-defined area.

When we label an object that can have a scribble, there is an extra icon in the corner of the **Edit Name pop-up**:



The down-pointing triangle (▼) opens the on-screen keyboard. The icon with the squiggly line (🌀) is the scribble icon. Clicking this opens the scribble editor at the bottom of the edit name pop-up. Creating a scribble and applying it to the object adds the scribble to the pool so it can be used again on other objects.

When both scribble and appearance are assigned to an object, the appearance is at the back, the scribble is on top of the appearance, and the object's name is at the front.

It could look like this:



Recap

In this chapter, we looked at Scribbles as tools to create custom indications and marking of objects.

The main manual also has a section for **Scribbles**. They have more details on the different functions.

We will not talk more about scribbles, but feel free to add more and use them in the rest of the chapters.

The **next chapter** is about another useful pool - Macros.

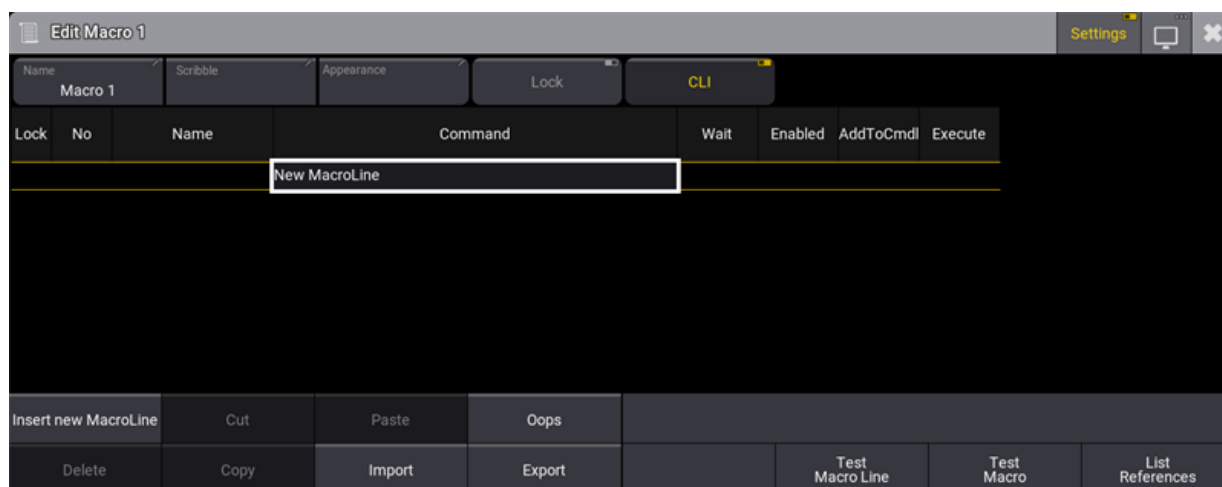
10. Macros

A macro is a command or a set of several commands that can be executed when the macro is called.

Macros are stored in the **Macros** Pool. The previous chapter introduced the pools and how to use them.

So, create a macro pool in the user-defined area and edit the first empty pool object.

The macro editor looks like this - with 'Settings' toggled on in the title bar:



In the editor, we can create macro lines. Each line is executed one by one. A macro needs at least one line.

The commands are the same as the ones we use in the command line input.

We do not write a please command at the end; it is automatically added if the **Execute** column says **Yes**.

Click **Insert new MacroLine**.

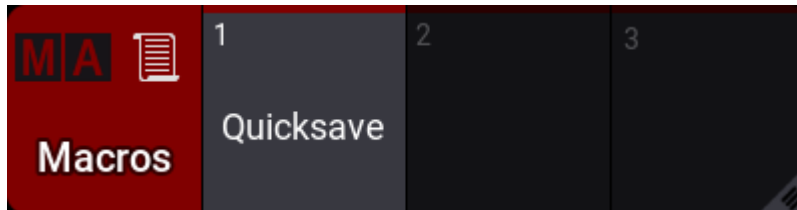
Now we have a macro line where we can add a **Command**.

We are going to create a simple macro that saves the show.

Edit the command field in the macro line and write **SaveShow**. It is important that it is one word.

Edit the **Name** input button at the top of the editor and write **Quicksave**. If you do not see a 'Name' button at the top, Click **Settings** in the title bar to show the settings at the top.

Close the editor and click the macro in the pool:



This was one of the most simple macros. A single keyword that saves our show.

Macros can be more complex using elements like user-defined variables. That is outside the scope of this Quick Start Guide.

We are going to create another macro. It mimics the store key.

Edit a new empty macro pool object. Add a new macro line and write **Store**.

Edit the name and change it to "Store@".

So far, it is all the same process as the previous macro. but now you need to change the **Yes** in the **Executor** column to a **No** by right-clicking the **Yes**.

The difference is that this macro line now does not automatically execute itself, allowing you to add more information or a destination. It puts "Store" in the command line waiting for you to do more.

Let us do one more macro.

Edit a new empty macro pool object.

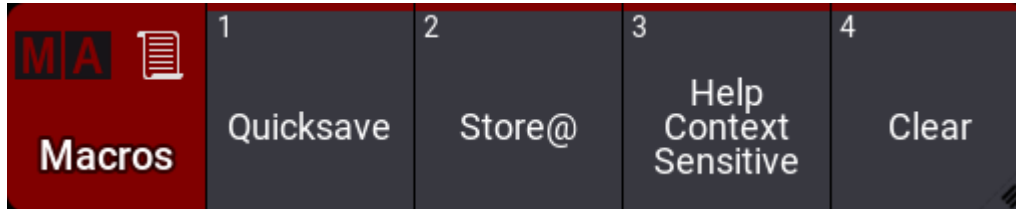
Now click **Import**.

This opens a long list of previously exported macros and factory-created macros. Scroll down the list and find "Help Context Sensitive", select it and click **Import**.

Now you have imported all the settings for this macro, including a macro name. You can close the macro editor.

This macro can be used to open relevant help pages. Try it out by clicking the macro and then the macro pool title field. This opens the help page about macros.

Add more macros if you feel like it - I like having a Clear macro.



You can click the macros in the pool to run them. A command can also trigger them. For example, **Macro 1**.

Recap

This chapter was a quick look at the macro system.

The main manual has an entire **Macro section** about macros.

Feel free to add more macros in the following chapters if some keys or keywords are difficult to reach or just if you feel it makes sense.

In the **next chapter**, we are finally going to create some cues.



11. Store Cues and Use Executors

There are different terms that you need to learn.

Cue

A **Cue** stores different values from fixture attributes. They can contain more than just the attribute values; it is all about the output to the fixtures. Cues also have information on how to transition between different cues.

Each cue has a unique cue number.

Cues actually consist of **Cue Parts**. This means that if we store values in cue 5. Then the values are actually stored in cue 5 part 0. We often just talk about this as cue 5 and only mentions the parts when they are relevant, and there are more than just part 0.

Sequence

The cues are stored in a **Sequence**. The sequences have a list of cues sorted by the cue number. This means that cue number 4 cannot be before cue number 3.

The grandMA3 can handle an almost unlimited number of sequences and many cues for each sequence.

The sequences are stored in a sequence pool. When we playback (or "run") a cue, it is actually played back from the sequence pool.

There is always a selected sequence. The default color for indicating a selected pool object is a thick yellow frame.

If we do not specify a sequence, the grandMA3 assumes that a sequence command is for the selected sequence.

Executors

Executors are used to controlling different objects. One of the objects is the sequences.

Executors can also be called **Playbacks**. There are different executor hardware: Executor Buttons, Executor Faders, and Executor Knobs.

All faders and knobs have a button attached. Not all buttons have a fader or knob attached.

On the grandMA3 onPC, you can open an on-screen version of the executor hardware by pressing **F5**.

It is important to know that the sequences are not playing back from the executors. The executor sends control commands to the sequences running from the sequence pool.

This also means that if several executors control the same sequence, they share the sequence status.

Create Some Cues

We will create some cues, but first of all, we need a window where we can see the sequence. Click the default view called "Sequence Sheet". It is a starting point; you can modify it if you like it.

The window you need is called **Sequence**, and if you want to create one from scratch, it is found in the "Common" tab in the **Add Window** pop-up.

The sequence sheet shows the selected sequence. We have not created a sequence yet, but the first sequence pool object is already selected.

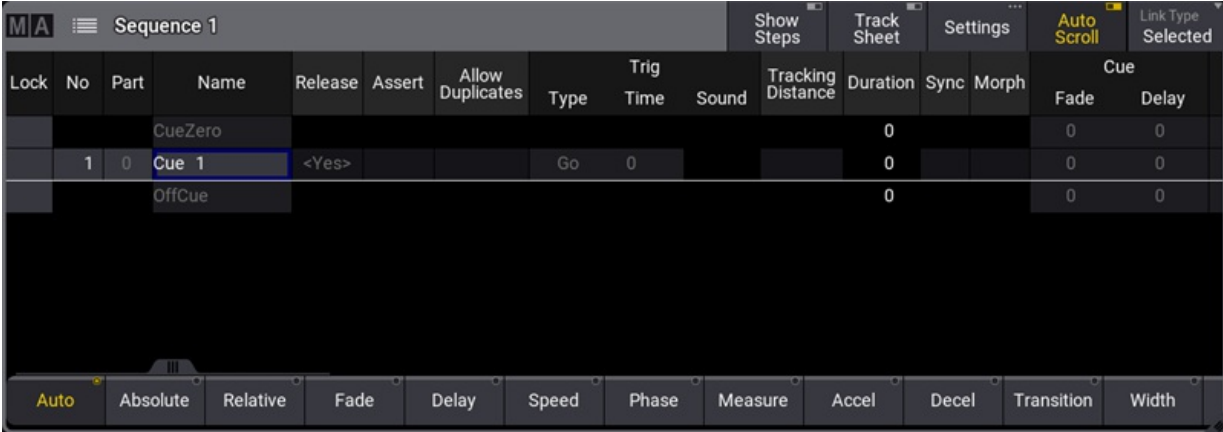
Select group 1 and give the fixtures a value of 100%.

Press **Store** and then **Please**.

Now we have stored the programmer values into **Cue 1** in **Sequence 1**.

When we did not specify a location, the selected sequence was used, and it stores the values in the first available cue.

You can see the cue in the sequence sheet.



| Lock | No | Part | Name | Release | Assert | Allow Duplicates | Type | Trig Time | Sound | Tracking Distance | Duration | Sync | Morph | Cue Fade | Cue Delay |
|------|----|------|---------|---------|--------|------------------|------|-----------|-------|-------------------|----------|------|-------|----------|-----------|
| | | | CueZero | | | | | | | | 0 | | | 0 | 0 |
| | 1 | 0 | Cue 1 | <Yes> | | | Go | 0 | | | 0 | | | 0 | 0 |
| | | | OffCue | | | | | | | | 0 | | | 0 | 0 |

A sequence always contains two default cues: CueZero and OffCue. The OffCue controls different timings when the sequence is turned Off.

Cues are rows in the sheet. The different columns represent different settings for the cue.

There are many columns in the sequence sheet - let us look at some of the most important ones.

No is the cue number.

Part is the cue part number.

Name is the cue (part) name.

In the group of three **Trig** columns, there is one called **Type**. It describes what triggers the cue.

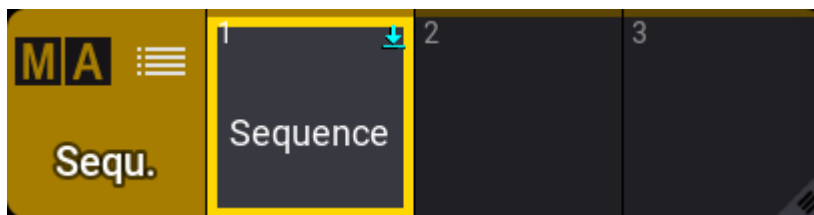
If you look at Cue 1, the type is "Go". This means that to execute the cue, you need to press a 'Go' key.

Cue Fade defines the time it takes to fade to the stored values in the cue. **Cue Delay** defines if there should be a delay between the trigger and the fade start.

Run the Cue

We want to trigger the cue. We will do this using a combination of the command line and the Sequence Pool.

If you do not have a visible Sequence Pool, please make room for one and create it in the user-defined area.



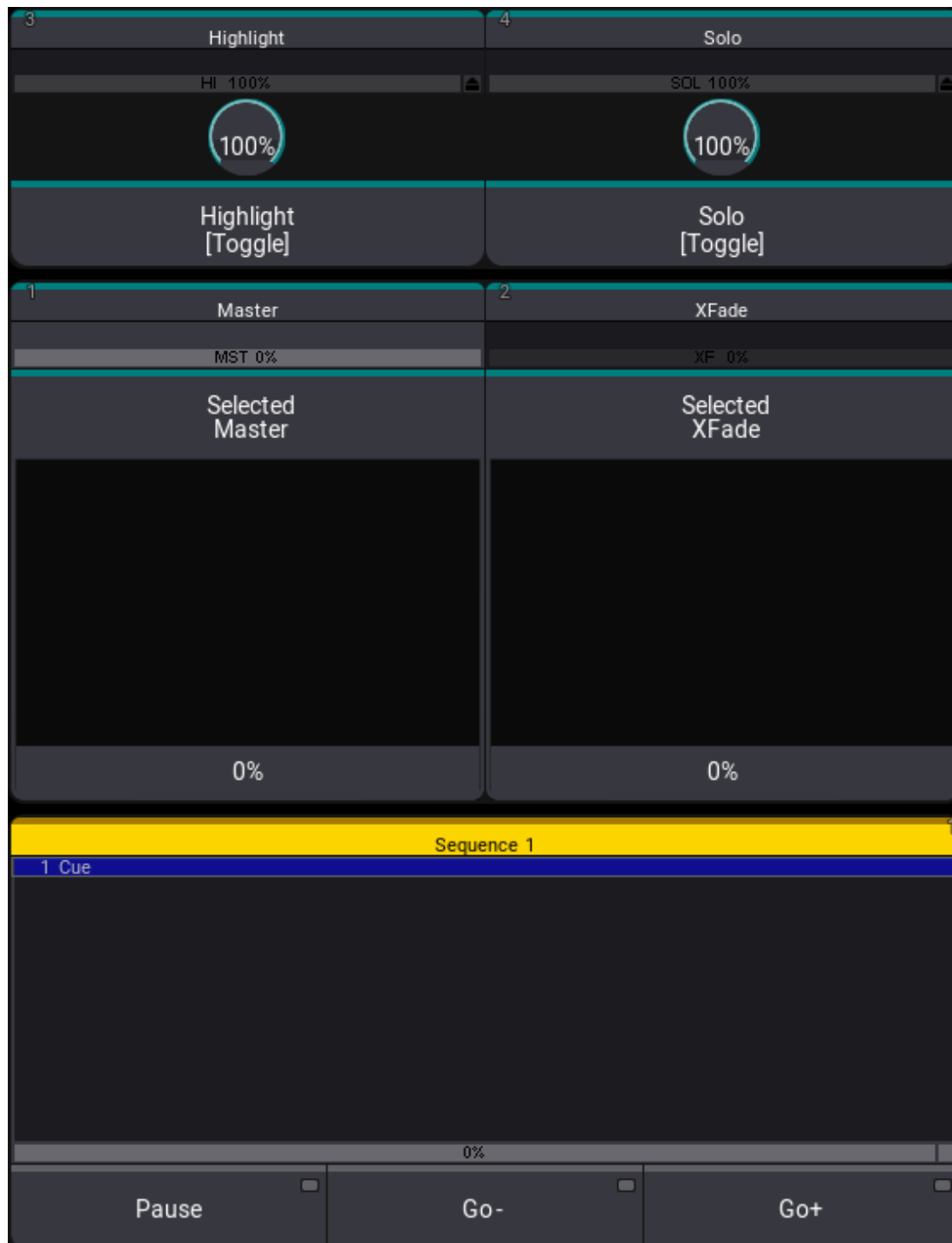
In the command line, write **Go** and then tap the sequence in the pool.

Now the sequence is outputting the stored values in cue 1.

An easier way to control the sequence is the executors and **Master Area**.

On the grandMA3 hardware, the master area is the two long faders and the three dedicated buttons for 'Go+', 'Go-' and 'Pause'. Some hardware also has some extra buttons and knobs above the faders.

On the grandMA3 onPC, we can open an on-screen version of the master area by pressing **F7** on a keyboard - here, it is the middle part of the pop-up.

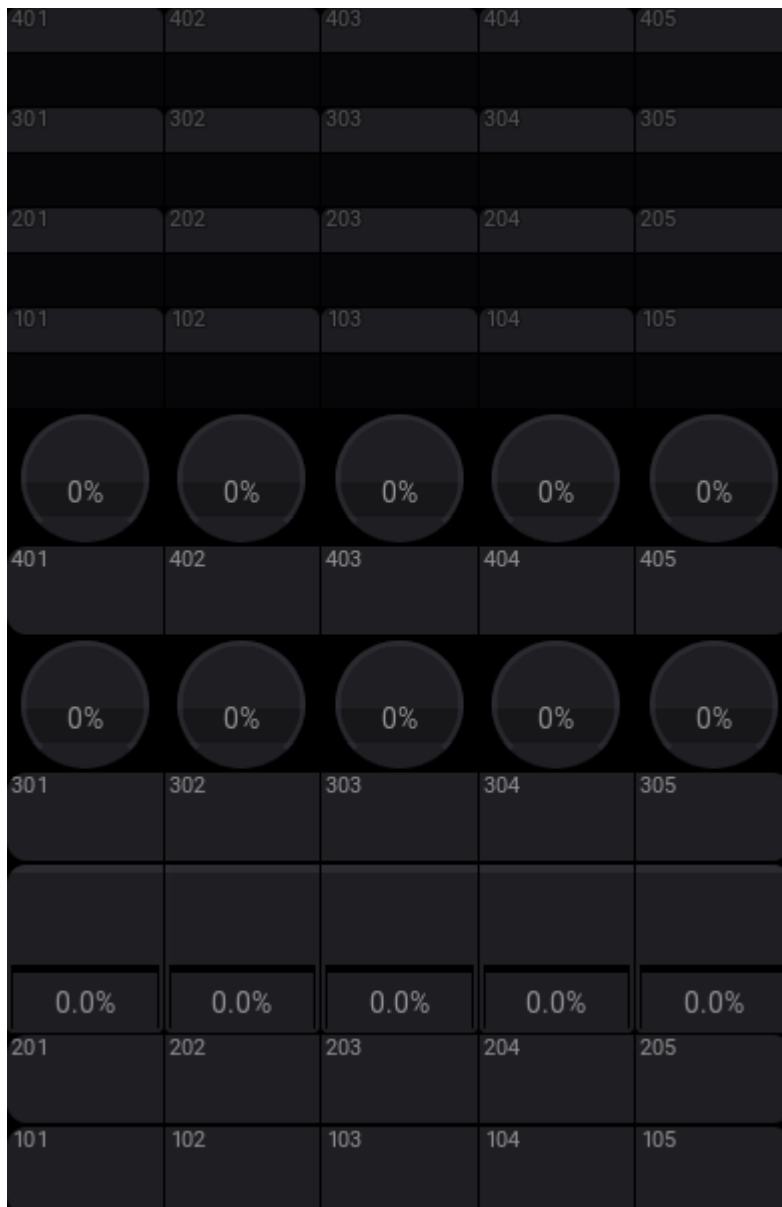


The master area always controls the selected sequence. The default function for the left fader is an output master. Moving it up and down adjusts the output level of the fixtures.

Assign Sequence Control to Executors

We can also assign sequence controls to other executors.

The on-screen version of the executors can be opened by pressing **F5** on a keyboard.



The on-screen executors can be created as a window. It is called **Playback** and is in the 'Common' tap.

I have created a window with the playbacks for the next step. If you are on the onPC, I suggest you do the same.



On the grandMA3 hardware, these executor buttons are not numbered as they are in the software. They have small horizontal lines on the buttons indicating the hundreds number.

The leftmost column of executors are the first. This means that the bottom executor in the lower-left corner is executor 101. It got one horizontal line.

The button above this is 201; it is connected to the fader.

The button above the fader is 301, and it got a rotating knob.

The top button is 401, and it also got a rotating knob.

The next column is the second's executors for each hundred: 102, 202, 302, and 402.

Each executor is its own and can send control commands to different objects. But they can also be grouped together.

We want the left fader executor to control our sequence.

Press **Assign** **Sequ** **1** and press the executor button **201**.



Now we can move the left executor fader, and it also controls the master intensity for the sequence. Notice that the master in the Master Area also moves. Both faders do the same thing for Sequence 1.

Create More Sequences

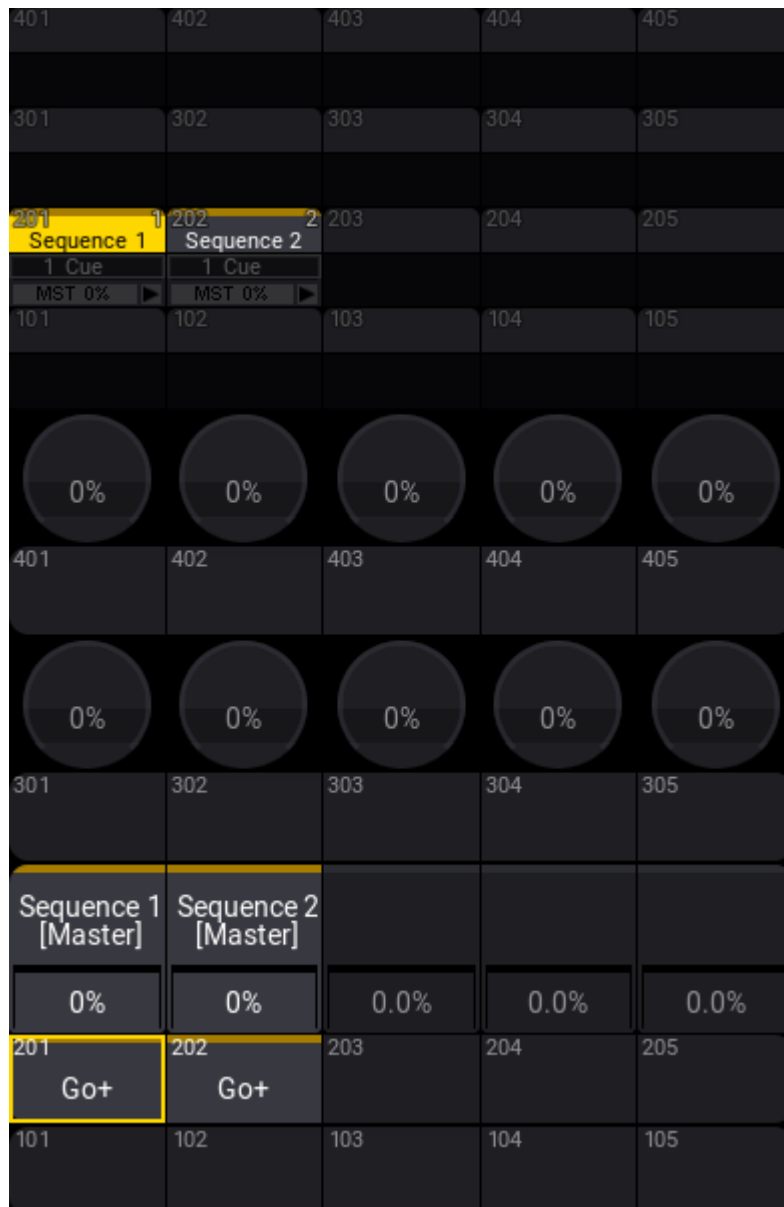
Now we are going to create more sequences.

Clear your programmer and select group 2.

Give the fixtures 100% intensity.

Press the **Store** macro and then the executor button **202**.

Now we have two faders, each controlling their own fixtures.



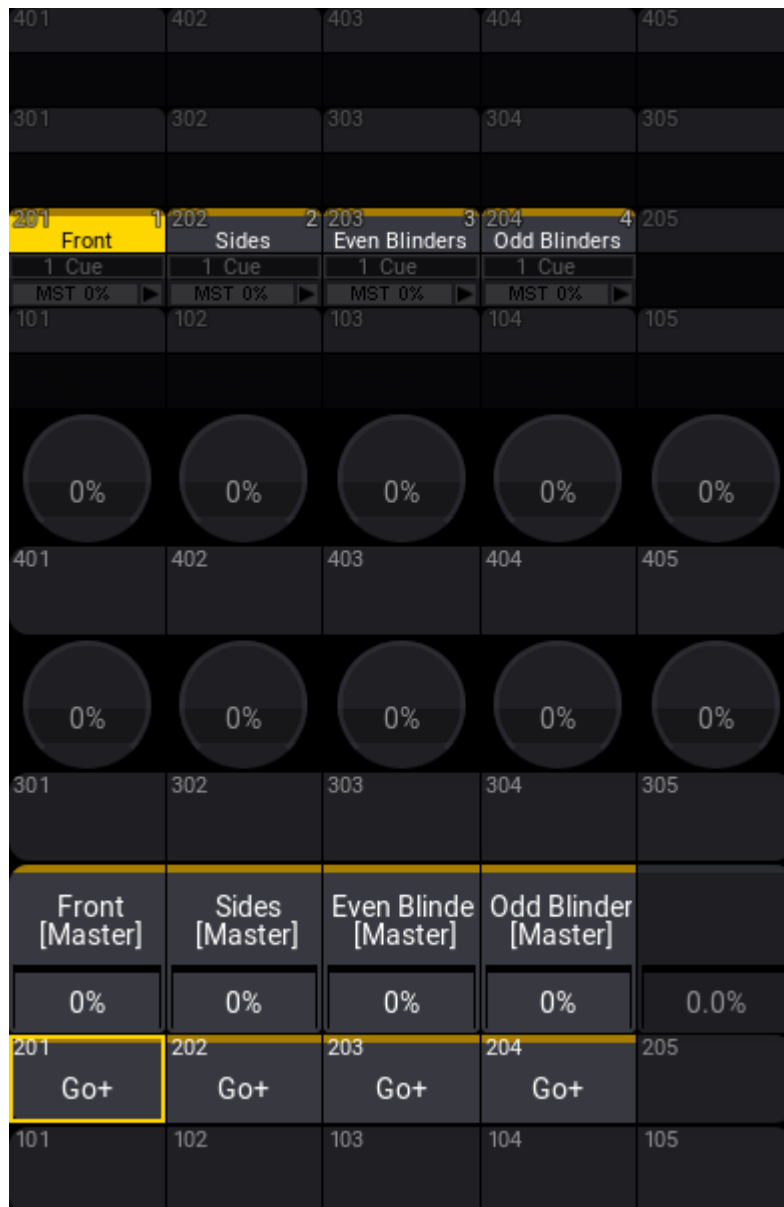
When we pressed the executor button, the grandMA3 software automatically created a new cue 1 in a new sequence and assigned the sequence as the object on executor 202.

Clear the programmer, repeat the steps above for group 4 (Even Blinders), and store them to executor 203. And finally, store group 5 at 100% on executor 204.



We should name/label the four sequences in the sequence pool to match the group names.

Now you have four faders that each control some of the fixtures.



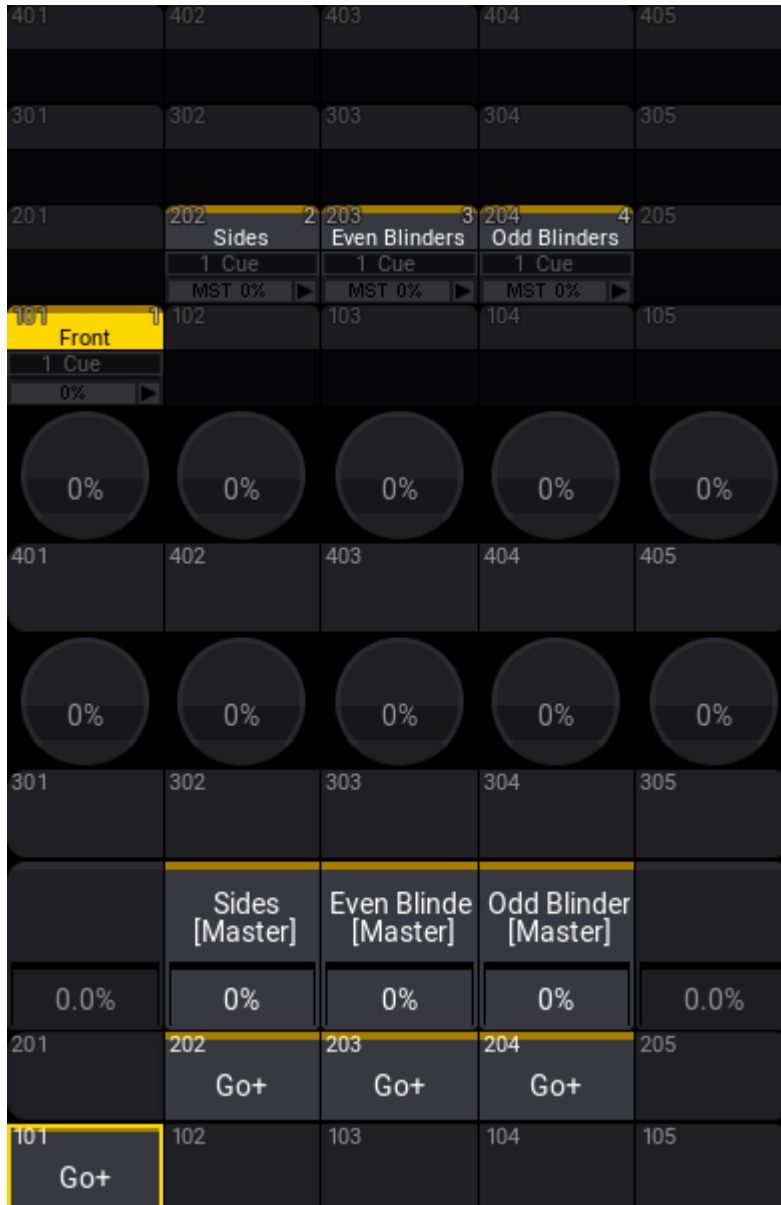
Modify the Executors

Let us try to modify the controls to give us some more buttons. We would like to use the 101, 102, 103, and 104 as flash buttons for the sequences above.

We could make these buttons separately control the sequences and just have a flash button on them, but we could also expand the executor and group the executors for each sequence.



Press **Move** and press executor 201 and then 101.

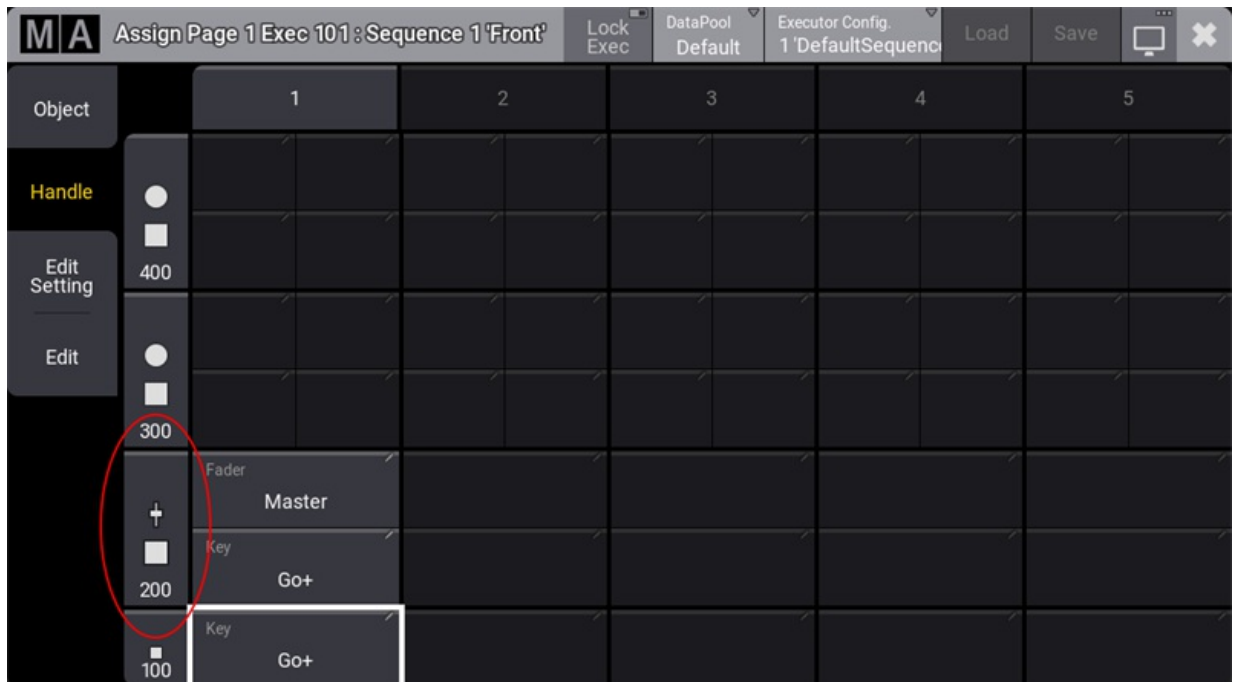


Now we have moved the executor from 201 to 101, and we only have a single executor button to control the sequence.

We need to configure the assignment of the executor buttons. Press **Assign** and then the executor button **101**.

Now the **Assign Menu** opens on one of the screens. We need to expand the executor to include the 200th row in this menu.

Tap the **200** button:



This expands the executor in height; it now includes the two executor buttons and the fader.

Now we need to change the assignment on the lower button. Tap the button in the assign menu.

This gives us a small select pop-up with valid options for the button. Tap **Flash** in the small pop-up.




| Empty | HalfSpeed | Speed1 |
|-------------|------------|--------|
| >>> | LearnSpeed | Swop |
| <<< | Load | Time |
| Black | On | Temp |
| DoubleSpeed | Off | Toggle |
| Flash | Pause | Top |
| Go+ | Rate1 | |
| Go- | Select | |
| Goto | SelfFix | |

This has now changed the function (or command) assigned to the button. It got a cyan line at the top to indicate that this is different than the default assignment for this executor configuration.

We can save this as a new default.

Tap **Save** in the title bar of the Assign Menu.

Close the Assign Menu by tapping the  in the upper right corner.



Let us try the new function. Turn down all the faders and press executor button **101**. You should see the fixture flash in the 3D window and the fixture sheet.

Ok, let us do the same for the other executors.

Press **Assign** and then executor 202. In the Assign Menu, we see that the 100 button is grayed out. This means that we cannot expand the executor down.



Executors can only be expanded up and to the right and only if the space is not occupied. A final expansion rule is that we cannot expand outside the grouping of 5 columns. This means that executor 105 cannot expand to the right to executor 106 even if it is empty.

To continue our task, we need to move the executors down before we can expand them up.

Press **Move** and then executor button 202 and then executor button 102. If you still have the Assign Menu open, you will see that it updated the view, and now executor 102 can be expanded to 202. Doing so automatically changed the button function to the new default we just stored for 101.

Now also expand executors 203 and 204 by moving them and then expanding them.

Try out the new flash buttons.

Flash can be combined with having the faders up. If the fader is at 100%, then the flash does not have a function, but having the faders at 25% and flashing is a visible combination.



Now the executors look like this in a **Playback** window:

The screenshot displays a playback window with a grid of executors. The grid is organized into several sections:

- Top Section:** A grid of executors for cues 101-105. Cues 101-104 are labeled 'Front', 'Sides', 'Even Blinders', and 'Odd Blinders' respectively, each with '1 Cue' below. Below these are MST percentage sliders: 25%, 20%, 0%, and 0%.
- Middle Section:** A row of five circular progress indicators, all showing 0%.
- Bottom Section:** A grid of executors for cues 201-205. Cues 201-204 are labeled 'Front [Master]', 'Sides [Master]', 'Even Blinder [Master]', and 'Odd Blinder [Master]' respectively, with percentage values (25%, 20%, 0%, 0%) below. Cues 201-204 also have 'Go+' buttons below. Cue 205 has '0.0%' below. Below this is another row of five 'Flash' executors for cues 101-105.

The 'Front' executor in the top-left position (cue 101) is highlighted with a yellow border, indicating it is the selected sequence.

Notice that the sequence called "Front" has a yellow color in the executor label. This indicates that this is the selected sequence.



Recap

In this chapter, we stored some cues in different sequences and made some executors control the sequences. We also adjusted the executors to match our needs.

Read the [Look at Cues and Sequences topic](#) to learn details about the Sequence Sheet window.

The Assign menu is described in detail in the [Assign Object to an Executor topic](#).

The [next chapter](#) is about adding moving lights. **Your onPC or console needs access to the internet for the best result in the next chapter.**

12. Add Moving Lights

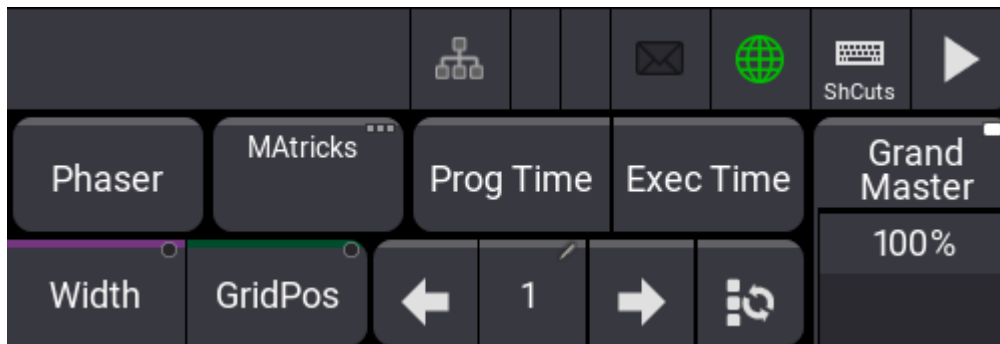
In this chapter, we will return to the patch and add some moving lights.

We are going to add a variety of fixtures, and we are going to hang them on our fictive fixture pods.

World Server

This time we are going to get the fixtures from the Internet. The files come from <https://gdtf-share.com>. You can find and download fixtures from the website. We can also import them directly from the grandMA3 onPC or console when there is a connection to a **World Server**. MA Lighting offers a public world server to connect to.

Let us start by checking the connection. The command line input bar has a globe icon on the right-hand side.



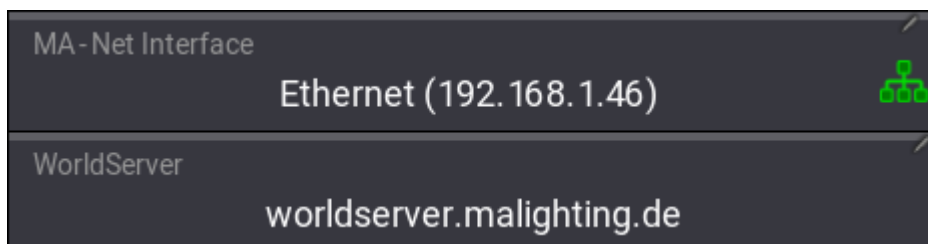
A green globe indicates that there is a good connection to the server. If this is true, you can jump to [Fixture Share Library](#) below. Keep ready to learn how to change the address of the world server.

If the globe is black, there is no internet connection, or the server address is wrong.

I cannot help you with the internet connection, but we can check that the world server address is correct.

We need to have a look at the **Network menu**. We will return to networking in a future chapter. For now, we will concentrate on the world server.

Click the  (or press **Menu**) and click **Network** in the pop-up. This is the interesting part:





When the computer running grandMA3 onPC has an internet connection, the World Server address must be correct. Type worldserver.malighting.de into the **WorldServer** input. It should already be this in a new empty show, but it is good to check.

Consoles need internet access on one of the Ethernet connectors on the back to be able to connect to the server.

The server is the same for consoles and onPC.

You can close the network menu. Hopefully, the globe will turn green.



Fixture Share Library

We are going to import fixtures from the world server. If you cannot access the server, just use the standard library. The fixture types will maybe not be as good, but they will function for us in the rest of the quick start guide.

We need to get back into the Patch. You should remember how otherwise, review [chapter 2](#).

Select **New Fixture** at the bottom of the list - make sure not to select the one inside the Blinder grouping fixture.

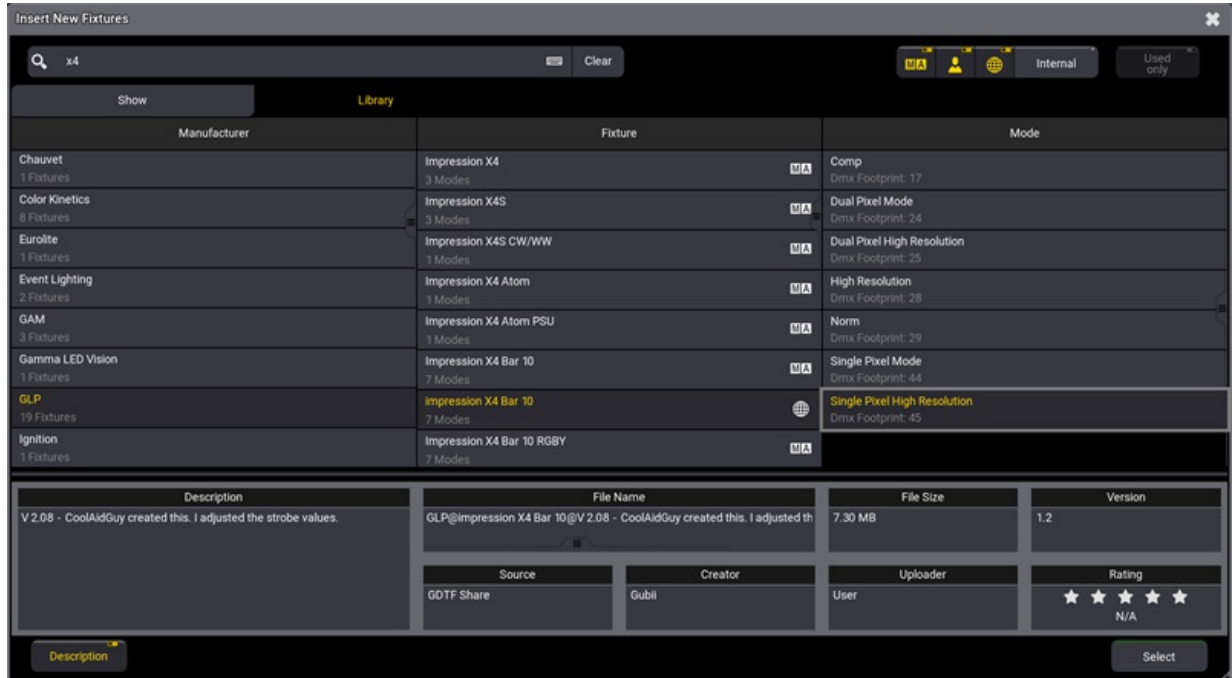
Click **Insert new Fixture**.

We need to import new fixtures from a library, so click **Library**. The upper right corner of the pop-up has some buttons that can be used to select different library sections. The default is that the MA library (**MA**) and the user create files () are active, but we can also activate the library section from the world server by turning On the globe icon .



Now we can also search through the online fixture libraries. Here we can access user-created fixtures and fixtures created by the manufacturers themselves.


We want to import an "Impression X4 Bar 10" fixture from GLP in a "Single Pixel High Resolution" mode.



We can see some details about a fixture by turning On the 'Description'. It is a button in the lower left corner.

In the description, we can see the **Source** information. In the example above, we can see that the source is "GDTF Share". We can also see next to "Fixture" in the list above that there is a globe icon next to the fixture type I have selected.

Please make sure you select exactly the same fixture and mode as the one in the image above. There might be more versions on the world server by different **Creators**. Select the one uploaded by **User** "Gubii".

 **Important:**
If you do not have access to the world server, just select the one from the "MA" library. It might not look correctly in the 3D, but it controls and behaves the same.

When you click **Select**, it might take some time to download and import the fixture type.

You need to add 7 fixtures starting with the name "X4 Bar 1" and FID "101". They need to be patched to universe 2 from address 1.



| | |
|---------------|------------------------------|
| Fixture Type | impression X4 Bar 10 |
| Mode | Single Pixel High Resolution |
| Dmx Footprint | 49 |
| Name | X4 Bar 1 |
| Quantity | 7 |
| FID | 101 |
| Patch 1 | 2.1 |

The next fixture type we need is the "Robin MegaPointe" from Robe Lighting using "Mode 1". Again from the GDTF Share.

The screenshot shows the 'Insert New Fixtures' dialog box. At the top, there is a search bar with 'robin' entered and a 'Clear' button. Below the search bar, there are tabs for 'Show' and 'Library'. The main area displays a list of fixtures with columns for Manufacturer, Fixture, and Mode. The 'Robin MegaPointe' fixture is highlighted. Below the list, there is a detailed view of the selected fixture, including its description, file name, file size, version, source, creator, uploader, and rating.

| Manufacturer | Fixture | Mode |
|---------------------------|---------------------------|----------------------------|
| grandMA3 Fixture Training | ROBIN LEDBeam 350 FW | Mode 2 - Reduced 8 - bit |
| Robe | ROBIN LEDBeam 350 RGBA | Mode 1 - Standard 16 - bit |
| Robe China | Robin LEDWash 1200 | |
| Robe Lighting | Robin MegaPointe | |
| User Test | Robin MiniMe | |
| | Robin MiniPointe | |
| | Robin Painte | |
| | Robin ParFect 150 FW RGBA | |

| Description | File Name | File Size | Version |
|--------------------------------------|---|-----------|---------|
| 11082022 color wheel slot correction | Robe Lighting@Robin MegaPointe@11082022 color wheel slot correction.g | 2.32 MB | 1.2 |


| Source | Creator | Uploader | Rating |
|------------|----------------------|----------|----------------|
| GDTF Share | Robe Lighting s.r.o. | Manuf. | ★ ★ ★ ★ N/A |



Notice in the image above that the manufacturer has uploaded their fixtures under the Manufacturer name "Robe Lighting". These are the fixtures we need.

Manufacturer-uploaded fixtures get a factory icon next to the fixture type name.


Again we need 7 fixtures. They should be in universe 4 from address 1. The name for the first fixture should be "MegaP 1". The FID begins at "201".

| | |
|---------------|---|
| Fixture Type | Robin MegaPointe |
| Mode | Mode 1 - Standard 16 - bit |
| Dmx Footprint | 39 |
| Name |  MegaP 1 |
| Quantity | 7 |
| FID | 201 |
| Patch 1 | 4.1 |

The next fixture type is from Martin Professional. The fixture type "Mac Aura XB" in "Standard" mode. I would select the files uploaded by the creator "dmuller".


7 fixtures beginning from FID "301", name "AuraXB 1", and in universe 5 beginning with address 1.



| | |
|---------------|--|
| Fixture Type | Mac Aura XB |
| Mode | Standard (14 ch) |
| Dmx Footprint | 14 |
| Name |  AuraXB 1 |
| Quantity | 7 |
| FID | 301 |
| Patch 1 | 5.1 |

The last fixture type is from Clay Paky. It is a "Sharpy" in mode "Standard Lamp On". I would select the fixture type from the MA library.

Again 7 fixtures from FID "401", name "Sharpy 1" in mode "Standard", and starting at DMX address "6.1"

| | |
|---------------|--|
| Fixture Type | Sharpy |
| Mode | Standard Lamp on |
| Dmx Footprint | 16 |
| Name |  Sharpy 1 |
| Quantity | 7 |
| FID | 401 |
| Patch 1 | 6.1 |



This table contains information about the new fixtures, including the position of the new fixtures.

Remember that you have to change the patch menu to show **Full** columns to see the position columns.

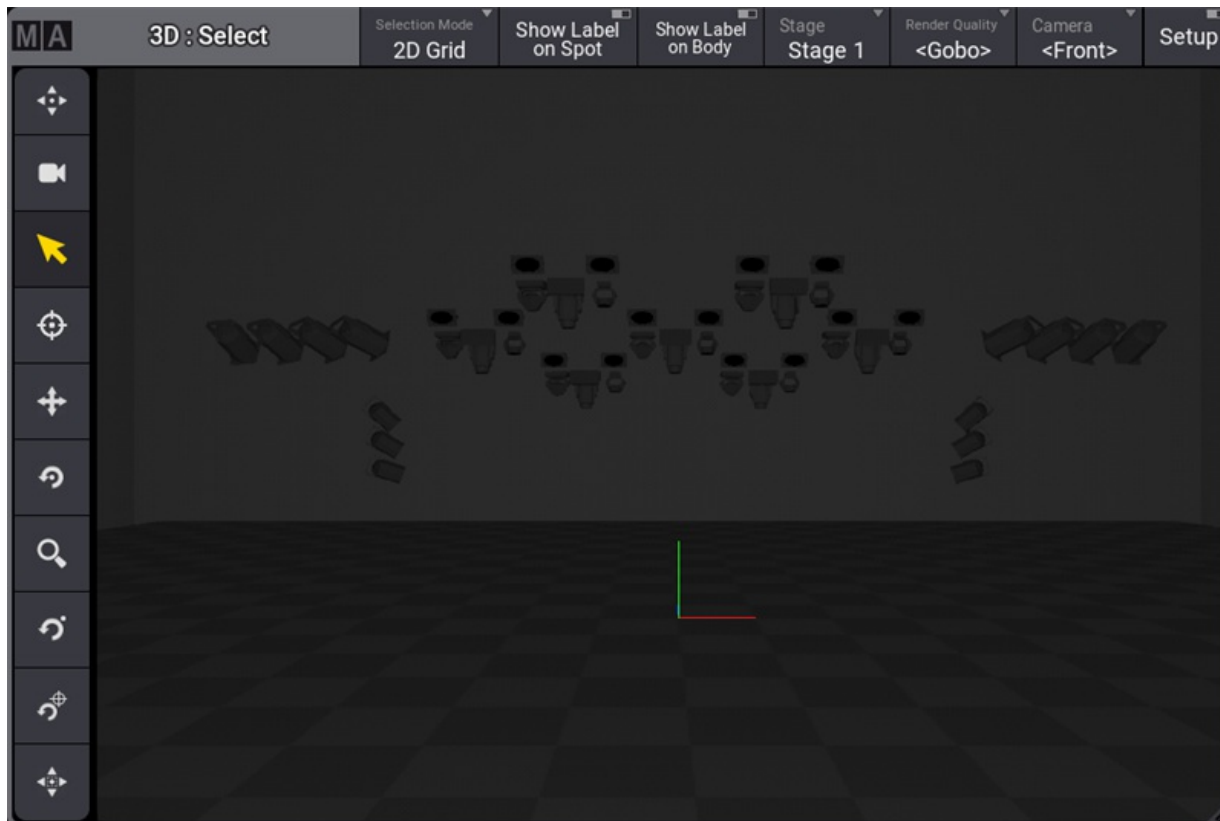
| FID: | Name: | Manufacturer: | Fixture: | Mode: | Patch: | X-Pos: | Y-Pos: | Z-Pos: |
|------|----------|---------------------|----------------------|------------------------------|--------|--------|--------|--------|
| 101 | X4 Bar 1 | GLP | Impression X4 Bar 10 | Single Pixel High Resolution | 2.1 | -1.5 | 0.5 | 4.5 |
| 102 | X4 Bar 2 | GLP | Impression X4 Bar 10 | Single Pixel High Resolution | 2.90 | 1.5 | 0.5 | 4.5 |
| 103 | X4 Bar 3 | GLP | Impression X4 Bar 10 | Single Pixel High Resolution | 2.179 | -3.0 | 2.1 | 4.0 |
| 104 | X4 Bar 4 | GLP | Impression X4 Bar 10 | Single Pixel High Resolution | 2.268 | 0.0 | 2.1 | 4.0 |
| 105 | X4 Bar 5 | GLP | Impression X4 Bar 10 | Single Pixel High Resolution | 2.357 | 3.0 | 2.1 | 4.0 |
| 106 | X4 Bar 6 | GLP | Impression X4 Bar 10 | Single Pixel High Resolution | 3.1 | -1.5 | 3.6 | 3.5 |
| 107 | X4 Bar 7 | GLP | Impression X4 Bar 10 | Single Pixel High Resolution | 3.90 | 1.5 | 3.6 | 3.5 |
| 201 | MegaP 1 | Robe Lighting | Robin MegaPointe | Mode 1 - Standard 16 - bit | 4.1 | -1.5 | 0.8 | 4.5 |
| 202 | MegaP 2 | Robe Lighting | Robin MegaPointe | Mode 1 - Standard 16 - bit | 4.40 | 1.5 | 0.8 | 4.5 |
| 203 | MegaP 3 | Robe Lighting | Robin MegaPointe | Mode 1 - Standard 16 - bit | 4.79 | -3.0 | 2.4 | 4.0 |
| 204 | MegaP 4 | Robe Lighting | Robin MegaPointe | Mode 1 - Standard 16 - bit | 4.118 | 0.0 | 2.4 | 4.0 |
| 205 | MegaP 5 | Robe Lighting | Robin MegaPointe | Mode 1 - Standard 16 - bit | 4.157 | 3.0 | 2.4 | 4.0 |
| 206 | MegaP 6 | Robe Lighting | Robin MegaPointe | Mode 1 - Standard 16 - bit | 4.196 | -1.5 | 3.9 | 3.5 |
| 207 | MegaP 7 | Robe Lighting | Robin MegaPointe | Mode 1 - Standard 16 - bit | 4.235 | 1.5 | 3.9 | 3.5 |
| 301 | AuraXB 1 | Martin Professional | Mac Aura XB | Standard (16 ch) | 5.1 | -1.0 | 0.8 | 4.5 |
| 302 | AuraXB 2 | Martin Professional | Mac Aura XB | Standard (16 ch) | 5.15 | 2.0 | 0.8 | 4.5 |
| 303 | AuraXB 3 | Martin Professional | Mac Aura XB | Standard (16 ch) | 5.29 | -2.5 | 2.4 | 4.0 |



| FID: | Name: | Manufacturer: | Fixture: | Mode: | Patch: | X-Pos: | Y-Pos: | Z-Pos: |
|------|-------------|------------------------|-------------|------------------|--------|--------|--------|--------|
| 304 | AuraXB 4 | Martin Professional | Mac Aura XB | Standard (16 ch) | 5.43 | 0.5 | 2.4 | 4.0 |
| 305 | AuraXB 5 | Martin Professional | Mac Aura XB | Standard (16 ch) | 5.57 | 3.5 | 2.4 | 4.0 |
| 306 | AuraXB 6 | Martin Professional | Mac Aura XB | Standard (16 ch) | 5.71 | -1.0 | 3.9 | 3.5 |
| 307 | AuraXB 7 | Martin Professional | Mac Aura XB | Standard (16 ch) | 5.85 | 2.0 | 3.9 | 3.5 |
| 401 | Sharpy 1 | Clay Paky | Sharpy | Standard Lamp on | 6.1 | -2.0 | 0.8 | 4.5 |
| 402 | Sharpy 2 | Clay Paky | Sharpy | Standard Lamp on | 6.17 | 1.0 | 0.8 | 4.5 |
| 403 | Sharpy 3 | Clay Paky | Sharpy | Standard Lamp on | 6.33 | -3.5 | 2.4 | 4.0 |
| 404 | Sharpy 4 | Clay Paky | Sharpy | Standard Lamp on | 6.49 | -0.5 | 2.4 | 4.0 |
| 405 | Sharpy 5 | Clay Paky | Sharpy | Standard Lamp on | 6.65 | 2.5 | 2.4 | 4.0 |
| 406 | Sharpy 6 | Clay Paky | Sharpy | Standard Lamp on | 6.81 | -2.0 | 3.9 | 3.5 |
| 407 | Sharpy 7 | Clay Paky | Sharpy | Standard Lamp on | 6.97 | 1.0 | 3.9 | 3.5 |

When your patch matches, exit the patch and save the new setup.

The 3D window should look like this:




Create new Groups

Create the following groups:

| Group No.: | Group Name: | Fixtures: |
|------------|-------------|---------------------------------|
| 6 | All X4 Bar | 101 Thru 107 |
| 7 | All MegaP | 201 Thru 207 |
| 8 | All Aura | 301 Thru 307 |
| 9 | All Sharpy | 401 Thru 407 |
| 10 | Pod 1 | 21 + 22 + 101 + 201 + 301 + 401 |
| 11 | Pod 2 | 23 + 24 + 102 + 202 + 302 + 402 |
| 12 | Pod 3 | 25 + 26 + 103 + 203 + 303 + 403 |
| 13 | Pod 4 | 27 + 28 + 104 + 204 + 304 + 404 |
| 14 | Pod 5 | 29 + 30 + 105 + 205 + 306 + 406 |
| 15 | Pod 6 | 31 + 32 + 106 + 206 + 306 + 406 |
| 16 | Pod 7 | 33 + 34 + 107 + 207 + 307 + 407 |

You can create and assign appearances to the groups if you like.

Mine looks like this:

| | | | | |
|--|-----------------|----------------|-------------------|--------------------|
|  Groups | 1 Front | 2 Sides | 3 All Blinders | 4 Even Blinders |
| 5 Odd Blinders | 6 All X4 Bar | 7 All MegaP | 8 All Aura | 9 All Sharpy |
| 10 Pod 1 | 11 Pod 2 | 12 Pod 3 | 13 Pod 4 | 14 Pod 5 |
| 15 Pod 6 | 16 Pod 7 | 17 | 18 | 19 |

Recap

In this chapter, we have added moving light fixtures to our stage and created new groups.

The **next chapter** is about controlling these fixtures.

13. Control Moving Lights


In the previous chapter, we added some moving lights. In this chapter, we will look at how to control these fixtures. We are not adding any new content or fixtures in this chapter, so if you are comfortable controlling the fixtures, then feel free to skip this chapter. I do recommend reading it as you might learn something new.

We are going to need another version of the fixture sheet.

The first we made only shows the intensity attributes in the "Channel Sheet" mode.

We need a new one where we can see all the other attributes.

Create a new fixture sheet.

Let us adjust some of the sheet settings. Tap the  icon in the upper left corner of the sheet.

Ensure both 'Fixture Sort' and 'Feature Sort' are On and that the 'Sheet Mode' is set to Fixture.

That is it for now. Please close the settings.

Store this as a new view.

Controlling Moving Lights

In the previous chapters, we looked at controlling the dimmer attribute. But now we have many more attributes.

The key to controlling these attributes is the **Feature Group Control Bar**.



With this, you can control what feature group you are controlling with the encoders.

All fixture attributes are separated into different sections. These are called feature groups.

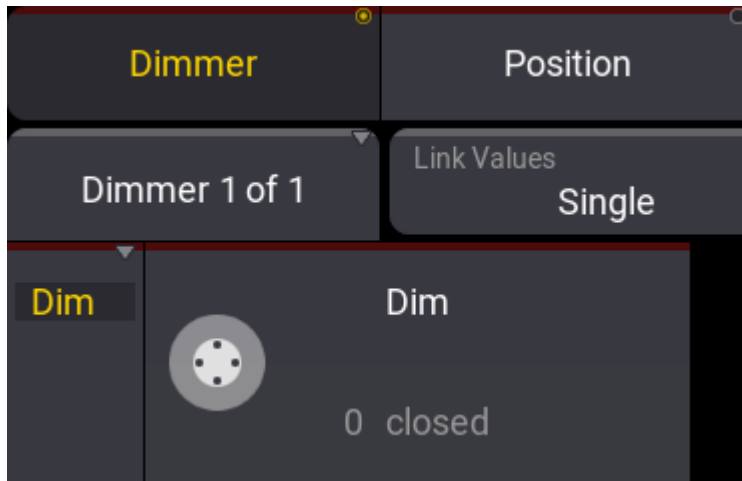
The bar will display the feature groups you have access to.

If you select fixture 101 (or group 6), the bar above each button might change (from gray to red). This indicates the feature groups you can use for the selected fixture. If you clear your programmer and try to select fixture 1, then you can see that it is only the 'Dimmer' button that got a red bar.

Selecting a feature group also selects the feature, and the encoders give access to the first attributes in the feature.

Fixtures are structured in a hierarchy. The attributes are organized inside features, and features are organized inside feature groups.

The image below shows the dimmer feature group selected. Below the feature group is a button showing the feature (the button says "Dimmer 1 of 1"). Below the feature, the first encoder controls the first attribute (Dim) in the dimmer feature.



There can be several encoder pages for a feature. That is why the feature button says "1 of 1"; it is page one of one page. We need a second page if a feature has more attributes than we have encoders.

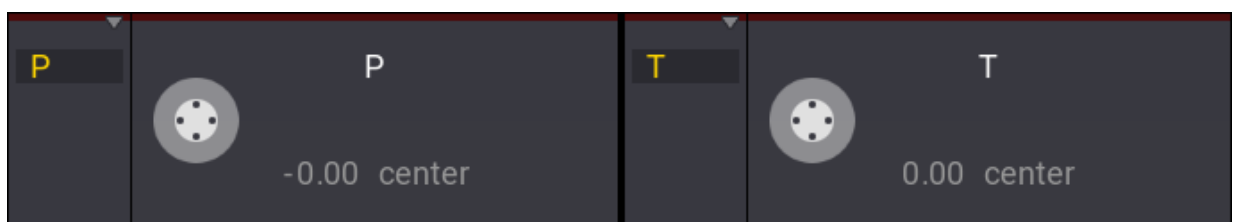
To get a better feeling for controlling fixtures, we should try the different elements of the MegaPointe. Clear your programmer and select group 7.

Dimmer

You can assign a dimmer value using the methods you learned in the previous chapters, or you can select the Dimmer feature group by touching the bar and turn the left encoder to turn up the lights. Please turn the fixture at full.

Position

Select **Position** by tapping it in the bar. Notice how your encoder changes function according to what feature group you have selected. With the "Position", your encoders look like this:



Turning the encoders changes the values. Turning them with the encoder pressed changes the value faster.

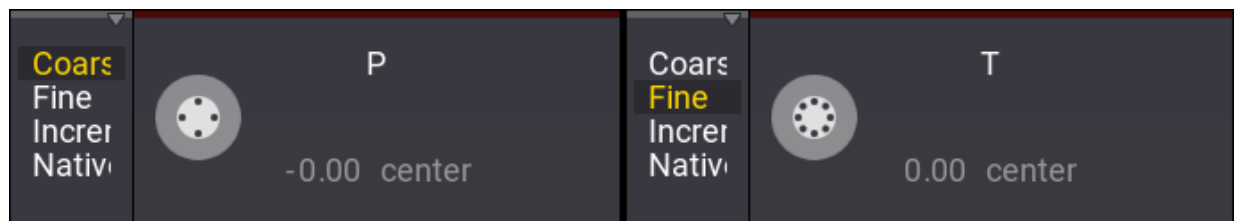


Hint:

The outer ring on the dual encoders cannot be pressed. Pressing the small key next to the outer ring equals pressing the ring.

If you want to make smaller movements with a turn (increasing the resolution), you can press and hold the **MA** key and select a different resolution. On the grandMA3 onPC, you need to open the command section (**F3**), click and hold the **MA** button, slide the mouse out of the button, and then release the mouse button to latch the **MA** button.

This changes the small area next to the encoder readout.



Gobo

Gobos can be added if the fixtures contain the attributes.

The manufacturers design the fixture to control the gobo in different ways. Some manufacturers have a lot of functions on the same DMX channels, and others spread the functions out on different DMX channels. The MegaPointe has two gobo wheels with different gobos. The first wheel is physically a single metal plate with different cutouts. We can choose what cutout to have in front of the light. The wheel can have different operational modes. For instance, spin continually.

The second gobo wheel is a wheel with replaceable gobos that can be indexed and rotated.

Let us give the second wheel a try.

Tap **Gobo** in the feature group control bar.

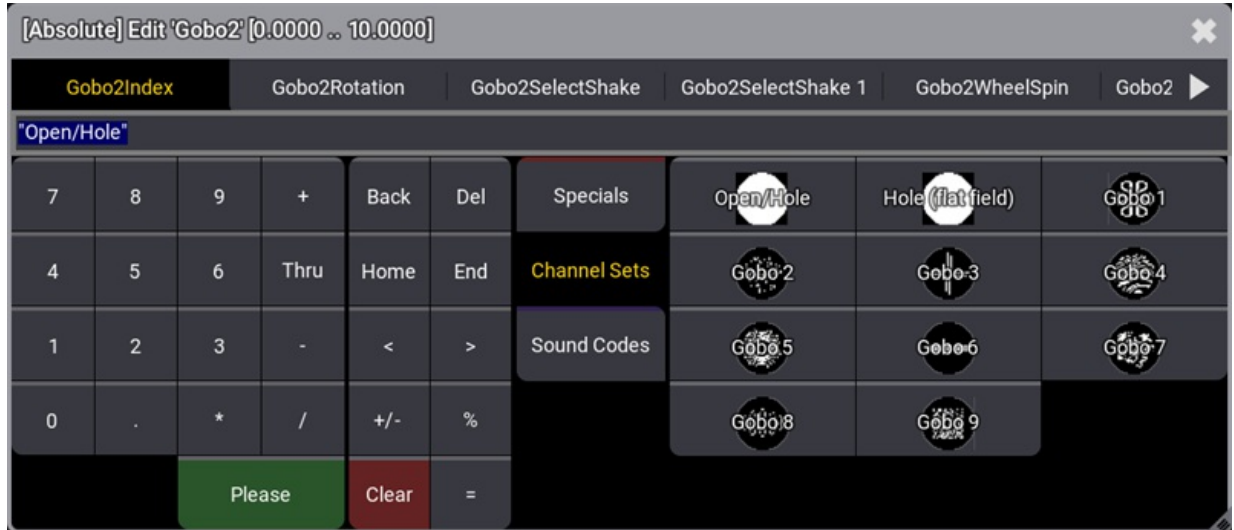
Now we have the gobo controls on the encoders. The first encoder is "G1" - this is gobo wheel one.

The second encoder selects a gobo on the second gobo wheel. Gobos are often defined in the fixture type definition, and the gobos in the different "wheel slots" are often defined. These definitions include small images that match the actual gobos in the fixture.

Try to press the second encoder shortly or click on the value area of the encoder label. This opens the calculator that we talked about in chapter 4.

Around the calculator's middle is the 'Channel Sets' button. Please click this.

Now the right side displays the defined gobos on the second wheel.



When an encoder controls different functions, they can be separated into different groups of values. At the top of the calculator, there are several tabs. The second tab can select the same gobos but with a gobo rotation mode.

Select one of the gobos in the first (Index) mode.

The third encoder controls the rotation index of the selected gobo on gobo wheel 2. This encoder also has several different modes. They are Index (G2<->), continuous rotation (Rotate), Shake Index (G2<->), and Shake Rotation (Rotate). We can change the mode by clicking the area on the left of the encoder label. We also need to give it a value after the mode selection before the fixture does what we want.



Try the different rotation and index functions. Remember you can see the result in the 3D window - the shake function is not visualized.

A very good tool with fixtures that have defined Channel Sets like the gobos is the **Smart View** window. This can be created on an empty user-defined area. It can be found in the **More** tab in the **Add Window** pop-up.



This gives access to the defined channel sets by a dynamic pool that changes content based on the selected feature ("Gobo" is the feature in the example above).

Notice that the gobos appear several times. Once for each mode.

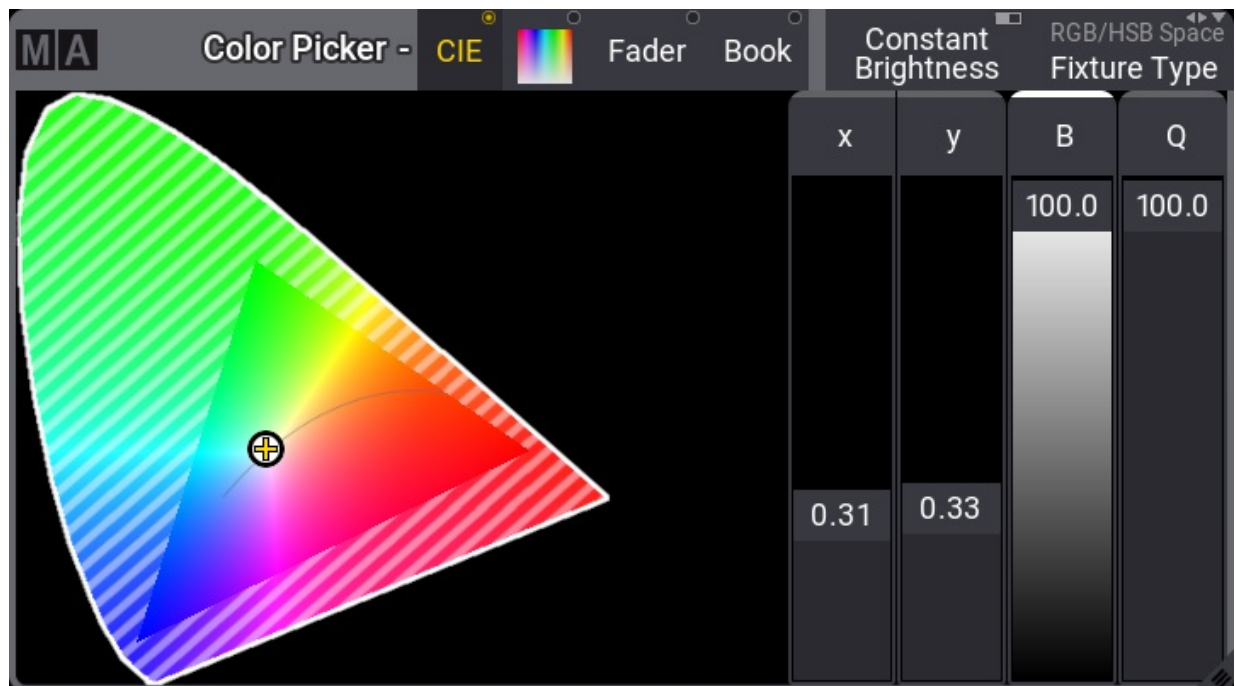
Color

Let us have a look at the colors.

The three first encoders control red, green, and blue. This does not match the physical properties of what is inside the MegaPointe (it has a subtractive color system).

The grandMA3 system has a color engine that gives us the same unified control no matter what color system the fixtures use. This means we control the MegaPointe and the Auras using the same controls.

We could use the encoders to change the colors, but we have a better tool. It is called **Color Picker**, a window that can be created like any other window. It is found in the **Common** tab.



The color picker has four different modes. The first one we see is the **CIE**. The modes can be changed in the title bar.

CIE is a CIE 1931 chromaticity diagram. The crossed-out area is the area the selected fixture cannot output. The area changes if we had fixtures with more color options (for instance, fixtures with LED emitters of more than the standard red, green, and blue types) or if the fixtures are measured against their real emitters.

A color can be selected by clicking in the color area.

The next mode is called **HSB** and is represented by a colored square. This can also be clicked to select a color.

The **Fader** mode gives access to different faders that can be used to select the desired color.

Finally, the **Book** mode can select different defined filters sorted by manufacturers. The book can be searched by filter name or number. Selecting a filter gives a color that is as close as possible based on the known information about the fixture.

The color picker only affects the color mixing system in a fixture if it exists. This means it only changes the color wheels in fixtures if color wheels are the only option. We have patched some Sharpys, and they only have a color wheel. If we want to change colors in a Sharpys, it works much like the gobo control, and the best tool can be the **Smart View** window.



The color wheels (C1, C2, etc.) are maybe on a different feature page. So you might need to change the page by clicking the feature button to access these functions on the encoders.

Try the different color modes of the color picker and play around with the on-screen faders in the color picker. The "Q" fader is about color quality, and it becomes relevant in RGB+ LED fixtures, where different sets of LEDs have different ways to reach the same colors.

Beam

The beam feature group has controls for shutters, iris, prism, and other beam effects. The MegaPointe has some prisms, and the 3D can visualize these. On feature page 2, there is a "Prism1" where different prisms can be selected. The "Prism 1 Pos" attribute can be used to rotate the prism. This can be used to rotate or index the prisms. A rotating gobo and a rotating prism can give some very interesting looks. Try this while looking at the 3D.

Focus

The focus feature group has controls for the focus. But it also has the **Zoom** attribute.

Zoom is visualized in the 3D window. Focus is not visualized.

Control

The final feature group we have with the patched fixtures is the Control. This is where we find attributes used to reset and set different modes in the fixtures. These are often attributes that we do not store in cues. The exception is possibly a sequence that can be used to turn the lamp on and off in the fixtures.

Recap

In this chapter, we looked at different ways to control moving head fixtures.

There is an entire section in the manual about **operating fixtures**. It gives more details about the different elements we discussed in this chapter.

The **next chapter** is about **Presets**.

14. Presets

We have looked at storing values in cues.

There is another option - storing the values in presets.

Presets are pool objects that can contain values and a selection of fixtures that can use the values.

These are often created as building blocks in cues but can also be used for busking shows.

One of the advantages of using presets as building blocks in cues is that the cue stores a **reference** to the preset and not the value stored in the preset. Should the preset values change, the cue will still look in the preset for the values. There is no need to update the cue.

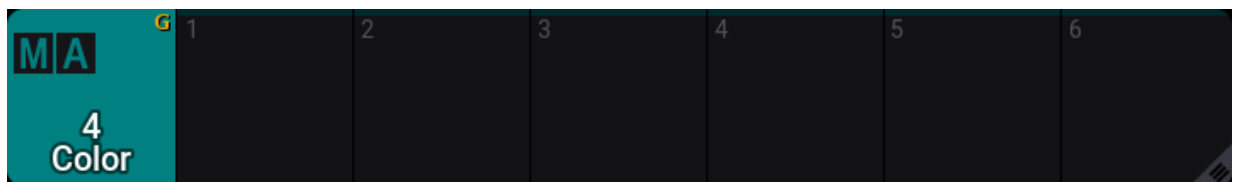
A preset pool looks a lot like the other ones we have looked at. There are several preset pools, so they have their own tab in the Add Window pop-up. The preset pools are created as windows in the user-defined area.

Each feature group has its own preset pool. The default setting is that you can only store values from a feature group in its respective pool. There are also five All preset pools. They can store values from all feature groups.

Let us have a look at color presets.

Clear your programmer if you still have values there.

Create a color preset pool on your screen.



Press **Group** **6** **Please**.

Press **Full** to turn them On.

Tilt them forward a little.

Finally, give them a nice color.

Now we have active programmer values in dimmer, tilt, and colors.



| Fixture Sheet: Absolute | | | | | Prog Only | Part Part Zero | Readout <Natural> | Step 1/1 | | | | |
|-------------------------|----------|-------|---------|-----|-----------|----------------|-------------------|----------|----|-----|----|----------|
| ▶ | Name | FID | IDType | CID | Dimmer | PanTilt | | RGB | | | | Color Ma |
| | | | | | Dim | P | T | R | G | B | W | |
| ▼ | X4 Bar 1 | 101 | Fixture | | 100 | | - 10.50 | 22 | 24 | 100 | 38 | |
| | SubFixtu | 101.1 | Fixture | | 100 | | | 22 | 24 | 100 | 38 | |
| | SubFixtu | 101.2 | Fixture | | 100 | | | 22 | 24 | 100 | 38 | |
| | SubFixtu | 101.3 | Fixture | | 100 | | | 22 | 24 | 100 | 38 | |
| | SubFixtu | 101.4 | Fixture | | 100 | | | 22 | 24 | 100 | 38 | |
| | SubFixtu | 101.5 | Fixture | | 100 | | | 22 | 24 | 100 | 38 | |
| | SubFixtu | 101.6 | Fixture | | 100 | | | 22 | 24 | 100 | 38 | |
| | SubFixtu | 101.7 | Fixture | | 100 | | | 22 | 24 | 100 | 38 | |

Notice that we have selected the "main" part of the X4 fixtures. The dimmer and tilt are part of this main part. The main part does not have any color attributes. The values shown for the row with the main part are slightly dimmed. This indicates that the value shown is actually from the child or sub-fixture. The color attributes are actually in the sub-fixtures. We do not need to select the sub-fixtures explicitly to apply the color. Since the main fixture does not have this attribute, it is passed on to the sub-fixtures when applied to the main fixture. Have a look at the dimmer attribute. The main fixture and sub-fixtures all have dimmer attributes. The value is only applied to the selected (main) fixture. The sub-fixtures default dimmer value is at 100%, so the result is colored light is output.

Ok, back to presets.

Press **Store** and click the first preset pool object in the color preset pool - not the title field, but the one with a small "1" in the upper left corner.

Two things happened.

First, our fixture sheet changed.

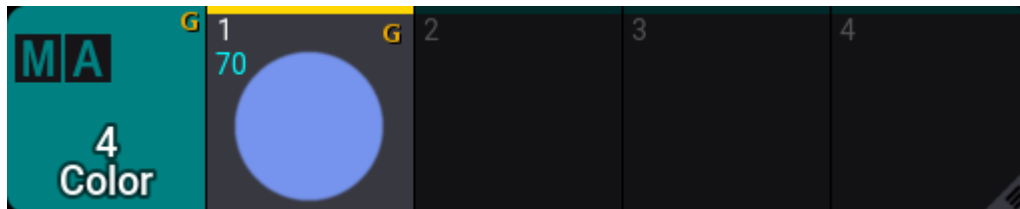


| Fixture Sheet: Absolute | | | | | Prog Only | Part Part Zero | Readout <Natural> | Step 1/1 | | | | |
|-------------------------|----------|-------|---------|-----|-----------|----------------|-------------------|----------|-----|-----|-----|----------|
| ▶ | Name | FID | IDType | CID | Dimmer | PanTilt | | RGB | | | | Color Ma |
| | | | | | Dim | P | T | R | G | B | W | |
| ▼ | X4 Bar 1 | 101 | Fixture | | 100 | | - 10.50 | 4.1 | 4.1 | 4.1 | 4.1 | |
| | SubFixtu | 101.1 | Fixture | | 100 | | | 4.1 | 4.1 | 4.1 | 4.1 | |
| | SubFixtu | 101.2 | Fixture | | 100 | | | 4.1 | 4.1 | 4.1 | 4.1 | |
| | SubFixtu | 101.3 | Fixture | | 100 | | | 4.1 | 4.1 | 4.1 | 4.1 | |
| | SubFixtu | 101.4 | Fixture | | 100 | | | 4.1 | 4.1 | 4.1 | 4.1 | |
| | SubFixtu | 101.5 | Fixture | | 100 | | | 4.1 | 4.1 | 4.1 | 4.1 | |
| | SubFixtu | 101.6 | Fixture | | 100 | | | 4.1 | 4.1 | 4.1 | 4.1 | |
| | SubFixtu | 101.7 | Fixture | | 100 | | | 4.1 | 4.1 | 4.1 | 4.1 | |

The color values are now inactive values in the programmer. The dimmer and tilt attributes are still active values. This indicates that the color values have gone somewhere and the dimmer and tilt have not.

Also, the color values have gone and are replaced with "4.1". This is the number of the preset where the color values have gone.

The first number is the feature group / preset pool number. The second number is the pool object.



So we got this new color preset.

Notice the small yellow "G" in the upper right corner of the preset. This indicates that the preset is a **Global** preset.

Let us have a look at what is actually stored in the preset.

Clear the programmer.

Press **Edit** and then click the preset.

Now the fixture sheet changes and look like this:

| M A Edit: Preset 1 | | | | | Prog Only | | | |
|--------------------|----------|-------|---------|-----|-----------|---------|-----|-------|
| ▼ | Name | FID | IDType | CID | RGB | | | |
| | | | | | R | G | B | W |
| ▼ | X4 Bar 1 | 101 | Fixture | | 22..100 | 24..100 | 100 | 0..38 |
| | SubFixtu | 101.1 | Fixture | | 22 | 24 | 100 | 38 |

These are now values in our programmer, and it is actually output.

What we see here is that the value is only stored for the first sub-fixture of the first X4 fixture, and there is a small yellow marker above each value.

The marker indicates that a value is a global value.

All fixtures of the same type can use global values. This means that all the sub-fixtures of the X4 bars can use this color.

Clear your programmer and press **Esc**.

Click the color preset.

This first preset "call" selects all the fixtures that can use a preset - when we do not already have a selection of fixtures. Notice that we select all the sub-fixtures.

Click the preset again.

Now we have called the preset reference into our programmer for the selected fixtures. This would also happen if we had used a group or manual selection to select some of the sub-fixtures.

Notice that the preset number shows in the fixture sheet value cells.

If we want to turn On and tilt the X4 bars again, we must select the parent / main fixtures. We can do this easily by pressing the **Up** key. Now we have selected the main fixtures, and we can press **Full** to turn them On and use the tilt encoder to tilt them forward.

Now we are going to store a couple of other presets. Please make a **Position** preset pool and a **Dimmer** preset pool.

Now press **Store** and click the first preset in the position pool. And we are going to store the first dimmer preset as well.

Now you should have presets that look like this (The color preset might not be the same):



The position preset got a small red "S". This tells us it is a **Selective** preset. Selective presets only contains values that can be used by the fixtures that had the values when the preset was stored.

Try to clear your programmer completely and click the position preset once. Now you have selected all the X4 main fixtures. Clicking it again assigns the reference to the preset.

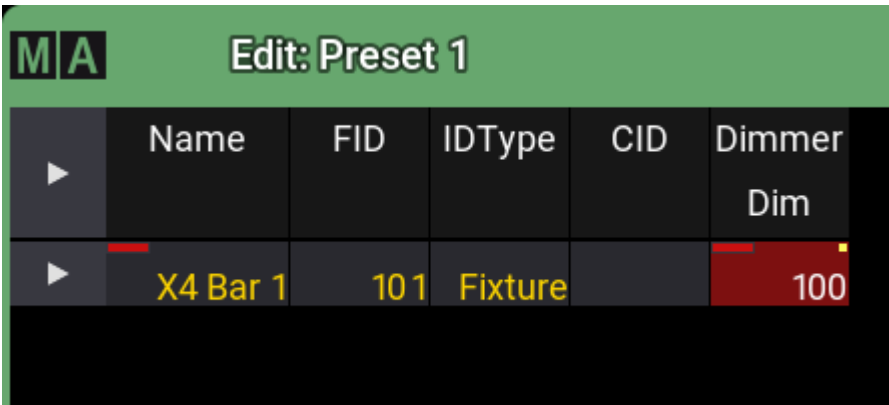
If you edit the preset, you can see in the fixture sheet that the same tilt value is stored for all the X4 fixtures.



| | Name | FID | IDType | CID | PanTilt T |
|---|----------|-----|---------|-----|--------------|
| ▶ | X4 Bar 1 | 101 | Fixture | | - 10.50 |
| ▶ | X4 Bar 2 | 102 | Fixture | | - 10.50 |
| ▶ | X4 Bar 3 | 103 | Fixture | | - 10.50 |
| ▶ | X4 Bar 4 | 104 | Fixture | | - 10.50 |
| ▶ | X4 Bar 5 | 105 | Fixture | | - 10.50 |
| ▶ | X4 Bar 6 | 106 | Fixture | | - 10.50 |
| ▶ | X4 Bar 7 | 107 | Fixture | | - 10.50 |

Clear the programmer again and exit the edit mode by pressing **Esc**.

Let us have a look at the dimmer preset. Notice that this got a gray "U". Which tells us it is a **Universal** preset. Press **Edit** and click the preset.



| | Name | FID | IDType | CID | Dimmer Dim |
|---|----------|-----|---------|-----|---------------|
| ▶ | X4 Bar 1 | 101 | Fixture | | 100 |

Notice that it has only stored values for the first X4, and the value is marked as global. So it looks a lot like a global preset. But it is not global - it is universal. This is important when we call the preset.

Clear the programmer and exit the edit mode.

Now click the dimmer preset once.

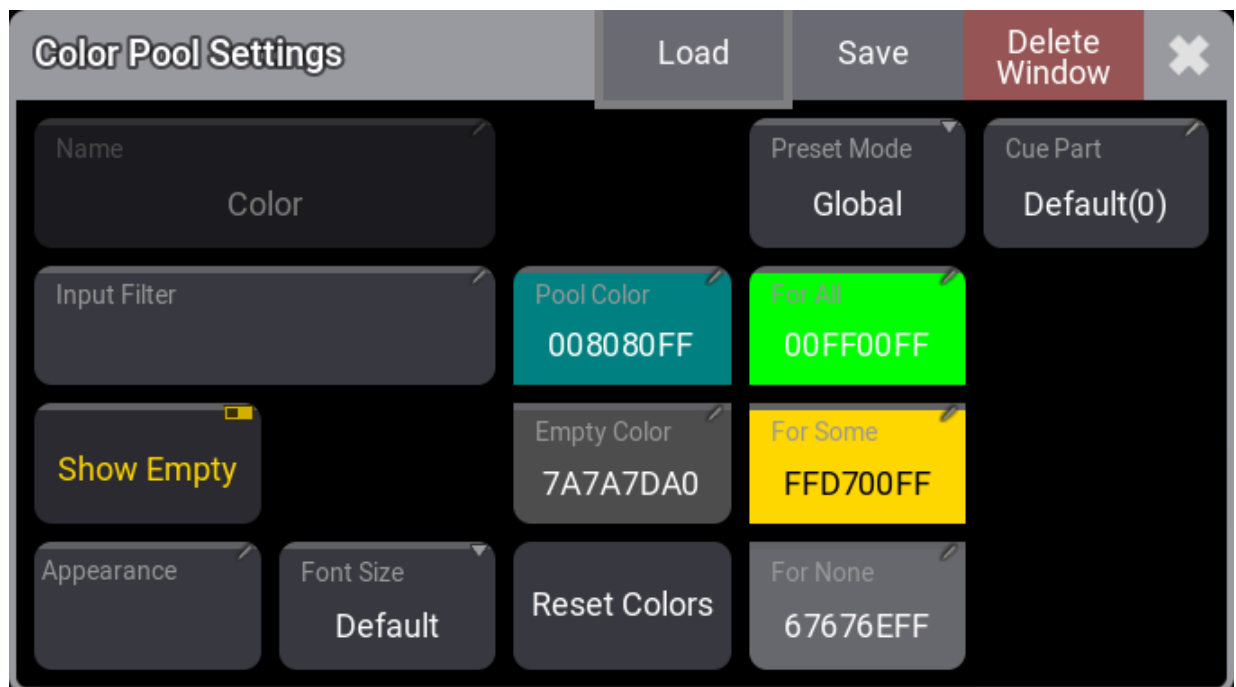
This selects *all the fixtures*. That is because all the fixtures we have patched have a dimmer attribute, and the preset can be applied to all dimmer attributes.

Clicking it again. Now all the fixtures are at full.

Clear the programmer.

Why did the presets get stored with these different preset modes? It is because we did not change the default store settings. These say that the preset should be stored using the "Auto" option for the preset mode. Auto means that the preset pools mode is used.

Each preset pools title field also has one of the mode letters showing the mode for the entire pool. This can be changed by clicking the MA logo in the title field for the pool. This opens the pool settings.



I am not going to explain all the different settings. But there is the **Preset Mode** for the entire pool. Clicking the button toggles between the three different modes. Please leave it in the mode it was.

Close the settings pop-up by clicking the  in the upper right corner of the pop-up.

Let us move on.

Create an **All** preset pool. There are five different All preset pools. They do the same; it does not matter which one you choose to create. There are several ways to organize the pools and store different content in different pools - should you choose to.

If we want to recreate the first look with the X4 bar, we need to select the X4 fixtures and apply the three presets. You could do this by clicking group 6, but we can also click the position preset first to select the X4 bars.

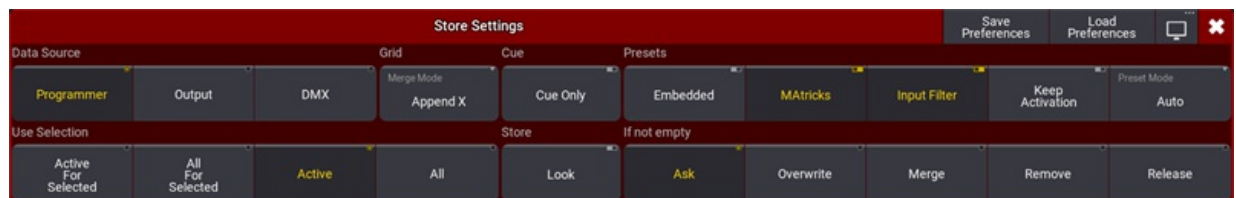
After making the selection, you can click the three presets.

Now we have the references to the three presets in our programmer.

We want to store this in an All preset, but we would like to keep the references to presets - just like if we stored a cue.

To do this, we need to make a small change to the store settings.

Press and hold the **Store** key until the store options open.



The store options are separated into different areas. One of them is about the preset. In this area, there is a button called "Embedded". Click it to activate it. Now click the first preset in the All preset pool.

We will do this again - almost and create a second All preset, and then we can look at what happened.

Clear the programmer. Click the position preset twice and then the dimmer and color preset.

Now store the second All preset without changing the store settings.

The result should look something like this:



The first all preset got an icon with a horizontal line and a down-pointing arrow below the line. This means that the preset is referencing other objects. The three presets we started with have a different icon with a horizontal line and a down-pointing arrow above the line. This means that the preset is used as a reference somewhere else.

Clearing the programmer and clicking any of the two All presets gives the same output. But try to use the edit method and look at the two presets in the fixture sheet.

The first All preset has the references as values, and the second preset has values for the attributes. This means that the default when storing presets is that we extract the values from any selected preset and store these values in the new preset.

To explore this further, clear your programmer.

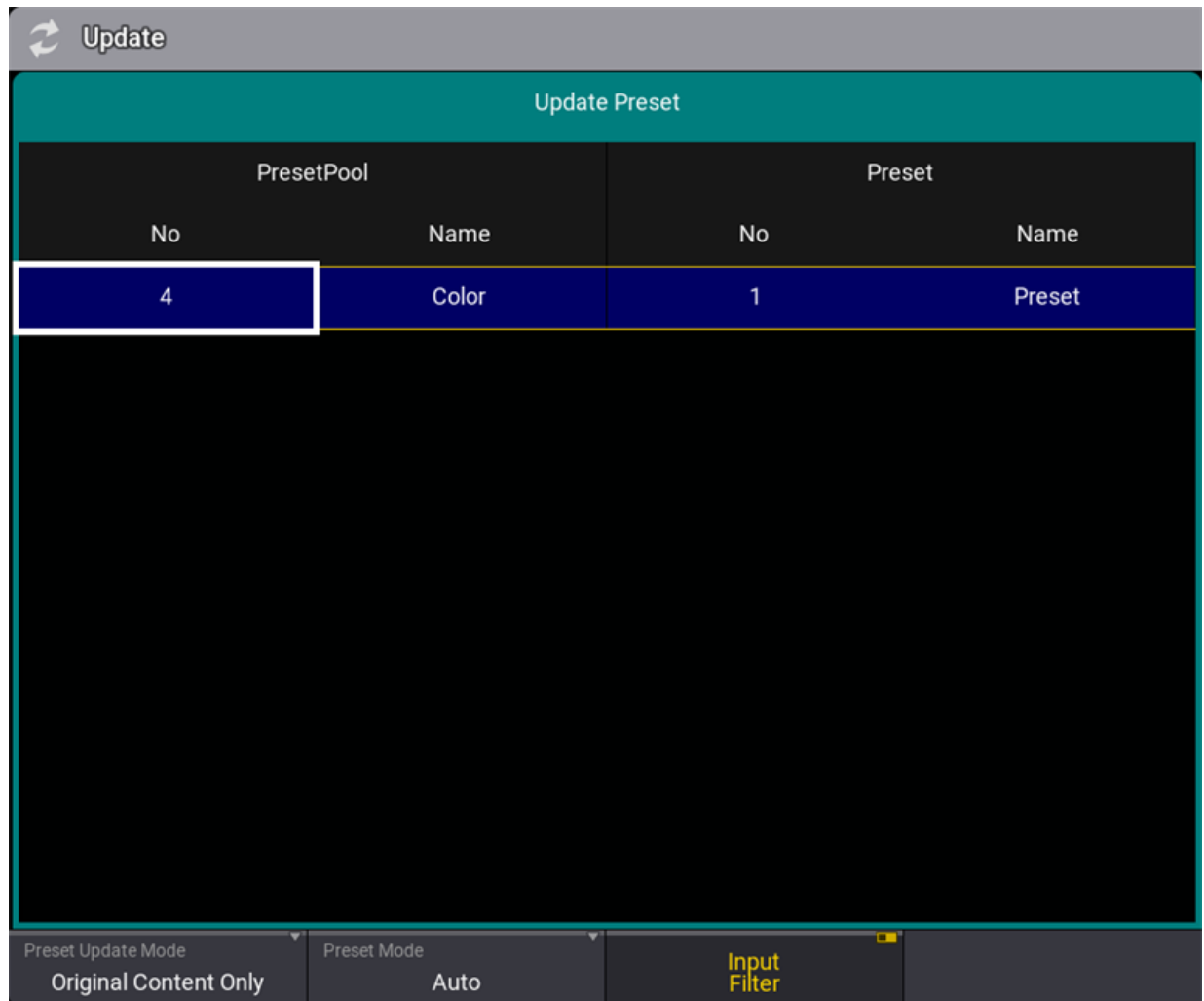
Select group 6 and click the color preset (not any of the All presets).

Change the color to something different.

Now the 'Update' key is flashing. This means that we can update something.

Press **Update**.

This opens the update menu.



The left side shows the color preset. Click the preset.

Now we have updated the color preset, and it could look something like this:



Notice that nothing in the two All presets has actually changed! But the output is obviously different. The first All preset is still just referencing the first color preset - and this color preset *has* changed. The second All preset has attribute values stored, which have not changed.

Alright, this was all the preset knowledge we need at the moment.

Please create 5 different color presets, including all the fixtures that can change color.

Also, create 5 position presets, some gobo presets, and some All presets. Please create the position preset for all the fixtures that can move.

It is always a good idea to have presets with the default values (Open white, No Gobo, Home position, etc).

When you have created the desired presets, please clear your programmer, and do not forget to save the show once in a while.



Recap

In this chapter, we looked at different presets and made some presets for use in later chapters.

We touched different areas, including the **Update Menu** and the **Store Settings**.

The manual has an entire section with details about **presets**.

In the **Next Chapter**, we are going to look at Phasers.

15. Phasers

Often we have a desire to have our fixtures move around and possibly change colors or any combination of values changing dynamically. This is often achieved using some kind of effect engine.

The effect engine in grandMA3 is called **Phaser**.

Phasers can be complex, and we are not going into a lot of details, but we are going to look at the basics of Phasers.

A phaser uses **Steps**. The cues and presets we have stored until now have one step. If we do not specify anything else, we store the values in step 1. A step contains a set of values.

Normally you would need two or more steps to have a Phaser. Each step contains a set of values. We sometimes refer to objects with a Phaser as "multi-step" objects. Phasers can be stored just like cues and presets.

The Phaser plays each step one at a time and loops through the steps during playback.

A **Speed** value defines how fast this loop runs.

If all the fixtures are doing the same steps at the same time, then we say that they have the same **Phase** value. But often, we want to spread the fixtures out, so they are in different places in the loop. This is done by giving the fixtures different phase values. Do not confuse the **Phase** value with the concept of **Phasers**.

Create a Dimmer Phaser

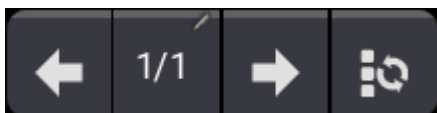
Let us create a simple dimmer chaser that fades between two values with the Even Blinders to try some of these concepts.

Clear the programmer.

Select Group 4.

Give them a dimmer value of 0%.

Notice this small area on the encoder toolbar:

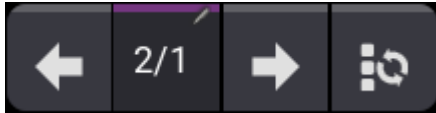


It is called the "Step Bar". It currently says "1/1". This shows us that we are working with values for steps 1 out of 1. Everything we have been doing so far in all the previous chapters has been happening in step one.

We need to add another step with a new value.

Click the right-pointing arrow in the step bar.

Now it should say "2/1".



Since we have not given the fixtures any value yet, we still only have 1 step, but we have selected step 2 and are ready to add some values.

Give the fixtures 100%.

Now the fixtures are looping between the two steps in the output.

Have a look at the fixture sheet. You can probably not see the value changes; this is because we are looking at a layer called "Absolute". This shows you the values you have requested in the programmer. We are currently looking at the values from step 2.

Different elements, such as a phaser, can affect the output. We can change the fixture sheet to look at the actual output.

We need to turn On the **Layer toolbar** in the Fixture sheet.

Open the settings for the Fixture sheet by clicking the **MA** logo in the upper right corner of the sheet window.

Toggle the setting called "Layer Toolbar" On (yellow text).

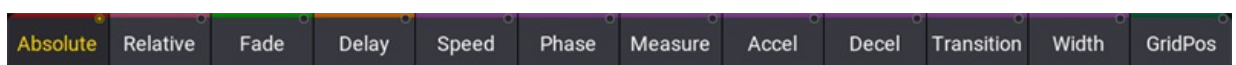
Close the settings by clicking the **X** in the upper right corner of the settings pop-up.

Now there is a layer toolbar at the bottom of the fixture sheet.

The layer toolbar can be used to select different layers. We are not going into details about the layer toolbar. But if you click **Output**, you can see what value the fixtures are actually outputting.

| M A Fixture Sheet: Output | | | | | |
|---------------------------|-----------|-----|---------|-----|------------|
| | Name | FID | IDType | CID | Dimmer Dim |
| ▼ | Blinders | 20 | Fixture | | 0..73 |
| | Blinder 1 | 21 | Fixture | | 73 |
| | Blinder 4 | 24 | Fixture | | 73 |
| | Blinder 5 | 25 | Fixture | | 73 |
| | Blinder 7 | 27 | Fixture | | 73 |
| | Blinder 8 | 28 | Fixture | | 73 |
| | Blinder 1 | 30 | Fixture | | 73 |
| | Blinder 1 | 31 | Fixture | | 73 |
| | Blinder 1 | 34 | Fixture | | 73 |
| | Blinder 2 | 22 | Fixture | | 0 |
| | Blinder 3 | 23 | Fixture | | 0 |
| | Blinder 6 | 26 | Fixture | | 0 |
| | Blinder 9 | 29 | Fixture | | 0 |
| | Blinder 1 | 32 | Fixture | | 0 |
| | Blinder 1 | 33 | Fixture | | 0 |

There is a version of the Layer Toolbar included in the Encoder Toolbar:



The buttons in this toolbar with a purple bar at the top are Phaser layers. The same colored marker is also showing in the fixture sheet on the values that a Phaser affects.



The layer toolbar in the encoder bar defines what "layer" the encoders are controlling. The layer toolbar in the fixture sheet defines what layer we are looking at.

Click **Speed** in the layer toolbar in the encoder toolbar. Now the first encoder controls the speed. The default readout for the speed is BPM - Beats Per Minute. Each beat is a single step. So if we had a Phaser with 60 steps running at 60 BPM then it would take one minute to run through all steps.

At the moment, we can see in the fixture sheet that the blinders are all moving together. We can change this by giving them different values in the **Phase** layer.

Click **Phase** in the encoder toolbar. Click or do a short press on the encoder to open the calculator.

In the "Specials" section, click **0 thru 360**.

Now the fixtures are spread out equally over the entire loop.

You can see this if you select the "Phase" layer in the fixture sheet.

If you currently cannot see the 'Phase' button, you can scroll the layer toolbar in the fixture sheet by clicking and holding both the left and right mouse buttons on the layer toolbar while moving the bar to the side. On the console, you need to touch the layer bar with two fingers and scroll sideways.

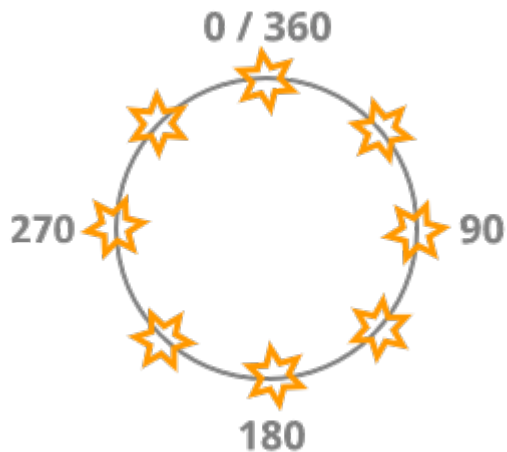


| Name | FID | IDType | CID | Dimmer Dim |
|-----------|-----|---------|-----|---------------|
| Blinders | 20 | Fixture | | 0.00° |
| Blinder 1 | 21 | Fixture | | 0.00° |
| Blinder 4 | 24 | Fixture | | 45.00° |
| Blinder 5 | 25 | Fixture | | 90.00° |
| Blinder 7 | 27 | Fixture | | 135.00° |
| Blinder 8 | 28 | Fixture | | 180.00° |
| Blinder 1 | 30 | Fixture | | 225.00° |
| Blinder 1 | 31 | Fixture | | 270.00° |
| Blinder 1 | 34 | Fixture | | 315.00° |
| Blinder 2 | 22 | Fixture | | |
| Blinder 3 | 23 | Fixture | | |
| Blinder 6 | 26 | Fixture | | |
| Blinder 9 | 29 | Fixture | | |
| Blinder 1 | 32 | Fixture | | |
| Blinder 1 | 33 | Fixture | | |

Notice that the values assigned are not actually from 0 to 360. This is because the phase value is defined as a degree on a circle.

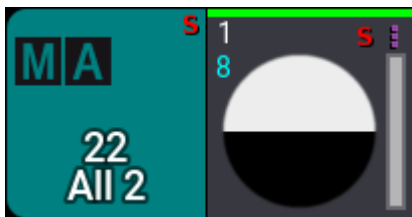
Imagine all the steps looping as a circle. On a circle, the value of 0 degrees and 360 degrees are the same location. So if the console literally did 0 to 360, then the first and last fixture would do the same.

The phase values we have now look like this on a circle:



Store and Use the Phaser

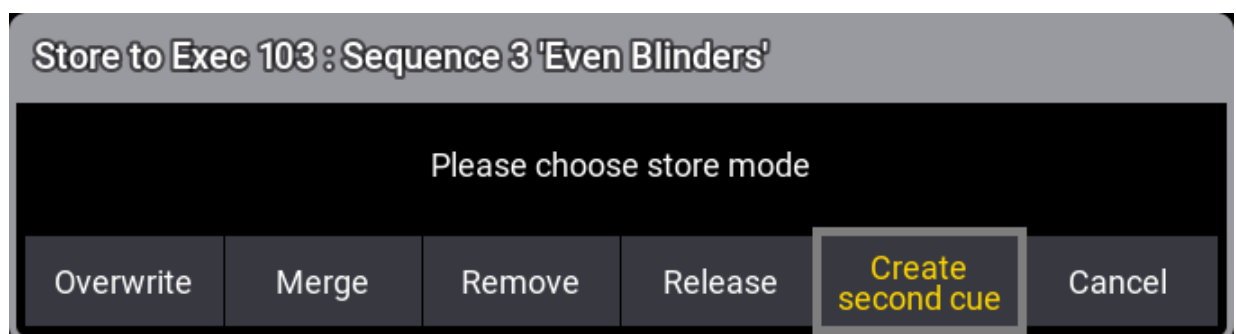
Store this in a new All Preset in preset pool 22 on the first preset.



Click the preset to have the reference to it active in your programmer.

Press/Click **Store** and then click executor 103.

Now we get a new pop-up:



We want to store the Phaser as cue number 2. We could have been precise with our store command, but then you would not have seen this pop-up.



It asks this question because we can store the values in the existing cue, or we can create a second cue. The default store settings have an option called "If not empty". The default action when storing is set to "Ask".

Click **Create second cue**.

Now you can use the "Go+" button on executor 203 to toggle between the two cues.

Create Second Phaser

Here is a little more explanation about the controls for how a value changes from one step to another.

Two Phaser layers are called **Accel** (Acceleration) and **Decel** (Deceleration). These control if there is a curve to the fade to and from a step.

The **Transition** layer defines how much of the available time between different steps should be used on the value transition.

These three sets of values define how the value gets from one step to the next.

The default values give us a linear fade using all of the available time.

We will make a third cue with a similar phaser but where the values snap from one step to the other instead of fading between the values.

Turn off the executor if it is active (**Off** and then executor 103) and clear the programmer.

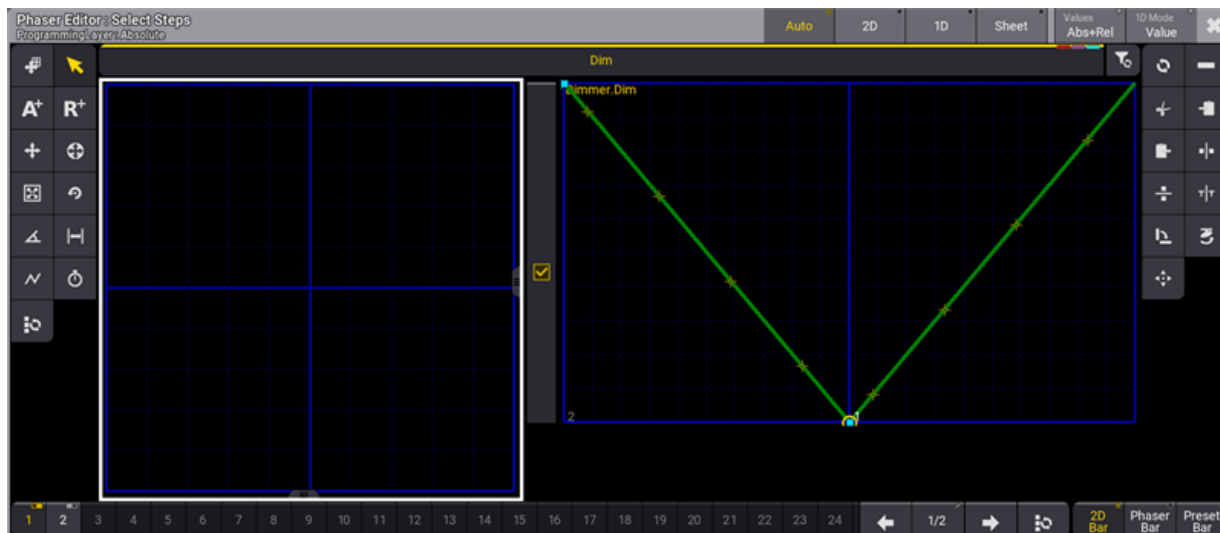
We can reuse many of the values we stored in the All Preset. Click it twice to call the phaser into the programmer.

We did nothing to make the blinders fade from one step to the other. The default values make this happen.

We could achieve our goal by using the phaser layers as we did with the phase value, but let us look at the **Phaser Editor**.

The encoder bar has a button that gives us a temporary version of the Phaser Editor, but it can also be created as a window.

Click **Phaser** in the encoder bar.



This is the Phaser Editor. It is outside the scope of this quick start guide to explain all the elements and options in this editor. There is a link to the phaser topics in the recap if you want to learn all the details about the editor.

The green "V" we can see in the editor is the dimmer values' path between the two steps. Step 1 is at the bottom of the "V" (0%). Step 2 is at the top left. You can see the number at the bottom blue line. The yellow markers moving along the green line are the different dimmer values of the fixtures.

The square on the left side (with the white frame) is used when we create position phasers. It represents pan and tilt. For now, we are going to concentrate on the dimmer.

We want to change the shape of the green line. Currently, the values are fading in a straight line between the two values.

A button in the tools on the left-hand side can help us with this.

Click the **Select Form** button.

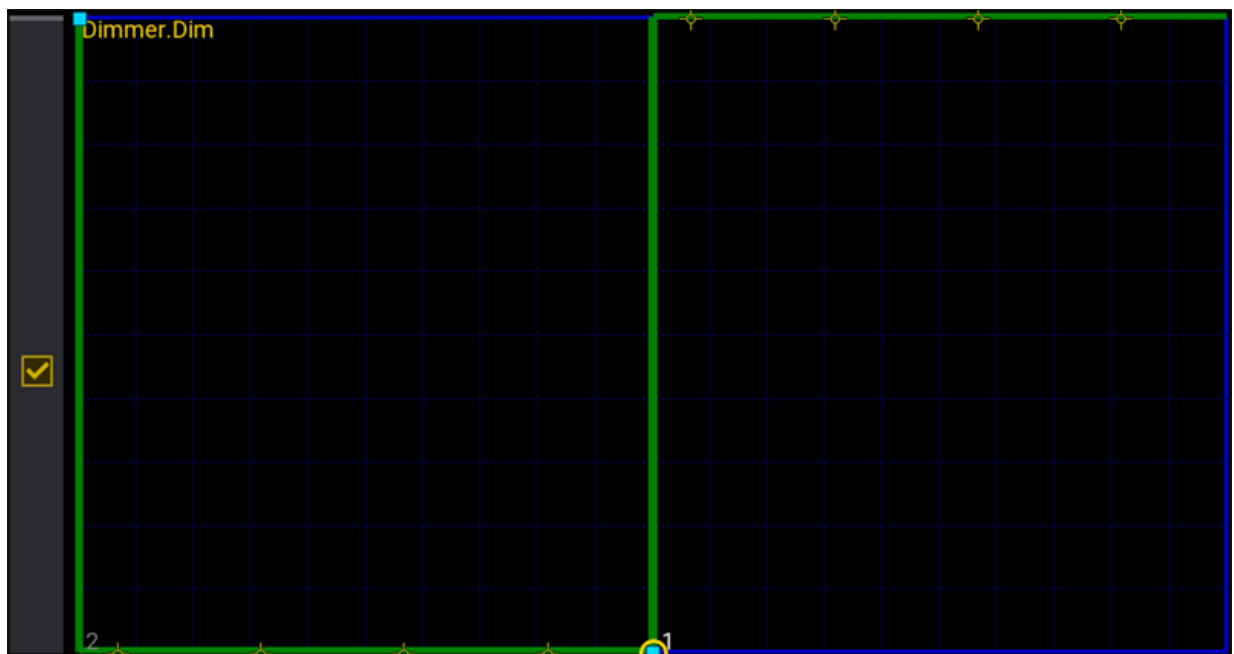


This gives us a new toolset on the right-hand side:




Click the top button.

Now the form has changed to this:



Here we can see that the green line is straight vertical. This means that the value jumps or snaps to the new value. We have actually turned the **Transition** value to 0% for both steps.

The transition values can differ for each step to make very creative Phasers.

Close the Phaser Editor by clicking the  in the upper right corner.

Store and Use the Second Phaser

Store this as a new All Preset in the 22 preset pool. You should label the two presets with useful names. I have called them "Even Blind Soft" and "Even Blind Snap".



Click the second preset, so it is active in your programmer, and press/click **Store** and then executor 103.

This time it does not ask us what we want to do. When there are at least two cues in a sequence, and we store into the sequence, the system assumes we want to store a new cue using the next whole number as the cue number. If we want something else, then we need to specify it.

Great, clear the programmer and try out the three different cues on the executor. The best way to experience it is in the 3D window.

Modify the Executor

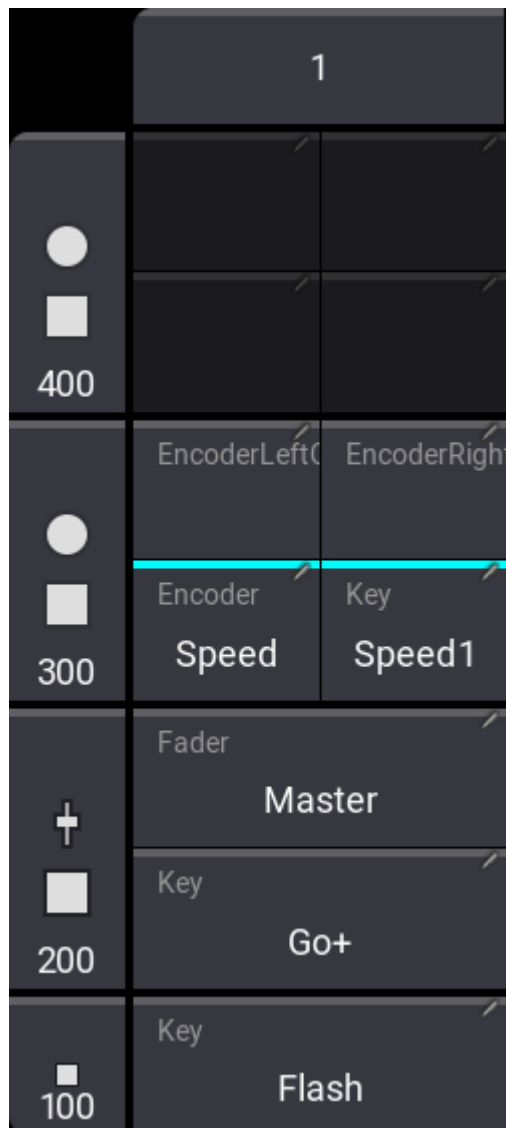
There is one thing we should adjust for this to be better. Right now, the sequence resets when we turn the master all the way down. It might be better if it stayed at the last cue we selected. And maybe we would like to be able to control the speed dynamically. Let us make these two changes.

We need to open the **Assign Menu**. Click **Assign** and then one of the executor buttons for the Even Blinder sequence.

In the menu, we need to be on the Handle page. Click **Handle** on the left side if it is not already active.

We want to expand the executor even further up. Click the button that says **300**.

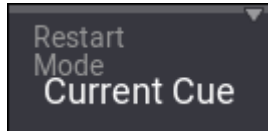
The key assignment might have changed (because we changed the size). Again we want the lower executor button to be "Flash". We want the key for the 300 button to be "Speed1", and we want the Encoder for the 300 knob to be "Speed". The handle assignment should look like this:



Now we need to adjust the settings of the executor. Click **Edit Setting** on the left side. This opens the settings for the sequence.

There are many different settings. The one we want to change is called "Restart Mode". It is near the middle of the menu.

This setting has three options. Click the button until it says "Current Cue".



This means the sequence will restart on the cue where we left it.

Finally, close the **Assign Menu**.

Play around with the new speed knob and the fader in combination with the three cues. The button below the knob resets the speed back to 60 BPM. The knobs on the onPC can be turned like the encoders.

Create Phasers for the Odd Blinders

Now do everything we just did again but this time for the Odd Blinders and set up their executor the same way.

Store the Phasers in new All Presets. When you have done all that, continue to the next chapter.

Recap

In this chapter, we looked at simple dimmer Phasers. There is an entire section in the manual called **Phaser** - this gives you all the details about Phaser creation, and there are some examples of more advanced Phasers. You can use this show to try the examples.

We also looked at the layer toolbar in the fixture sheet. This has a little bit more description - **Fixture sheet layer toolbar**. We often keep the **Auto** selected in the fixture sheet unless we want to see something specific. This means it follows the selected layer in the encoder toolbar.

We also briefly touched the Store Settings. We will not talk more about them in this quick start guide. You can learn more about the Store Setting in the **Store Settings and Store Preferences** topic.

In the **next chapter**, we are going to create a new sequence.



16. Sequence with Multiple Cues

Now we are going to create a new sequence with multiple cues.

We will use the moving heads and some of the presets we created in chapter 13.

Because of the differences in our preset, your result will look different than mine. That is okay. It is meant as a demonstration, and we will use the sequence to look at different functions with sequences.

Create the Sequence

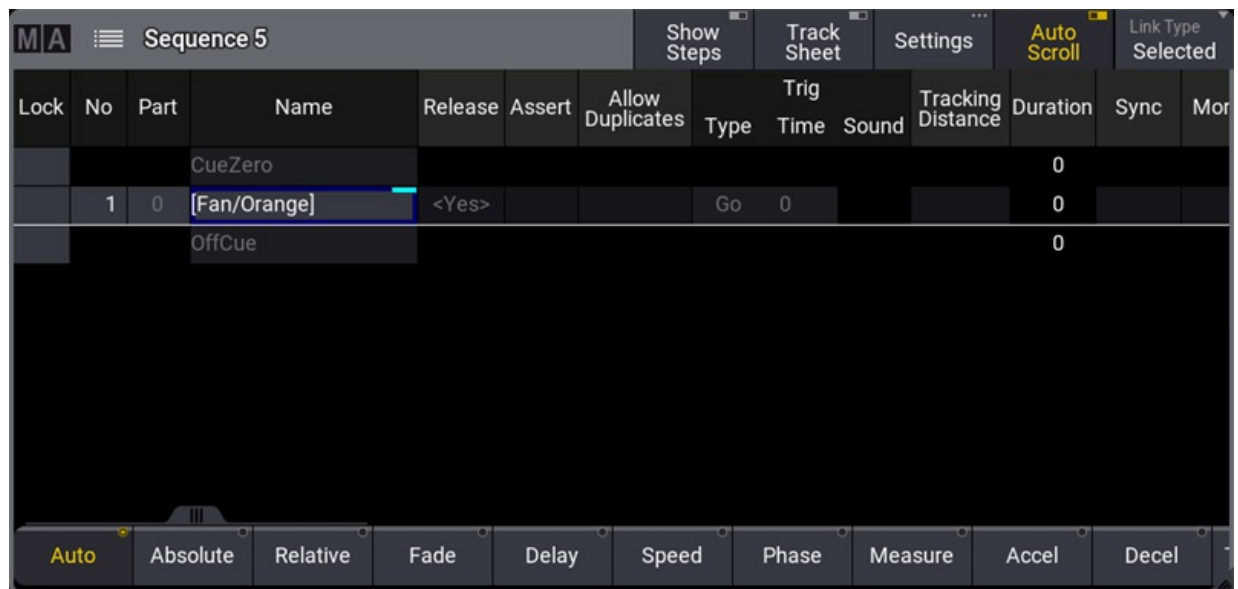
We begin by getting some values into our programmer. Start by clearing the programmer. Now select Group 7 (all the Mega Pointe) and turn them to 100%. Select a position preset and color preset.

This is our first cue in a new sequence, so let us store it: Press **Store** and then the executor button 206.

Now we got a new sequence (number 5) and executor 206 is controlling the sequence.

Press **Select Sequ 5 Please** to select the sequence. This makes it easier when we are going to work with the sequence.

Have a look at the sequence sheet. Notice that the cue name gets the names from the presets.



First Cue in the New Sequence

Press the **Go+** key in the master section to run the cue. The master section can be opened temporarily by pressing **F7** on a keyboard or be created as a window.

Turn off the Mega Pointes (0%) and Press **Store Cue 2 Time 3 Please**. This stores cue 2 with a cue fade time of 3 seconds.



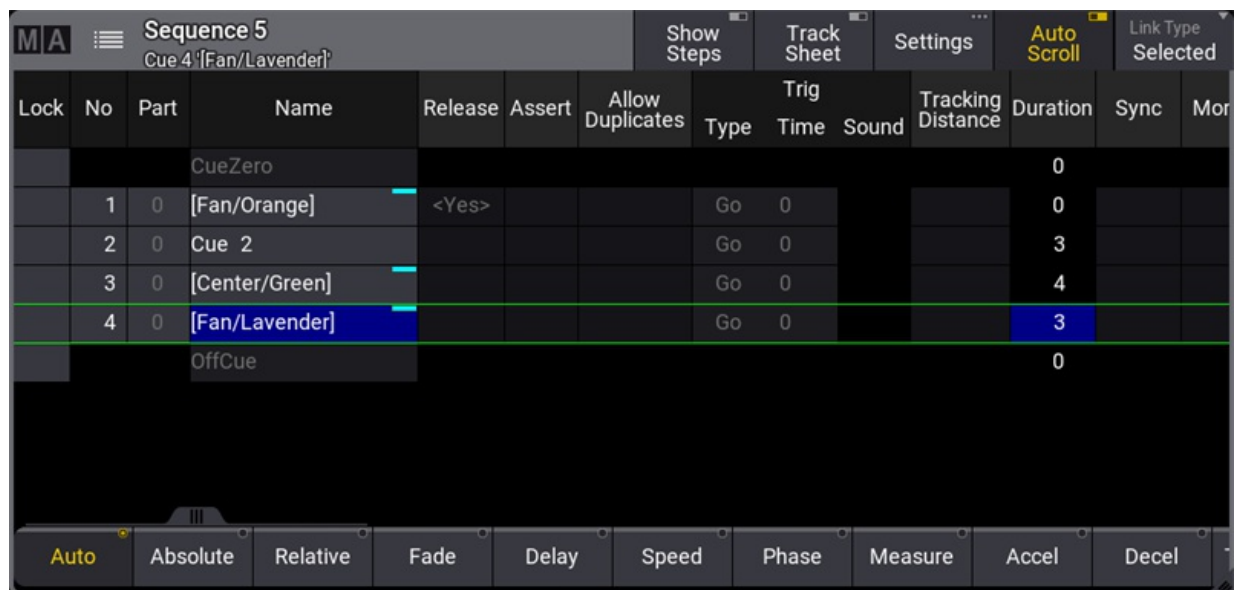
Clear the programmer.

Now you are back to cue 1. Press **Go+** in the master area to run the second cue.

Select all the Auras. Turn them On, and select a color and a position. Store this as cue 3 with a fade time of 4.

Give them a new position and adjust the color. Store this as cue 4 with a fade time of 3 seconds.

Clear the programmer and run the two new cues in the sequence.



Cue 4 is active

Select the X4 Bars. Give them a dimmer value, a color, and a position, and adjust the zoom. Store this as cue 5 with a fade time of 2 seconds.

Clear the programmer and run cue 5.

Select the Mega Pointe. Give them a new position, intensity, color, and add a gobo. Select the Auras and turn them Off. Store this as cue 6.

Run the cue and *then* clear the programmer. This allows you to go to the cue without any changes when we clear the programmer.

Now we are going to change the cue timing.

Press **Time 2 / 5 Please**. This changed the current cues time. We could have specified a cue number, and you can do this if you want to change a different cue than the current one.

We also specified two different numbers separated by a forward slash. This means that the cue now has fade and outfade times. The outfade time (5 seconds) will be used by the dimmer going down in value (the Auras). All other attributes change their values using the normal fade time (2 seconds).



The final cue is going to be a blackout. Select the Mega Pointes and the X4 Bars and give them 0% intensity. Store this as cue 7 with a fade time of 0.

This was the sequence. Try to run through it a couple of times.

| Lock | No | Part | Name | Release | Assert | Alloy Dupl | Trig Type | Time | Sound | Track Distar | Durati | SynMc | Cue Fade | Delay | S D |
|------|----|------|-----------------------|---------|--------|------------|-----------|------|-------|--------------|--------|-------|----------|-------|-----|
| | | | CueZero | | | | | | | | 0 | | 0 | 0 | |
| | 1 | 0 | [Fan/Orange] | <Yes> | | | Go | 0 | | | 0 | | 0 | 0 | |
| | 2 | 0 | Cue 2 | | | | Go | 0 | | | 3 | | 3 | 0 | |
| | 3 | 0 | [Center/Green] | | | | Go | 0 | | | 4 | | 4 | 0 | |
| | 4 | 0 | [Fan/Lavender] | | | | Go | 0 | | | 3 | | 3 | 0 | |
| | 5 | 0 | [Violet/Audience] | | | | Go | 0 | | | 2 | | 2 | 0 | |
| | 6 | 0 | [Center/3.2/Lavender] | | | | Go | 0 | | | 5 | | 2 / 5 | 0 | |
| | 7 | 0 | Cue 7 | | | | Go | 0 | | | 0 | | 0 | 0 | |
| | | | OffCue | | | | | | | | 0 | | 0 | 0 | |

All Cues Created

Edit the Sequence

Let us make some changes to the sequence using the sequence sheet.

We would like cue 4 to run shortly after cue 3 is done automatically. This can be done by changing the trigger for cue 4. The default trigger type is "Go" as we shortly saw in chapter 8.

Edit the field for cue 4 and select **Time** and edit the time column and give it a value of 6 seconds. These settings mean that when we trigger cue 3 with a Go, then cue 3 runs with a fade time of 4 seconds, and a timed countdown of 6 seconds is also started for cue 4. So 6 seconds after we trigger cue 3, then cue 4 starts the fading. There are other ways to achieve the same result. This is just one way to do it.

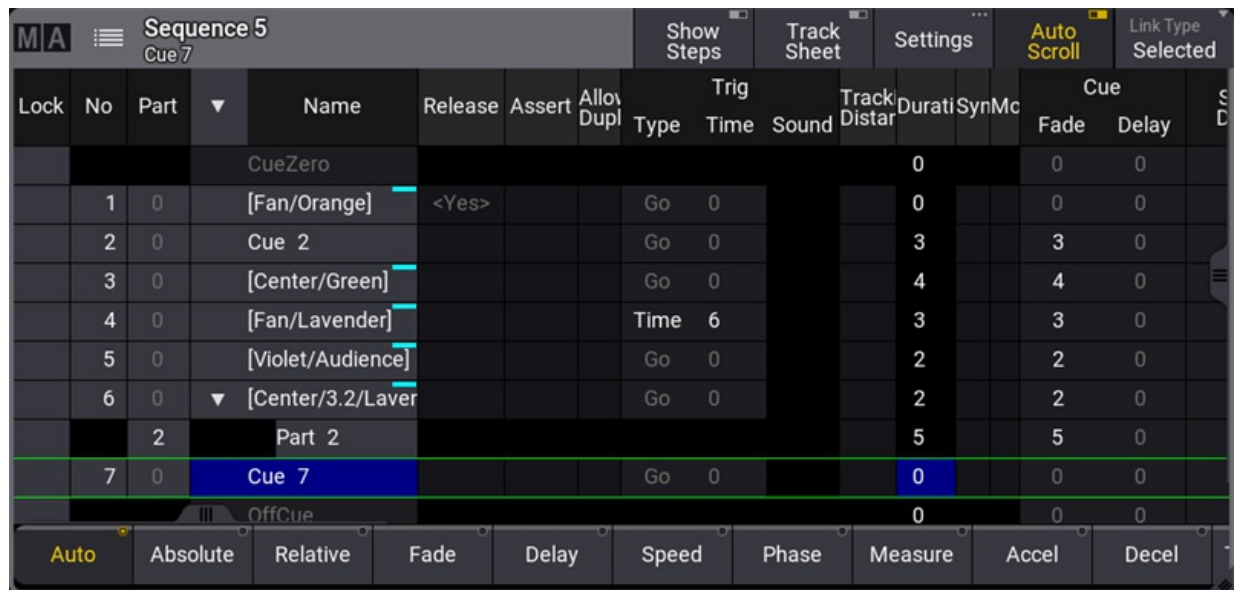
With cue 6, we created a cue where the Mega Pointes turn On, and the Auras turn Off. We know this because we just did it. If we return to this show after some time has passed, we might not remember that the Auras use the outfade time. So let us change this to a different solution that makes it more obvious what is happening. We are going to create a part cue with the Auras.

Select the Auras and give them 0%. Press **Store Cue 6 Cue 2 Time 5 Please**. This might give you a popup asking you to select a store mode. Make sure "Cue Only" is Off and then click **Ok**. This stores the Auras dimmer value to cue 6 part 2 with a cuefade of 5.



So now we can change the cue fade in cue 6 part 0 to 2.

Click **Cue 6 Time 2 Please**. If we do not specify a part number, the software assumes we mean part 0.



Cue 4 with a Time Trigger and Cue 6 with a Cue Part

Separating the Auras in their own part instead of just using the outfade time can seem like extra work. In the end, it is a matter of personal programming style. I wanted to show you two ways this look could be achieved. I like to separate attributes that have different timing in part cues.

Now we should name the part something that tells us what we put in the part. Let us give all the cues a name. You can rename them by editing the name field for each cue and cur part.

Here are the names I use:

| Cue | Part | Name |
|-----|------|------------|
| 1 | 0 | Entrance |
| 2 | 0 | Ready |
| 3 | 0 | Scene 1 |
| 4 | 0 | -- Auto -- |
| 5 | 0 | Scene 2 |
| 6 | 0 | Scene 3 |
| 6 | 2 | -- Aura 0% |
| 7 | 0 | BO |

We should also name the sequence. Click in the command line input and type **Label Sequence 5 "My Show"** and execute the command. If you, for some reason, have a different sequence number, then please adjust the command to reflect the correct sequence number.



| Lock | No | Part | Name | Release | Assert | Allo Dupl | Trig Type | Time | Sound | Track Distar | Durati | SynMc | Cue Fade | Delay |
|------|----|------|------------|---------|--------|-----------|-----------|------|-------|--------------|--------|-------|----------|-------|
| | | | CueZero | | | | | | | | 0 | | 0 | 0 |
| | 1 | 0 | Entrance | <Yes> | | | Go | 0 | | | 0 | | 0 | 0 |
| | 2 | 0 | Ready | | | | Go | 0 | | | 3 | | 3 | 0 |
| | 3 | 0 | Scene 1 | | | | Go | 0 | | | 4 | | 4 | 0 |
| | 4 | 0 | -- Auto -- | | | | Time | 6 | | | 3 | | 3 | 0 |
| | 5 | 0 | Scene 2 | | | | Go | 0 | | | 2 | | 2 | 0 |
| | 6 | 0 | Scene 3 | | | | Go | 0 | | | 2 | | 2 | 0 |
| | | 2 | -- Aura 0% | | | | | | | | 5 | | 5 | 0 |
| | 7 | 0 | BO | | | | Go | 0 | | | 0 | | 0 | 0 |
| | | | OffCue | | | | | | | | 0 | | 0 | 0 |

New Names for the Cues

Another feature I would like to introduce is the appearance of the sequence and the cues.

We can give the sequence an appearance. This can give it a distinguished look on the executors and in the sequence pool.

Let us start by creating the appearances we need.

Make an **Appearance** pool somewhere.

How you use appearance is all up to you. Maybe you do not like the way I do it, and that is, of course, completely OK. But try to follow what I do, and then you can always change it afterward.

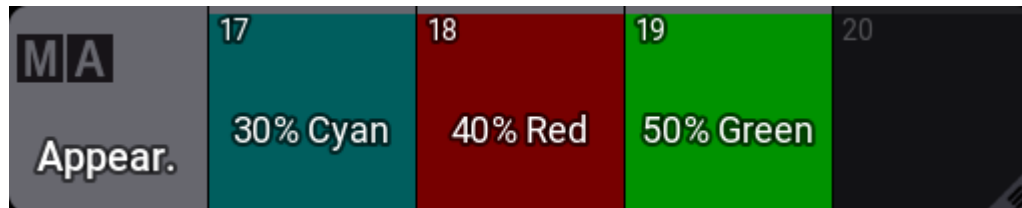
We need to create 3 new appearances. Edit an empty pool object. You might need to scroll in the pool to get to some empty pool objects.

In the **Background Color** fader, set the "R" fader to 0%, the "G" and "B" faders to 100%, and the "Alpha" fader to 30% (it might not want to be exactly 30%). Name this appearance "30% Cyan".

The next appearance is named "40% Red". The faders are "R" = 100%, "G" = 0%, "B" = 0%, and "Alpha" = 40%.

The final appearance is named "50% Green". The faders are "R" = 0%, "G" = 100%, "B" = 0%, and "Alpha" = 50%.

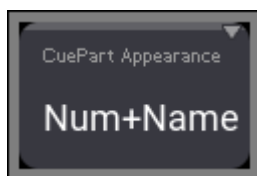
Those were the appearances we needed.



Now we need to have a Sequence Sheet and the Appearance pool visible.

We are going to assign appearances to cues. To be able to see these, we need to adjust the **Sequence Sheet Settings**.

Click the **MA** logo in the upper left corner of the sheet. Click the **Display** tab to make sure it is the selected tab. There is a setting called **CuePart Appearance**. Set this to "Num+Name".



Close the settings.

The easiest way to assign the appearances to cues (or technically the cue parts) is by using the Swipecy menu in the Appearance pool - if you forgot about the Swipecy, please revisit [chapter 6](#).

Use the assign option and assign the "30% Cyan" on cue 4 (part 0) and cue 6 part 2.

Assign the "40% Red" on cue 2 and cue 7.

The result should look something like this:



| Lock | No | Part | Name | Release | Assert | Allo Dupl | Trig Type | Time | Sound | Track Distar | Durati | SynMc | Cue Fade | Delay |
|------|----|------|------------|---------|--------|-----------|-----------|------|-------|--------------|--------|-------|----------|-------|
| | | | CueZero | | | | | | | | 0 | | 0 | 0 |
| | 1 | 0 | Entrance | <Yes> | | | Go | 0 | | | 0 | | 0 | 0 |
| | 2 | 0 | Ready | | | | Go | 0 | | | 3 | | 3 | 0 |
| | 3 | 0 | Scene 1 | | | | Go | 0 | | | 4 | | 4 | 0 |
| | 4 | 0 | -- Auto -- | | | | Time | 6 | | | 3 | | 3 | 0 |
| | 5 | 0 | Scene 2 | | | | Go | 0 | | | 2 | | 2 | 0 |
| | 6 | 0 | Scene 3 | | | | Go | 0 | | | 2 | | 2 | 0 |
| | 2 | | -- Aura 0% | | | | | | | | 5 | | 5 | 0 |
| | 7 | 0 | BO | | | | Go | 0 | | | 0 | | 0 | 0 |
| | | | OffCue | | | | | | | | 0 | | 0 | 0 |

Cues with Appearances

Marking the cues with colors can help you to quickly distinguish special cues from others. I like to mark "dangerous" cues like blackouts and cues that I do not need to worry about, like the cues that run automatically.

Finally, let us give the sequence an appearance.

Click the **Settings** in the title bar of the sequence sheet. These are the settings for the actual sequence.

In the first column, there is a setting called "Appearance". Click this and select the "50% Green" appearance in the list.

This colors the sequence in the sequence pool and gives the executor the green color. This can make it fast to identify the sequence on the executors.

Below this setting, there is another setting called "Prefer Cue Appearance". Turning this On will give the executor, and the sequence pool object the color from the active cue (part 0) if there is one. Otherwise, it will use the sequence appearance.

Turn this On if you like, and then close the settings.

Tracking

We can see what is stored in the cues by changing the sequence sheet into a tracking sheet.

Do this by turning On the **Track Sheet** in the title bar of the sequence sheet.

It then looks like this (I have scrolled the sheet horizontally):



Sequence Sheet in Track Sheet Mode

Here we can see how an attribute changes through the cues. For instance, the dimmer value of fixture 201 is at 100% in cue 1 and then at 0% in cue 2. This then tracks to cue 6, where the value is back at 100% again.

There are some colors here that are a bit interesting for us.

The cyan text color shows us that there is a new value. This value will use the **Cue In Fade** time.

The green color is dimmer values going to a lower value, and they will use the **Cue Out Fade** to change the value. The **Cue Out Fade** is the same as the **Cue In Fade** unless you specify a different time.

The magenta text color indicates tracking values. This means that the value is not stored in the cue, but it is the value that the sequence will output.

Another text color that can be on the tracking sheet is white. This indicates values stored in the cue at the same value as they would have if it were a tracking value. So in essence, it does not need to be stored in the cue.

We can edit a value directly in the tracking sheet. Let us try this. We are going to make a change for only one cue, so the first thing we want to do is to turn On the **Cue Only** button in the title bar.

There is another setting we would like to change. Open the settings for the Sequence Sheet and turn On "Feature Sort". This orders attributes of the same type next to each other.



| Sequence 5 'My Show' | | | | | | Cue Only | Show Steps | Track Sheet | Settings | Auto Scroll | Link Type Selected | | | |
|----------------------|----|------|------------|-------|--|----------|------------|-------------|----------|-------------|--------------------|-----|-----|-----|
| Lock | No | Part | Name | urati | | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 201 | 202 |
| | | | | | | Dim | Dim | Dim | Dim | Dim | Dim | Dim | Dim | Dim |
| | | | Cuezero | U | | | | | | | | | | |
| | 1 | 0 | Entrance | 0 | | | | | | | | | 100 | 100 |
| | 2 | 0 | Ready | 3 | | | | | | | | | 0 | 0 |
| | 3 | 0 | Scene 1 | 4 | | | | | | | | | | |
| | 4 | 0 | -- Auto -- | 3 | | | | | | | | | | |
| | 5 | 0 | Scene 2 | 2 | | 70 | 70 | 70 | 70 | 70 | 70 | 70 | | |
| | 6 | 0 | Scene 3 | 2 | | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 100 | 100 |
| | | 2 | -- Aura 0% | 5 | | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 100 | 100 |
| | 7 | 0 | BO | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | OffCue | 0 | | | | | | | | | | |

Feature Sort Activated

Now use the mouse to click and drag through all the cells for fixtures 101 to 107 in cue 5 so they are all marked with a blue frame. Next, you want to right-click (Edit) the selected cells. This opens the calculator.

We can select valid presets by clicking the **Presets** button around the middle of the calculator. For now, we just want to change the dimmer value to a different value click **5 0 Please** (if they already were at 50%, then select a different new value).

Now it looks something like this:

| Sequence 5 'My Show' | | | | | | Cue Only | Show Steps | Track Sheet | Settings | Auto Scroll | Link Type Selected | | | |
|----------------------|----|------|------------|-------|--|----------|------------|-------------|----------|-------------|--------------------|-----|-----|-----|
| Lock | No | Part | Name | urati | | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 201 | 202 |
| | | | | | | Dim | Dim | Dim | Dim | Dim | Dim | Dim | Dim | Dim |
| | | | Cuezero | U | | | | | | | | | | |
| | 1 | 0 | Entrance | 0 | | | | | | | | | 100 | 100 |
| | 2 | 0 | Ready | 3 | | | | | | | | | 0 | 0 |
| | 3 | 0 | Scene 1 | 4 | | | | | | | | | | |
| | 4 | 0 | -- Auto -- | 3 | | | | | | | | | | |
| | 5 | 0 | Scene 2 | 2 | | 50 | 50 | 50 | 50 | 50 | 50 | 50 | | |
| | 6 | 0 | Scene 3 | 2 | | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 100 | 100 |
| | | 2 | -- Aura 0% | 5 | | 70 | 70 | 70 | 70 | 70 | 70 | 70 | 100 | 100 |
| | 7 | 0 | BO | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | OffCue | 0 | | | | | | | | | | |

Dimmer Values Edited in Track Sheet



If we did not do this as "Cue Only", then the new value would have been tracking through cue 6.

Move In Black

You might have noticed when running the cues that the fixtures faded to a new position and a new color together with the dimmer values. If we want the fixtures to already be at the next position and with the color ready, then you could store the color and position values in the previous cue, but we can also make the software do this for us. It is a function called MIB (Move In Black).

To use MIB, we need to turn off the Track Sheet again (toggle the button in the title bar). Scroll the sheet horizontally until you see columns called something with MIB. You can see the **MIB Mode** is set to "<None>". Values inside <> are usually values set in a setting somewhere.

We can change this value in four of the cues. These are the cues where dimmer values go from 0% to a value above 0% while other values also change. These cues can have attributes auto-pre-positioned. Change the MIB Mode to "Early" for cue 3 by editing the cell in the sheet.

We might want a different default than "None". Click **Settings** in the title bar of the Sequence Sheet. On the right side, there is a setting called **MIBMode**. Change this to "Late" and close the settings.

Now you can see that cue 3 still has the mode we specifically selected, but all the other cues use a different default MIB mode.

| Lock | No | Part | Name | Command | MIB Preference | MIB Mode | MIB Target | MIB MultiStep | MIB Fade | MIB Delay | Indiv Fade |
|------|----|------|------------|---------|----------------|----------|------------|---------------|----------|-----------|------------|
| | | | Cuezero | | Normal | | | | | | 0 |
| | 1 | 0 | Entrance | | Normal | <Late> | Running | | Default | Default | 0 |
| | 2 | 0 | Ready | | Normal | | | | | | 0 |
| | 3 | 0 | Scene 1 | | Normal | Early | Running | | Default | Default | 0 |
| | 4 | 0 | -- Auto -- | | Normal | | | | | | 0 |
| | 5 | 0 | Scene 2 | | Normal | <Late> | Running | | Default | Default | 0 |
| | 6 | 0 | Scene 3 | | Normal | <Late> | Running | | Default | Default | 0 |
| | | 2 | -- Aura 0% | | | | | | | | 0 |
| | 7 | 0 | BO | | Normal | | | | | | 0 |
| | | | OffCue | | Normal | | | | | | 0 |

MIB Result

The result on the output is that we do not see fixtures move while they are On except cue 4 where we have stored a new position and color while the fixtures are On.

Again there are other ways to achieve the same look. This was one way to solve this.



There are more details and things to know about tracking, but it is outside the scope of this quick start.

Recap

In this chapter, we created a sequence with multiple cues. We edited two cues using the standard programmer, looked at the tracking information, and edited the values in the tracking sheet.

There is a whole section of the manual dedicated to the cues and sequences. I have linked to it in chapter 8, but here it is again - **Cue and Sequences section**. This also has a topic about **Tracking**.

We had a short look at MIB. There are many settings related to this, which can be quite complex when Phaser steps are included. If you want to, you can read more about it in the **Move In Black topic**.

The **next and final chapter** explores how we can output DMX from the system.



17. Network and How to Output DMX

This final chapter is only information. We are not going to add anything to the show.

It is possible to connect multiple grandMA3 hardware devices on a network.

This allows multiple operators to work together on the same showfile.

It also offers backup in case some hardware stops working.

There are two directions to go in a grandMA3 network.

The first direction is a grandMA3 onPC solution where the computing hardware is a Windows or Mac computer running the grandMA3 onPC software.

We are not permitted to output anything from the grandMA3 onPC software unless we have some grandMA3 hardware that unlocks parameters/attributes for us. If we have an onPC solution, there is a limit of 4 096 parameters. We can patch these parameters in any of the 1 024 universes available to the system. We need something that can convert the DMX in the network into actual physical DMX universe outputs if we need to control the fixtures.

The other direction is using grandMA3 consoles as the primary computing hardware. This can be combined with grandMA3 onPC.


The console system gives you some parameters from the beginning. The way to expand the parameters is by adding grandMA3 processing units. Much of the grandMA3 hardware has physical DMX ports. These can (as a general rule) be used as an input or an output.

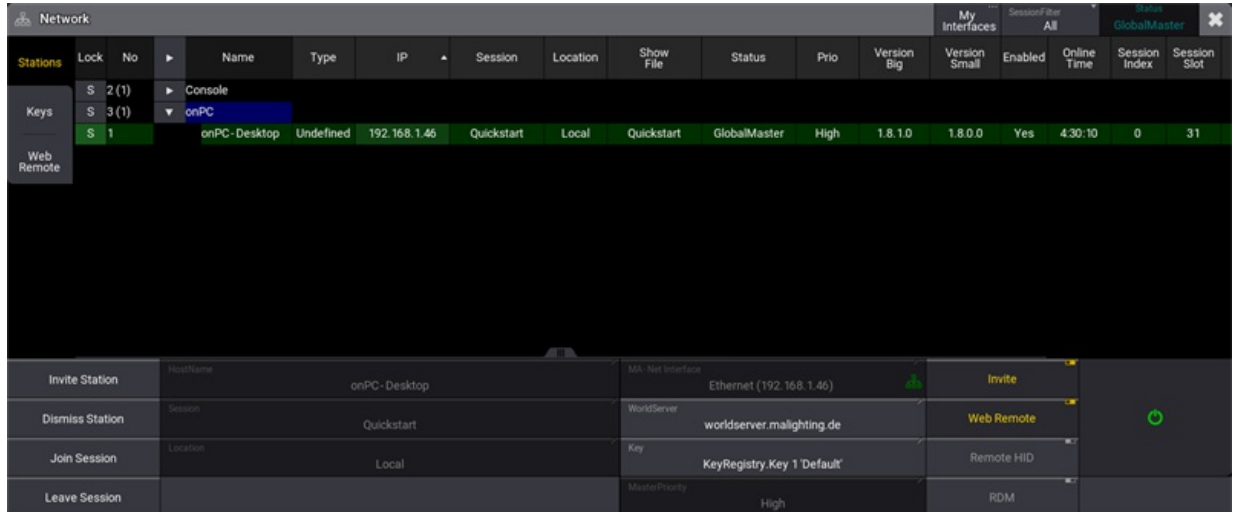
Session

To connect the grandMA3 devices, they need to be connected to a network switch and have IP addresses. We are not going into details on how to do this.

Then a **Session** needs to be set up. There is always a master device in a session - this needs to be what we call a station. Any grandMA3 device that can create and run a session is called a **Station**. Other grandMA3 hardware in the network can join the session.

This is controlled from the **Network Menu**.

Click the gear icon  in the control bar or press the **Menu** key, and then click **Network**.

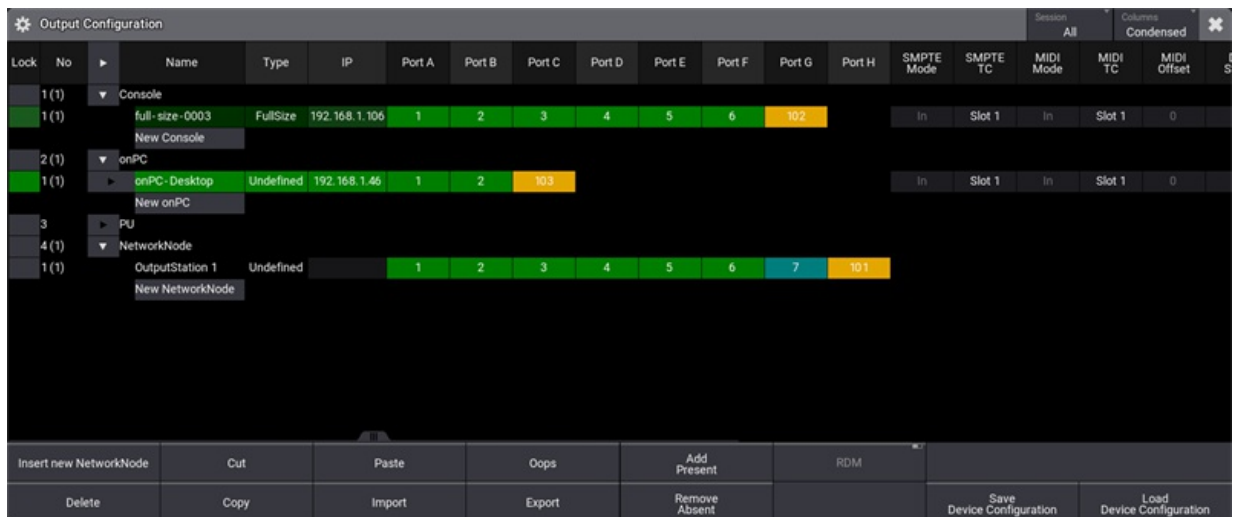


Other grandMA3 hardware on the network will appear in this menu and can be selected and invited into the session.

Configuring a DMX Port on grandMA3 Hardware

The DMX ports on any connected grandMA3 hardware can be configured from any station.

Open the menu pop-up again and this time click **Output Configuration**.



In the example image above, you can see a full-size console with DMX ports. The onPC has ports that match a grandMA3 onPC command wing. Up to two grandMA3 onPC fader wings can also be connected to a grandMA3 onPC station. Their ports will appear as children of the onPC station.

There is also a (not connected) Network Node with a port configuration.

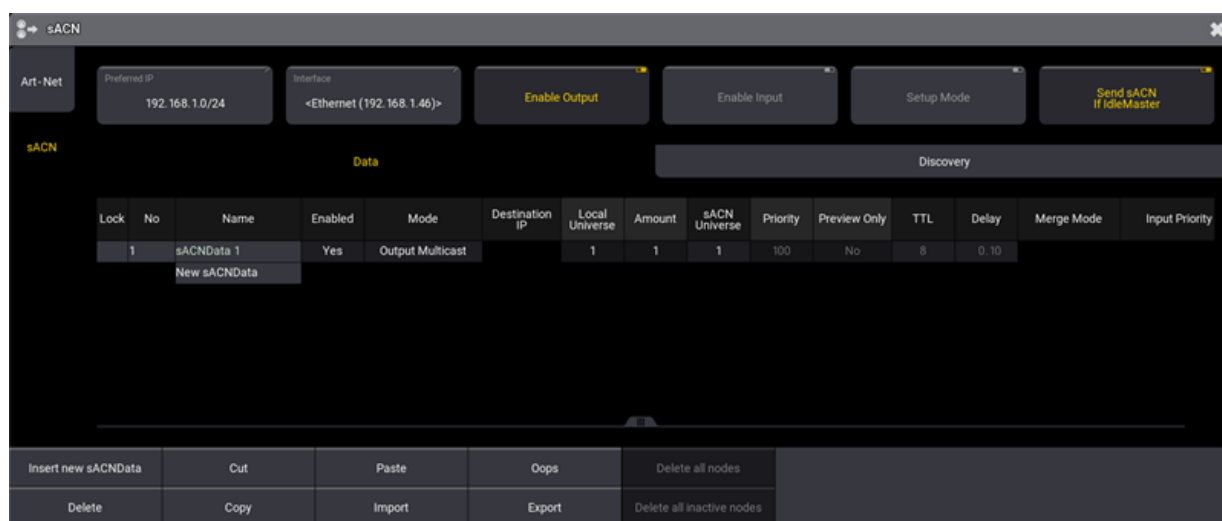


Editing the fields for any ports allows you to select which universe the port should output or input DMX into.

Network DMX

Another option is to output (or input) DMX using Art-Net or sACN. This is done by opening the menu pop-up again and then clicking **DMX Protocols**.

There are two options on the left side where you can select Art-Net or sACN.



It is outside the scope of this Quick Starts Guide to describe this in detail. There is a link below to learn details about the Art-Net and sACN.

But generally, you can set up the grandMA3 system to output any combination of universes. Then you will need a DMX node from any manufacturer that can understand Art-Net or sACN.

Recap

In this chapter, we looked at what is needed to output DMX. A session, unlocked parameters, grandMA3 DMX ports, or DMX via a network.

Learn more about unlocking parameters in the **Parameters** topic and the sub-topics.

You can see the grandMA3 hardware lineup on **[MA Lightings website](#)**.

The Network menu is described in detail in the **Networking** section.

Details about setting up output from the grandMA3 hardware can be found in the **DMX Port Configuration topic**.

The **Ethernet DMX** and its sub-topics describe DMX output via the network.



Finally

This is the end of the Quick Start Guide. Thank you for reading it. I hope you have enjoyed it and learned something.

We did not create the best show ever, but that was not really the goal. The goal was to introduce you to some of the many features and functions of the software.

The manual is a great resource to get detailed information about grandMA3. There are also the release notes with each new release to keep you updated on changes.

If you want to learn more, then there is online E-learning and in-classroom learning - see more on [MA Lightings website](#).

I also want to mention the [official forum](#). It is a great resource for getting help from other users and professionals.

There are also a lot of different videos online - both official and unofficial that provide great insight and information about grandMA3.

Happy Programming



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