Quick Start Guide

grandMA3

Version 2.4 | 2026-05-22

English

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00 - Welcome

This guide is a quick tour of some of the most used elements of the grandMA3 software. This guide is written using version 2.4. 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 up to date with 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 in which you (the reader) follow the steps I (the author) explain as we go along together. The main manual is better if you are looking for short explanations of 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.

You should 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, take the PDF, and read it on your favorite electronic device instead. One favorite option could be the console or onPC, where this guide is available in the help system, so you do not need to create a PDF.

The Quick Start Guide is meant to be read from start to finish and is for users new to the grandMA3 software. You should use the main manual if you are looking for help on a specific topic.

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.

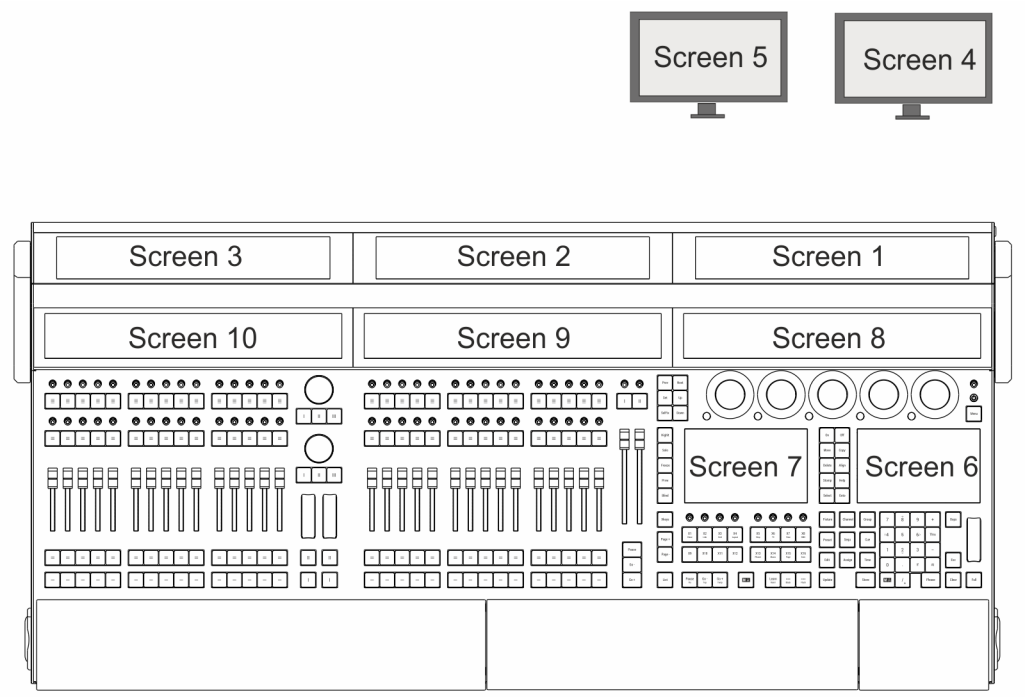
We will create a new show with some fixtures with standard functions. We will create something with a cue sequence and some busking setup that can be used for a more dynamic live playback.

Preface

This guide is primarily written using the grandMA3 onPC. The thought is that most users who go through this are on the onPC platform. You can go through this guide if you have a grandMA3 console or a grandMA3 onPC command wing. 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. We might need to "Right-click" something with the mouse. It is the same as pressing the Edit key and tapping the object on a console. You can use an external mouse/trackball on the console; it's up to you, but the interface is built to be touched.

If you are using the onPC, you will spend a lot of time 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 the console screen 6.
- Display S7 is the 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 a 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 the F3, F4, F5, and F7 keys on a keyboard. We will come back to all these controls later.

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, 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 a tab in a menu, a button on the screen, or a clickable area.

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:

All input like this should be executed with a press on the 'Enter' key on your keyboard. The Enter is not displayed. It is the same as the Please key on the grandMA3 hardware. 'Please' or 'Enter' is not a visible command - it is the key that executes the typed command. A default keyword is displayed in the command line input above. It is the yellow 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:

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, the keyboard input will look like this: **My Favorite Cue**. 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 the type of information.

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 sections of the manual where you can find more detailed information on specific topics covered 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 them to continue to the next chapter.

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

Learn how to install grandMA3 onPC in the Installation of grandMA3 onPC topic.

For details on setting up the console, see 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.

01 - New Show and 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 by default on the consoles. On the console, you need to press the Menu button. Another way to access this menu in the future is to press the 'F2' key on the keyboard.

Now, the menu pop-up appears. This gives access to several essential 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.

We need the backup menu now, 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 storage device). The drive can be changed by tapping the drive button in the title bar (at the top-right corner of the window). 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 have 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, such as Compact consoles. Tap the keyboard icon () in the right corner of the name input field. This opens a new small "Edit NameInput" pop-up. Now click the keyboard icon in the upper left corner of the new 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 before the show name. This ensures that you create a new show and do not modify others' show files.

Hint:
It is always a good idea to store your show in multiple locations. For instance, keep a USB flash drive with your show files, and always remember to have it 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 a new, completely empty show by clicking Check All and then clicking New Show.

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 is the programmer's responsibility 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 an excellent opportunity to get one.

Select the option you are most comfortable with.

You might be asked if you want to create a new show - we want this, so please click New Show.

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:

```
Guest[Fixture]>
```

This example shows 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 entered at the command line. 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 will log in as Admin. This user exists in all shows, and the username and password should not be changed. We need to use the **Login** keyword, followed by the username and 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:

```
Guest[Fixture]>Login Admin
```

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:

```
Admin[Fixture]>
```

Recap

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

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 General Keywords topic.

The grandMA3 is made to accommodate multiple users working together in the same show. This is one of the reasons for having 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.

02 - First Patch

The new show file we created is empty!

We need to add some devices to our **Patch** 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 add many complex fixtures, we will 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, and the fixture's position in a virtual 3D space.

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 may have. If we have a lot of fixtures, it might be a very long list.

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 within a grouping fixture must have their own ID and can be accessed individually by their ID.

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 by their unique ID, as mentioned above, or by the parent ID and a child index number. We'll explore this more in Chapter 4.

Subfixtures

Some fixtures have subfixtures. This is often the case when a fixture has multiple elements that do the same. For instance, an LED fixture with multiple LED cells that can be controlled individually. There would be a parent fixture with all the shared functions, for instance, pan and tilt. Then, there would be a child or subfixture for each LED element. These subfixtures 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 subfixtures 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 subfixture.

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 starting at 1.

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 at least one ID so we can select and ultimately control it.

Enter the Patch

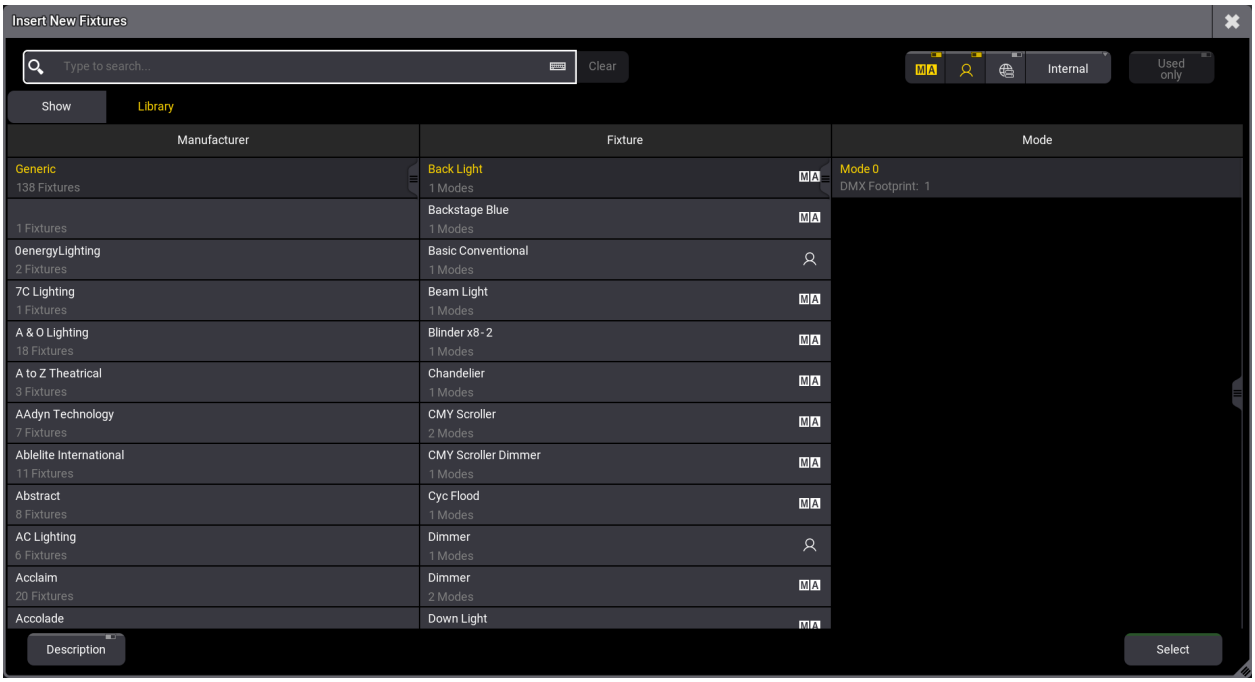
Here is the goal for this chapter:

- Add 14 standard dimmer channels that we can control.
- Add another 14 dimmer channels that are 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**, which helps us provide the necessary information to add fixtures.



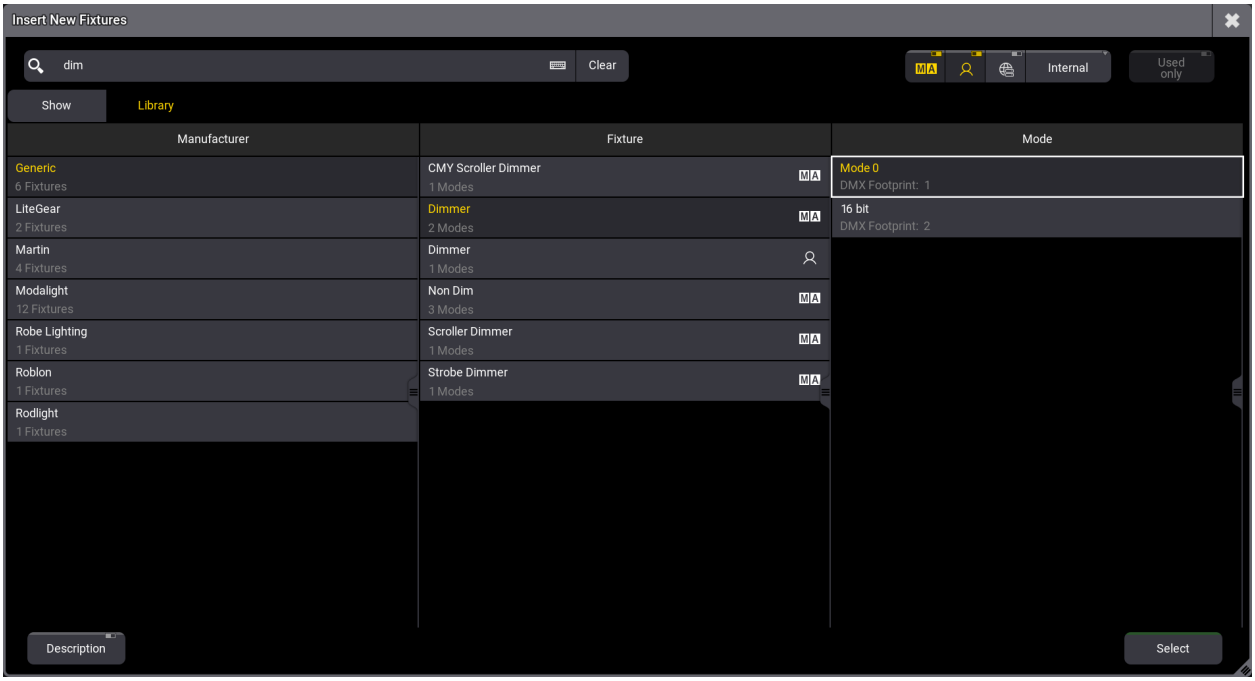
The cursor is ready in the **Filter** input field and can be used to filter the list presented to us.

The list is the **Library**. The default is the MA 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 fixtures that have "**dim**" somewhere in the manufacturer name, fixture name, or fixture mode.

It might look like this:



The library has three columns. The left column shows the different manufacturers. The center column is the fixture 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 (with a darker gray background and yellow text, as in the image above), then click Select in the lower-right corner.

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

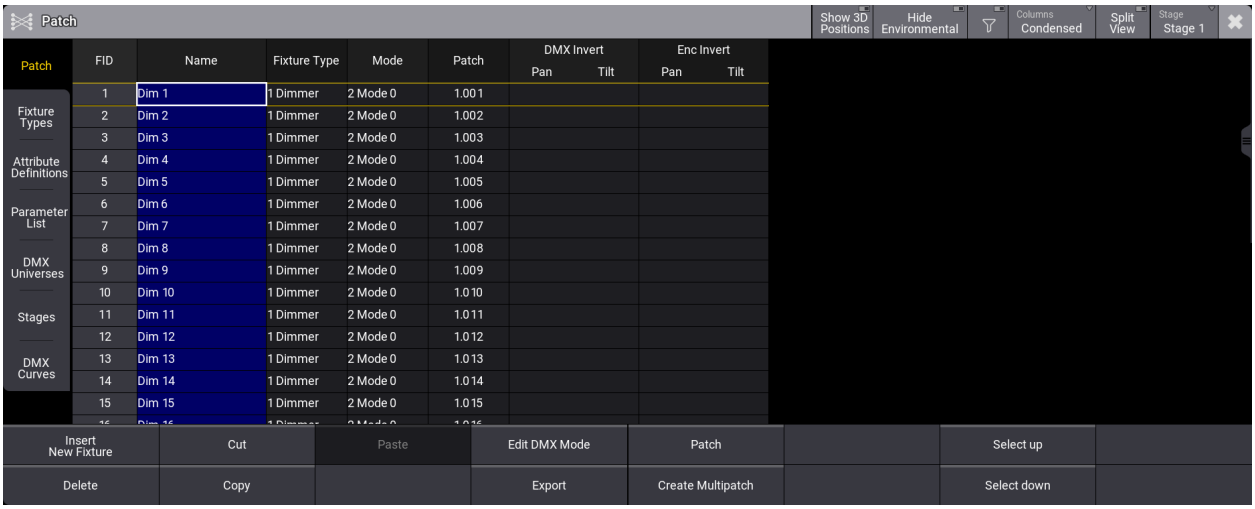
Just leave it as the default "Dim 1" and click Please.

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 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, select the cell called "New Fixture", and click Insert New Fixture in the menu. We are now back at the **Insert New Fixture wizard**.

We can take a quick look at the other tab by clicking Show. There is only the generic dimmer, which is nice if we want to add more dimmers.

The idea is that there are different fixture types across different libraries, and we import a copy of each fixture type from a library into our show.

We need to add a new fixture type, the grouping fixture, to our show. This is in the Library, so click the Library tab below the filter input.

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

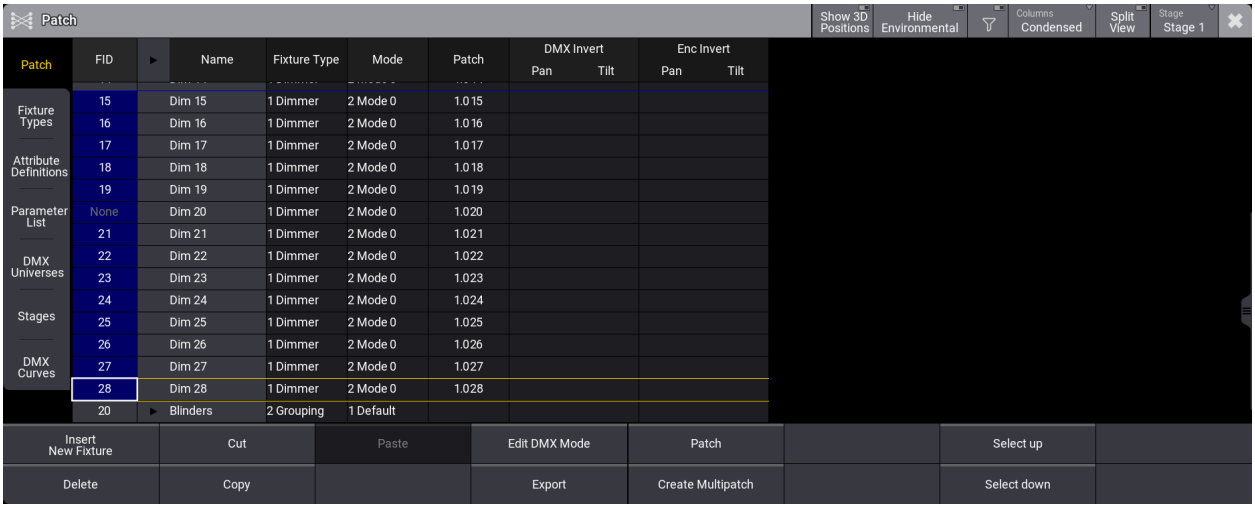
Name the fixture **Blinders**. We only need 1, but we want it to have FID 20 - type **20** in the FID input. This gives us a red background in the FID input to show us that there is a problem:

Ignore the problem for now and click Create !.

The problem was that we already had a fixture with FID 20, and since FIDs must be unique, 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:



Now, we need to edit this. It is 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.

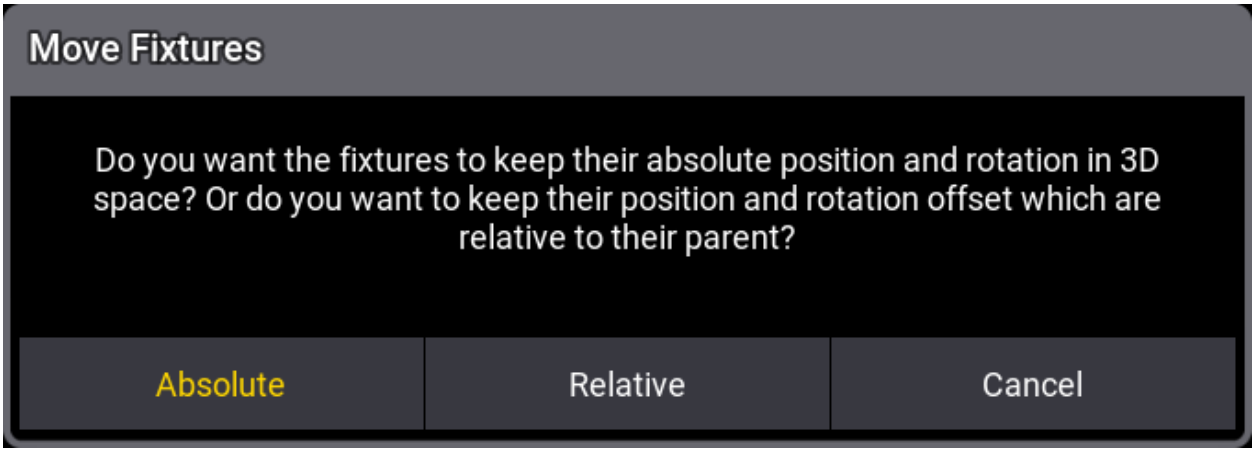
To keep the selection, simply click Cut to cut them from the list into the clipboard. The result is that they are now marked with a red background in the fixture list.

We need to paste them to the new location.

Click the triangle arrow next to the Blinders fixture to unfold it, then select **New Fixture** within "Blinders". Like this:

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

Now click Paste. You are now asked about the fixtures' position and rotation in the 3D virtual space.



At the moment, all the fixtures are at the zero position in the 3D virtual space. So, it does not matter whether you select 'Absolute' or 'Relative'. But select one of them.

In chapter 5, we will examine the 3D virtual space and the positioning of the fixtures.

After the move, 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 in the patch.

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 by right-clicking.

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

Select the "Briteq" manufacturer, the "COB Blinder 2x100W," and 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	1 Dimmer	2 Mode 0	1.001
2	Dim 2	1 Dimmer	2 Mode 0	1.002
3	Dim 3	1 Dimmer	2 Mode 0	1.003
4	Dim 4	1 Dimmer	2 Mode 0	1.004
5	Dim 5	1 Dimmer	2 Mode 0	1.005
6	Dim 6	1 Dimmer	2 Mode 0	1.006
7	Dim 7	1 Dimmer	2 Mode 0	1.007
8	Dim 8	1 Dimmer	2 Mode 0	1.008
9	Dim 9	1 Dimmer	2 Mode 0	1.009
10	Dim 10	1 Dimmer	2 Mode 0	1.010
11	Dim 11	1 Dimmer	2 Mode 0	1.011
12	Dim 12	1 Dimmer	2 Mode 0	1.012
13	Dim 13	1 Dimmer	2 Mode 0	1.013
14	Dim 14	1 Dimmer	2 Mode 0	1.014
20	Blinders	2 Grouping	1 Default	

FID	Name	FixtureType	Mode	Patch
21	Blinder 1	3 COB Blinder 2x100w	1 1 Channel	1.015
22	Blinder 2	3 COB Blinder 2x100w	1 1 Channel	1.016
23	Blinder 3	3 COB Blinder 2x100w	1 1 Channel	1.017
24	Blinder 4	3 COB Blinder 2x100w	1 1 Channel	1.018
25	Blinder 5	3 COB Blinder 2x100w	1 1 Channel	1.019
26	Blinder 6	3 COB Blinder 2x100w	1 1 Channel	1.020
27	Blinder 7	3 COB Blinder 2x100w	1 1 Channel	1.021
28	Blinder 8	3 COB Blinder 2x100w	1 1 Channel	1.022
29	Blinder 9	3 COB Blinder 2x100w	1 1 Channel	1.023
30	Blinder 10	3 COB Blinder 2x100w	1 1 Channel	1.024
31	Blinder 11	3 COB Blinder 2x100w	1 1 Channel	1.025
32	Blinder 12	3 COB Blinder 2x100w	1 1 Channel	1.026
33	Blinder 13	3 COB Blinder 2x100w	1 1 Channel	1.027
34	Blinder 14	3 COB Blinder 2x100w	1 1 Channel	1.028

Exit the patch by clicking in the upper right corner. You are now asked whether 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:

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 begin learning to control them.

You could look at some sections of the manual to learn more details about the patch.

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

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.

03 - First View 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 includes indicators and buttons for quick access to various 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 features buttons called ViewButtons, where we can store and recall different elements, such as 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 in the smaller "Display" pop-up.

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 the number of square fields in the user-definable area. Scale can be used to visually scale the entire interface.

Close the pop-up by clicking in the upper corner.

Predefined Views

When we talk about a **view**, we mean the arrangement of **windows** within the user-defined area. These views can be stored and recalled. They can be assigned to buttons, such as the ones in the **View Bar** on the right side of the interface.

If you change a view and would like to keep the change, 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 and/or the right side. This is because the stored view is wider and taller than the current size of the user-defined area.

A thin brown 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, 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. First, we need to create 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 displays the fixture's dimmer values in our show. So far, we only have fixtures with dimmers.

Click the dark 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 Sheet.

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

This window shows the fixtures in rows and the attributes (primarily "Dimmer" in this case) 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.

We can change how the window appears when we are only interested in the dimmer values. 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 window's settings.

Different windows have different settings. Some are common settings, and others are specific to a particular 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 **Dimmer+**.

The settings should look like this:

Now, the Fixture Sheet has been updated to show tiles with the ID, the dimmer value, and a square indicating the output.

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

This fixture sheet window is much bigger than needed, 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, then move it to a new location within the user-defined area. Release the mouse button (or the screen) at a location where the window looks good 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, close the Command Area pop-up, then click the top ViewButton on the right (the one that says "Fixture"). Now, the ViewButton should be empty.

Next, we want 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 can be recalled at any time 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 is advantageous to see how the console responds to your input. The **Command Line History** window continually gives you a lot of information. It shows how the software interprets our user input and whether the input is understood or results in 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 up all the available space. Now, we are going to try a different technique.

Click and hold below the fixture sheet (make it smaller first if needed), then drag a square to 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 History.

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 by clicking the title bar and dragging. If there is insufficient space, the window will resize automatically on the right and bottom sides.

Update the View

We are going to add one more element to the view.

Below the command line history, we need to create a new window. Click and drag the area below the window. In the Add Window pop-up, we need to click Data Pools and then Quickeys.

When we first create a pool, it is often empty and just has a lot of "containers" for objects or elements. Pools are often limited to only contain one kind of element. Sometimes, we need to store into an empty pool element; other times, we edit an empty element to define what it should do.

Quickeys are virtual hardware keys that can be organized in a pool. Instead of opening the **Command Section** every time we need to press a key, we can add the key to the Quickey pool.

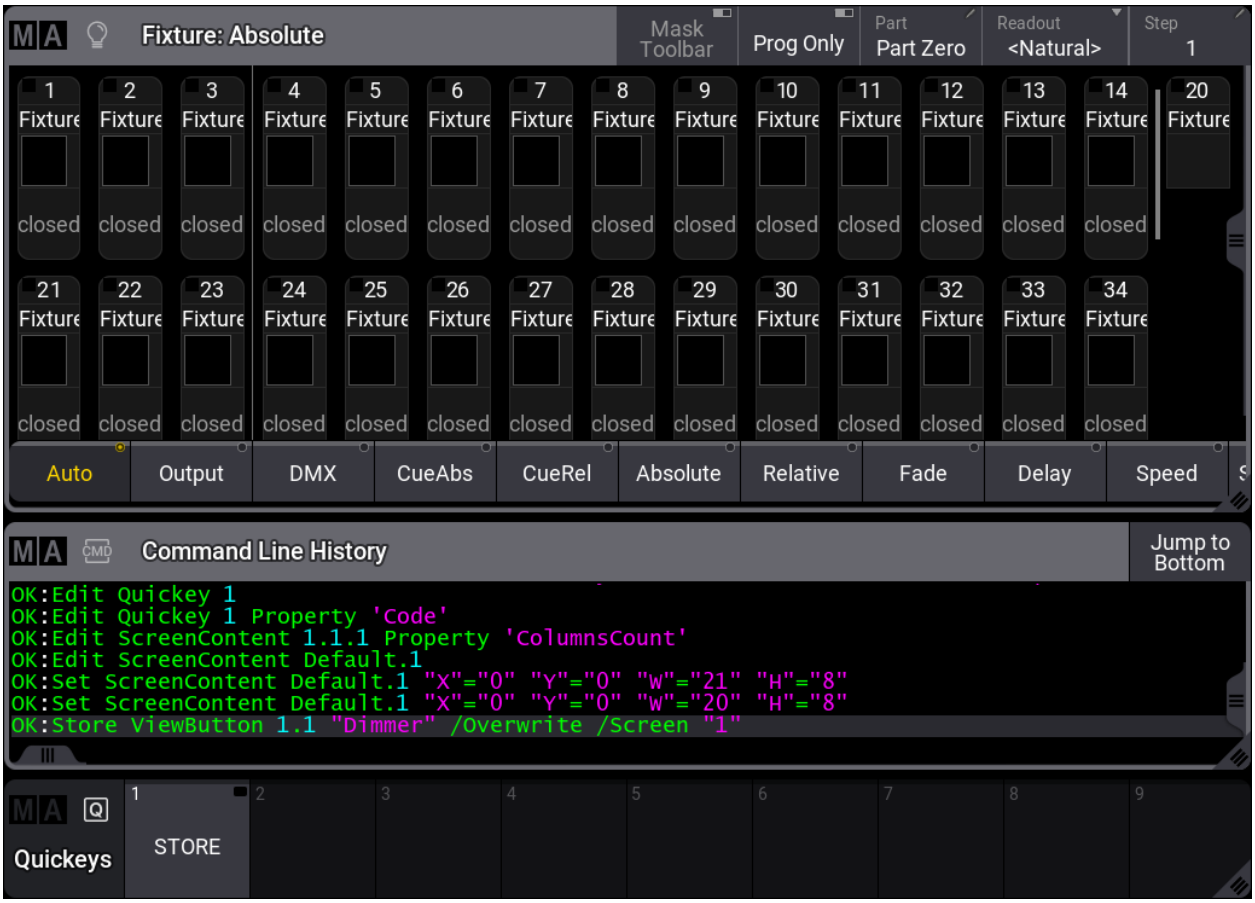
Let us create the first key in the pool. Right-click the first empty pool object where it says "1". This opens the **Edit Quickey 1** pop-up. We need to edit the "Code" input. Clicking this opens a big pop-up with all the different hard keys. Click Store in the pop-up. This also changes the name of the quickey.

Close the editor pop-up. Now, we have an on-screen version of the 'Store' key. Once a quickey is created, it works exactly as a physical key. We explore pools more in Chapter 6.

When you are happy with the window's size, location, and look, you can store the view on the view button again.

Click the new Store quickey 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.



You should save your show.

Recap

This chapter briefly introduced 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.

And naturally, there is also a section about the Quickeys.

In the next chapter, we will control the dimmers.

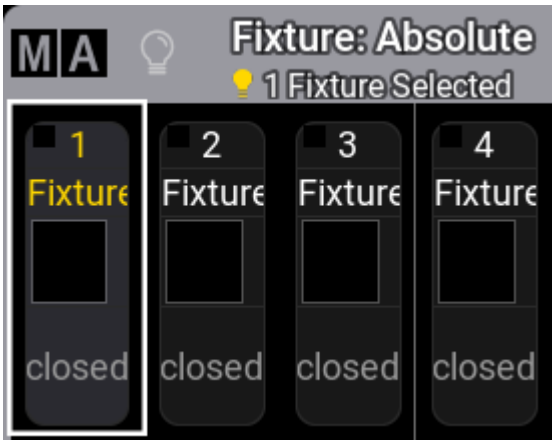
04 - Control Simple Fixtures

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 many 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 5 0 Please.

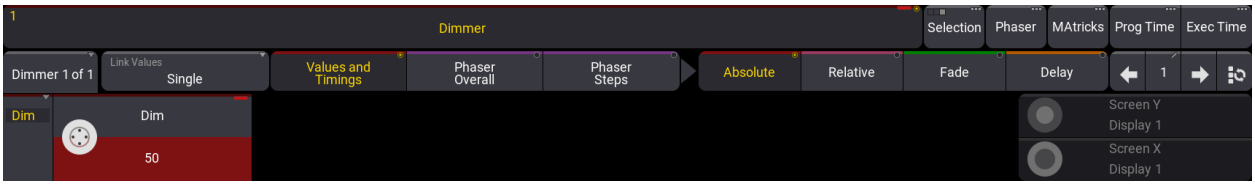
Now the fixture's dimmer value is 50%.

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) sets 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 results in the fixture sheet and the command line history. To click the 'MA' key and another key at the same time on the grandMA3 onPC, latch the 'MA' key by left-clicking it, then hold the mouse button, move the cursor out of the button area, and release the mouse button. Now, other buttons change their label and can be clicked to add the new keywords to the command line. To unlatch the 'MA' key, simply click it shortly again.

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 **Feature Groups** - we will return to these when we have fixtures with more than dimmers. Right now, we only have a "Dimmer" feature group, and it is selected (yellow text). On the right side, there are buttons for quick access to various features. Ignore these for now.

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 are the encoder labels. We also call this **Attribute Control** because it can be used to control various attributes of fixtures. Our current fixtures only have the dimmer attribute.

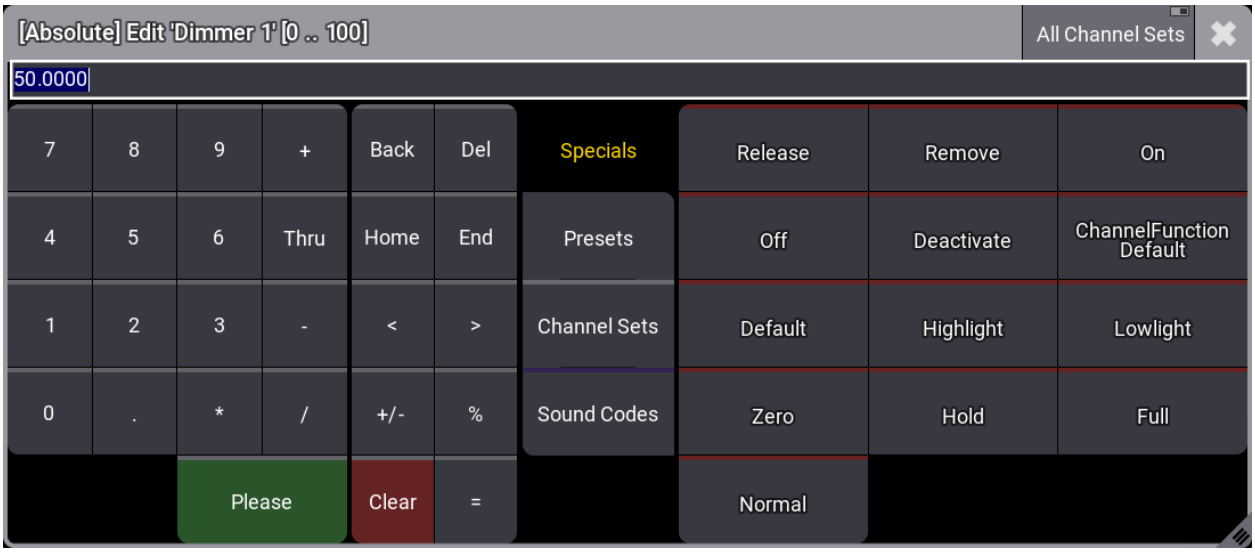
We can use this to control the dimmer value. If you have the physical hardware, you can turn the left-most encoder to change the value. The inner encoder changes the value in larger steps than the outer encoder.

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 an invisible on-screen encoder. You can also click and hold the encoder icon and, while holding the mouse button, move the pointer to another area of the screen. This is now the center of the encoder. While keep holding the mouse button, you can now draw circles around the center of your invisible encoder. The farther away from the center you draw the circle, the finer the resolution. Smaller circles clustered around the center make the value change faster (lower resolution). You can release the mouse button when you are happy with the value.

Finally, you can click the red area or briefly 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), with 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' to represent 100% and 0%, respectively.

This pop-up is named The Calculator because we can do some arithmetic with it. In my example, the dimmer is at 50%. If I click + 1 0 Please, 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 changes by clicking in the upper-right corner of the pop-up.

Try selecting multiple fixtures either by clicking and dragging on 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.

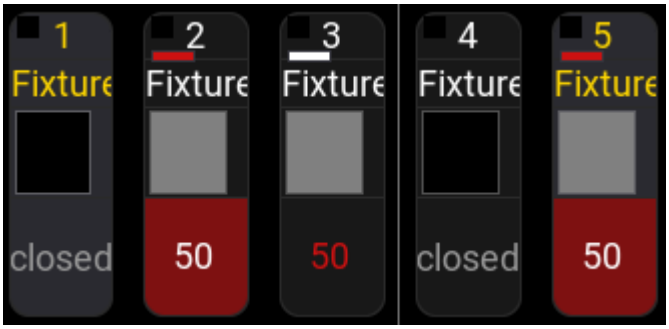
This is also where the fixture selection order matters. The value is spread out across the fixtures in the selection order. So if we selected the same fixtures in a different order - for instance, 10 thru 1 - and then applied the same value range, then the result would be reversed.

The programmer has three levels of information. It is the **selected** fixtures, **activated** values, and **deactivated** values. We can remove each level by shortly 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 deactivate the active values. This means the value is still sent to the output, but is typically not stored if we try to.

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



The image above shows the programmer levels. Fixtures 1 and 5 are selected. Fixtures 2 and 5 have active values. Fixture 3 has deactivated values. Fixture 4 has nothing in the programmer. Notice the two colored indicators. They indicate the programmer status. Red represents active values, and white represents deactivated values.

A final programmer tool I will introduce you to is the **At Pop-up**. 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 pop-up includes buttons for many useful commands, including Clear, Zero, Full, and Normal.

And remember that often-used keys can be added to the Quickey pool. I have added the 'Clear' key to my pool.

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 this:

The yellow fixture part of this is the default keyword. This means that if we do not define a different beginning keyword, the system 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

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 assigned values to the fixtures, we keep adding fixtures to our selection. If you assign a value to the selected fixtures using any of the methods described above, the system assumes that the next fixture selection means you are done with the previous selection and automatically clears it before selecting the new fixtures.

A single 'Clear' will clear the fixture selection.

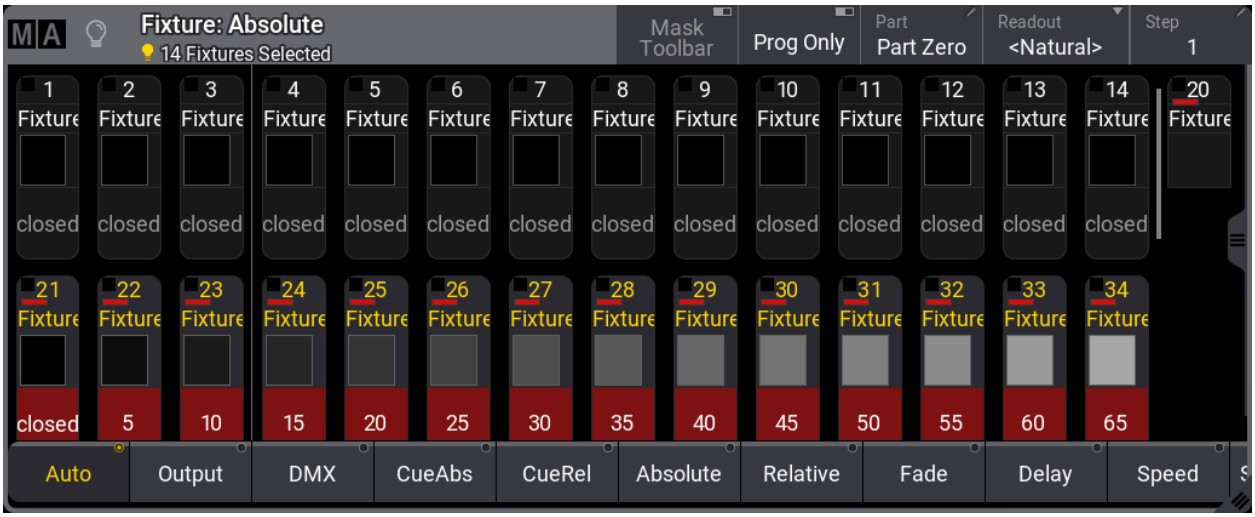
If numbers are not added on the sides of the "Thru" keyword, then the range will go as far as possible. This means that **Fixture Thru** selects from the lowest to the highest number. This is often all the fixtures.

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

This means that they can also be selected using a subfixture 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 subfixtures. We will explore a few of them. Start by clearing the programmer completely.

Select fixture 20. This selects only the grouping fixture, not the subfixtures. The grouping fixture has no attributes, but we can still change the dimmer attribute. This is because the children inherit the dimmer values. Try setting the fixture's dimmer value. You can see that all the children get the value without being selected. Press the Down key (not the down arrow). We have moved down the hierarchy, and all the children have been selected. Since multiple fixtures are selected, we can use the calculator to apply a range of values. Try to apply **0 Thru 65**. Your result should look similar to this:



Pressing Up moves back up the hierarchy to the grouping fixture.

Clear the programmer again.

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 subfixtures. Clear the programmer again.

Now type **Fixture 20.2 thru 10**

This selects subfixtures 2 thru 10 in fixture 20.

Try other fixture selection combinations until you are comfortable selecting fixtures and subfixtures.

Finish this chapter by clearing the programmer.

Recap

This topic taught us about the programmer, fixture selection, and how to assign dimmer values.

The primary manual has a section titled 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], At, Down, and Up.

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

05 - 3D Fixture Setup

3D Window

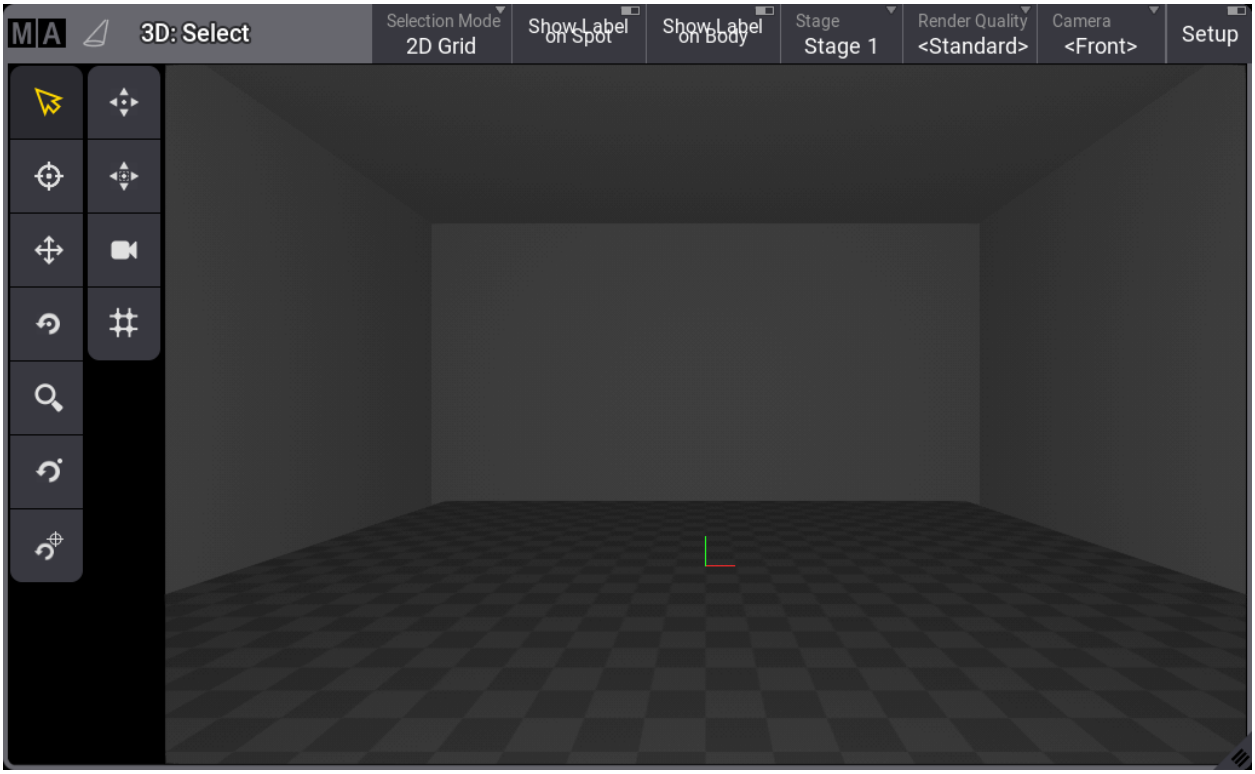
The grandMA3 software has a virtual 3D stage area.

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 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 located in the **Common** tab of the **Add Window** pop-up. It is called **3D Viewer**.

This is what it currently looks like:



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

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 the camera we use in the 'Camera' button in the title bar.

The 3D space and the light beams in the space can have different render qualities. This can include the simulation of haze in the 3D space. The different render qualities can be selected in a pool, like the cameras, and you can see the currently selected render quality in the title bar.

The toolbars on the left side of the window have different tools that allow for fixture selection and view manipulation.

If the window you created is less than seven squares high in the user-definable area, then the toolbar menu is split into two columns. If the height is even smaller, the toolbar is split into smaller sections.

The first toolbar column, in the image above, is about fixture selection and moving the camera:

- **Select** - For selecting fixtures or other objects.
- **Follow** - We are not gonna cover this function in this topic. It points moving lights at the position you click in the window.
- **Move** - This moves the camera around.
- **Orbit** - This rotates the camera around the center (0,0,0) position.
- **Zoom** - Zooms in and out from the position clicked.
- **Pivot** - Rotates the camera around a set pivot point.
- **Set Pivot** - Sets the pivot point for the rotate function above.

The second toolbar column has the following tools:

- **Zoom to Fit** - Moves the virtual camera to fit all elements.
- **Fit Selected** - Moves the camera to fit the selected fixtures.
- **Camera Reset** - Moves the virtual camera to its default position.
- **3D view to Selection Grid** - We will not cover this function in this topic. Tapping it uses the 3D fixture arrangement in a different view called **Selection Grid**.

Try out the different camera 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.

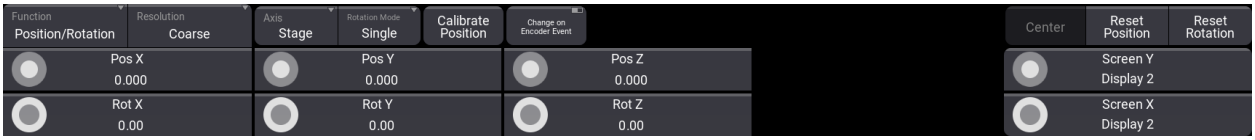
For this to be useful, we need to position and rotate fixtures to match our setup.

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.

Select fixture 1.

Turn the setup mode On.

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



The 3D axes are X, Y, and Z, which can represent 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's rotation. Try moving and rotating a selected fixture. Notice that when you change one of the rotation values, the values for the two other rotation axes may also change.

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 patch. 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 that allows you to make live changes without modifying the show configuration. This means that, for instance, you cannot add or delete fixtures to the show, but we can change the DMX address to which a fixture is patched. We can also change the fixture position and rotation.

We can show a version of the 3D Viewer in the patch. Click Show 3D Positions. Now, we can see a version of the 3D Viewer inside the patch. This can be very useful when positioning the fixtures in the 3D space. In this version of the 3D Viewer, we have an extra tool that is also visible in the actual 3D Viewer when it is in "Setup" mode. The icon looks like this:  . It can be used to rotate conventional fixtures to point at a location in the 3D space.

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.

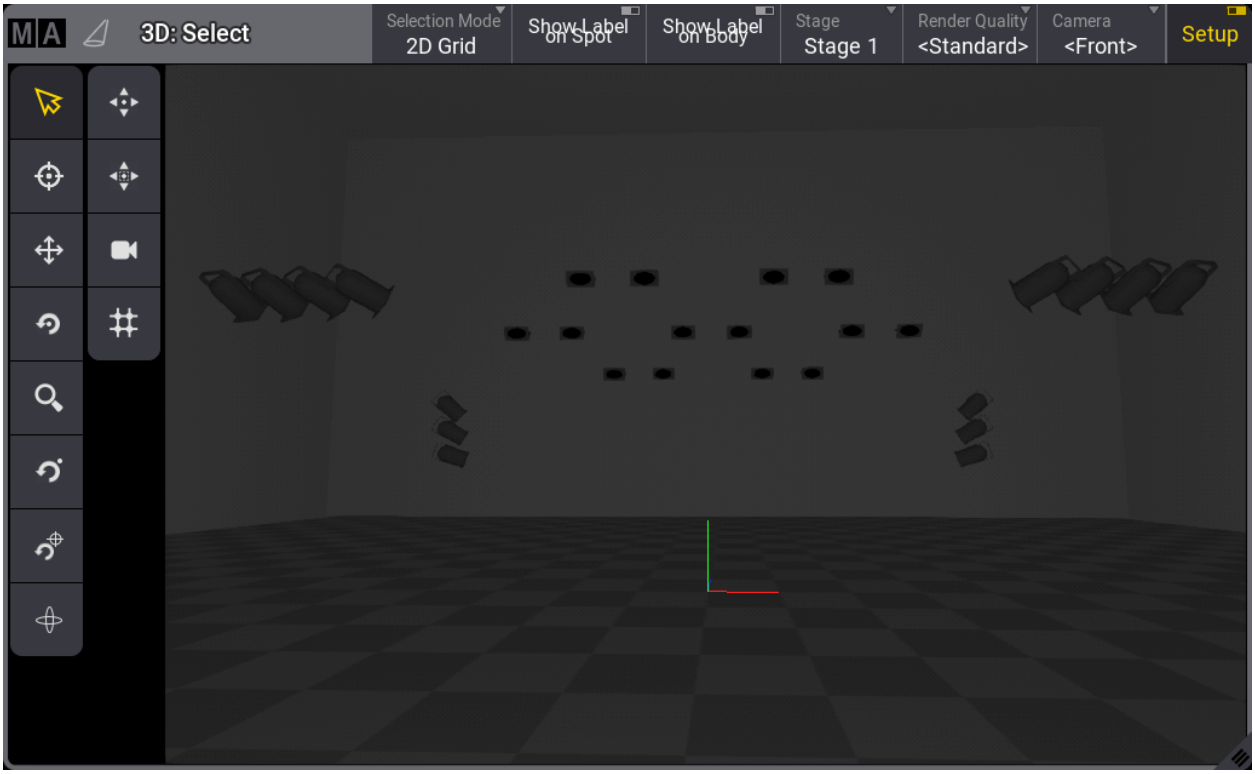
Change the numbers to match the following table. You can select multiple cells with lasso selection or by holding Ctrl on a keyboard while clicking cells.

FID	Name	Type	Patch	X-Pos	Y-Pos	Z-Pos	X-Rot	Y-Rot	Z-Rot
1	Dim 1	Dimmer - Mode 0	1.001	-4.00m	-4.00m	3.30m	60.20	-3.50	-6.00
2	Dim 2	Dimmer - Mode 0	1.002	-3.67m	-4.00m	3.30m	61.25	-9.00	-15.75
3	Dim 3	Dimmer - Mode 0	1.003	-3.33m	-4.00m	3.30m	63.20	-14.00	-25.65
4	Dim 4	Dimmer - Mode 0	1.004	-3.00m	-4.00m	3.30m	66.14	-18.75	-36.00
5	Dim 5	Dimmer - Mode 0	1.005	3.00m	-4.00m	3.30m	66.14	18.75	36.00
6	Dim 6	Dimmer - Mode 0	1.006	3.33m	-4.00m	3.30m	63.20	14.00	25.65
7	Dim 7	Dimmer - Mode 0	1.007	3.67m	-4.00m	3.30m	61.25	9.00	15.75
8	Dim 8	Dimmer - Mode 0	1.008	4.00m	-4.00m	3.30m	60.20	3.50	6.00
9	Dim 9	Dimmer - Mode 0	1.009	-4.00m	0.00m	2.80m	16.00	-45.00	0.00
10	Dim 10	Dimmer - Mode 0	1.010	-4.00m	0.00m	2.40m	16.00	-57.50	0.00
11	Dim 11	Dimmer - Mode 0	1.011	-4.00m	0.00m	2.00m	16.00	-70.00	0.00
12	Dim 12	Dimmer - Mode 0	1.012	4.00m	0.00m	2.80m	16.00	45.00	0.00
13	Dim 13	Dimmer - Mode 0	1.013	4.00m	0.00m	2.40m	16.00	57.50	0.00

FID	Name	Type	Patch	X-Pos	Y-Pos	Z-Pos	X-Rot	Y-Rot	Z-Rot
14	Dim 14	Dimmer - Mode 0	1.014	4.00m	0.00m	2.00m	16.00	70.00	0.00
20	Blinders	Grouping							
21	Blinder 1	COB - Blinder 2x100w - 1 ch	1.015	-2.00m	0.50m	4.70m	-73.00	0.00	0.00
22	Blinder 2	COB - Blinder 2x100w - 1 ch	1.016	-1.00m	0.50m	4.70m	-73.00	0.00	0.00
23	Blinder 3	COB - Blinder 2x100w - 1 ch	1.017	1.00m	0.50m	4.70m	-73.00	0.00	0.00
24	Blinder 4	COB - Blinder 2x100w - 1 ch	1.018	2.00m	0.50m	4.70m	-73.00	0.00	0.00
25	Blinder 5	COB - Blinder 2x100w - 1 ch	1.019	-3.50m	2.00m	4.20m	-73.00	0.00	0.00
26	Blinder 6	COB - Blinder 2x100w - 1 ch	1.020	-2.50m	2.00m	4.20m	-73.00	0.00	0.00
27	Blinder 7	COB - Blinder 2x100w - 1 ch	1.021	-0.50m	2.00m	4.20m	-73.00	0.00	0.00
28	Blinder 8	COB - Blinder 2x100w - 1 ch	1.022	0.50m	2.00m	4.20m	-73.00	0.00	0.00
29	Blinder 9	COB - Blinder 2x100w - 1 ch	1.023	2.50m	2.00m	4.20m	-73.00	0.00	0.00
30	Blinder 10	COB - Blinder 2x100w - 1 ch	1.024	3.50m	2.00m	4.20m	-73.00	0.00	0.00
31	Blinder 11	COB - Blinder 2x100w - 1 ch	1.025	-2.00m	3.50m	3.70m	-73.00	0.00	0.00
32	Blinder 12	COB - Blinder 2x100w - 1 ch	1.026	-1.00m	3.50m	3.70m	-73.00	0.00	0.00
33	Blinder 13	COB - Blinder 2x100w - 1 ch	1.027	1.00m	3.50m	3.70m	-73.00	0.00	0.00
34	Blinder 14	COB - Blinder 2x100w - 1 ch	1.028	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 fixtures' light and move the camera around to see them 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 blinder fixtures are, as mentioned, children of the Blinder grouping fixture. This includes their position and rotation. The position and rotation are relative to the parent fixture. Currently, the grouping fixture is at the zero position, so the blinder fixtures,

for instance, are positioned 4 meters above the stage - in reality, they are actually 4 meters above the location of the parent fixture. If we move the parent fixture 2 meters, then the child fixture remains 4 meters above the parent fixture, but it is now 6 meters above the stage.

This explains the move pop-up we got in Chapter 2. The system asked if we wanted the current position and rotation values to be relative to the parent fixture or if the values should be adjusted based on the parent's location.

Let me explain this with a simple example. We have a fixture and a grouping fixture. Both are 2 meters above the stage floor. The fixture and the grouping fixture are rotated 90 degrees. Now we move the fixture to be a child of the grouping fixture. If we choose 'Absolute', then the fixture does not move in the 3D virtual space. The values are adjusted to accommodate the position and rotation of the grouping fixture. If we choose 'Relative', then the values for the fixture and the grouping fixtures remain unchanged. The result is that the fixture is now 2 meters higher and rotated another 90 degrees.

The 3D window offers many settings that let you adjust it to match your preferences. 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 with a more realistic haze. The quality can also 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 Viewer 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.

06 - Groups

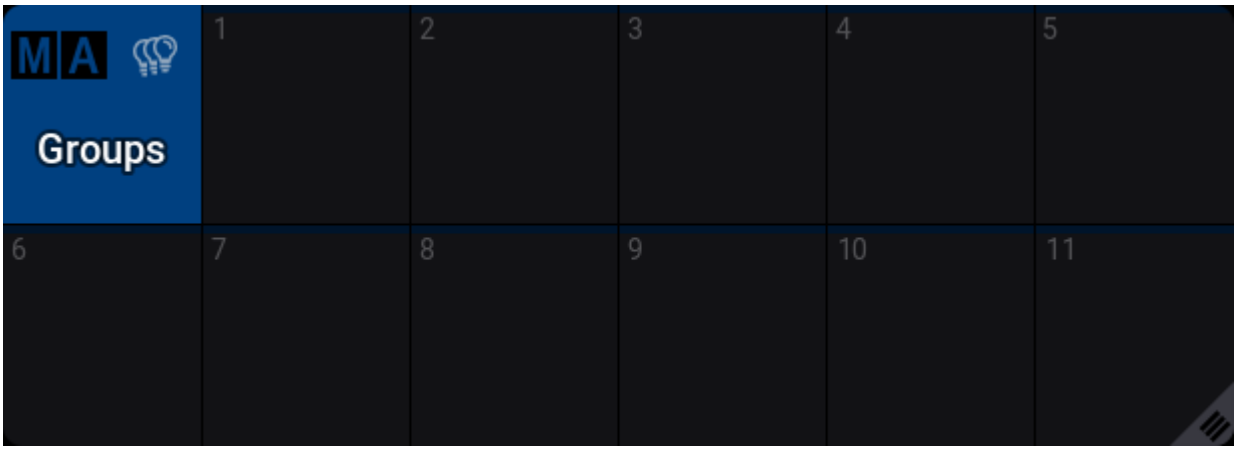
Fixture selection can be made using the methods explored in Chapter 4. However, when fixtures are often used together and need to be selected together, there is another option called **Groups**.

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

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 **Data Pools** tab in the **Add Window** pop-up.

The pool looks like this when empty:



The square on the top 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 **Views** pool. The quickeys we have created are also in a pool.

Create Group

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

The first group will 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

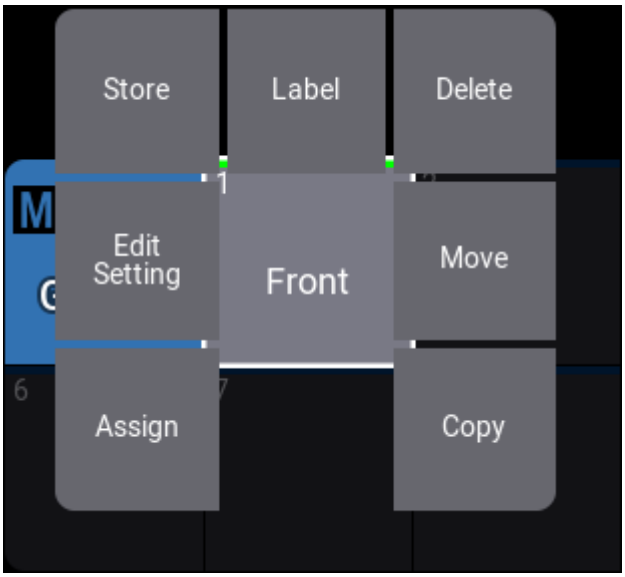
Try to clear your programmer and then click the group. Now you have reselected the fixtures.

The group does not have a name, but we can easily label the group. The last thing we touch or click gets focus. This is indicated with a white frame. When a pool object has focus, and we start writing on our keyboard, the system assumes we are giving it a label.

You can simply start typing: **Front** - this opens the "Label" 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 **Swipey** 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). Label it "All Blinders".

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 contains the remaining blinders, which are not a part of group four. We can make this selection using a different selection method.

Clear the programmer and then write the following command in the command line and execute it:

Let us break down this command and look at what happens.

"Group 3" selects the fixtures in group number three (all the blinders).

"- Group 4" subtracts the fixtures that are in group four (the "Even Blinders").

The result is that we have a selection containing the blinders that are not in group four. Store this as group five and label this "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 appearance.

07 - 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 an indicator of different fixture types or special cues, or to add symbols or images to elements for faster identification.

Symbols

Before creating an appearance, let us have a look at a different pool. Appearances can use user images, symbols, and even videos. We are going to load a symbol and use it in the appearance.

Clear some space in the user area and create a **Symbols** pool. It can be found in the **Pools** tab in the **Add Window** pop-up.

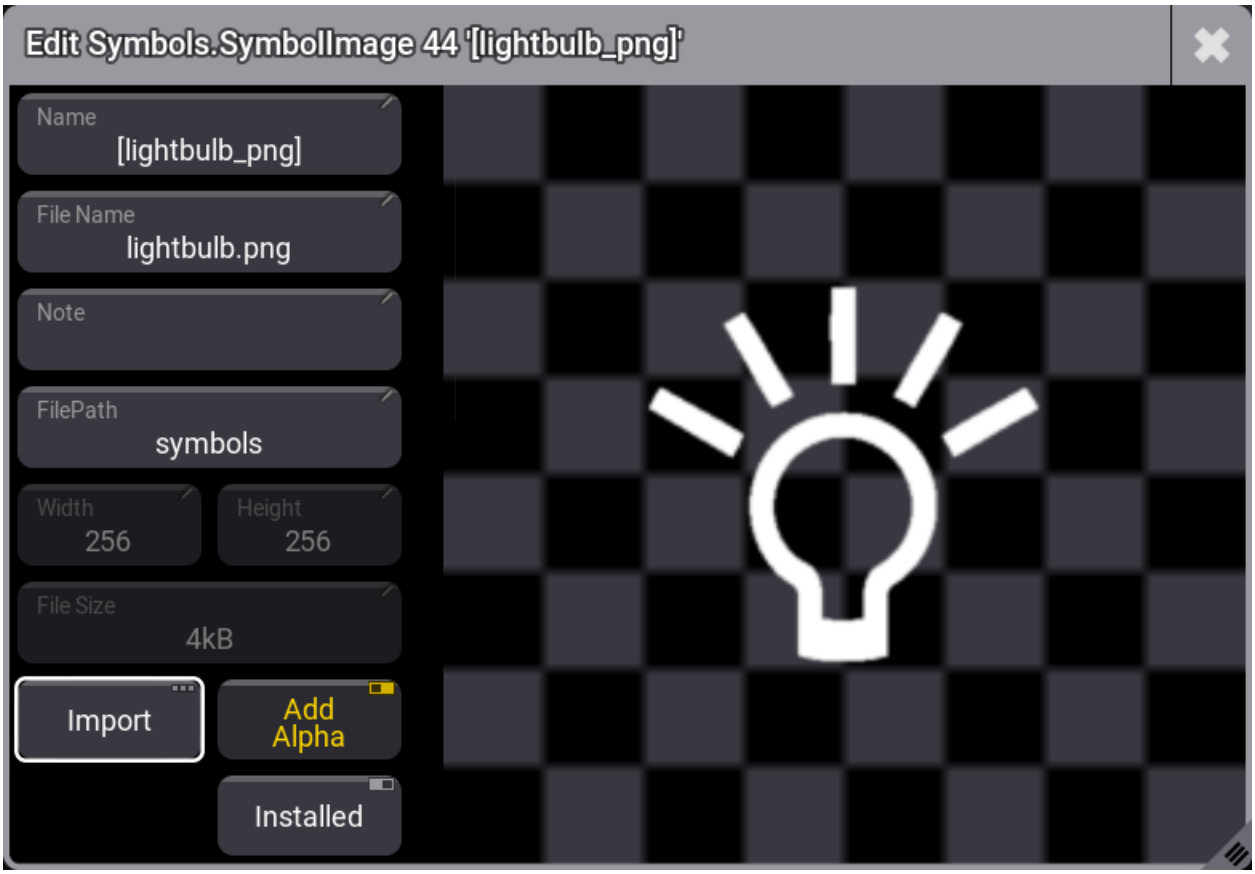
There are already some default symbols in the pool. These are auto-created in a new show.

There is a large symbol library in the software. We can import any of these symbols into the symbol pool and use them in appearances.

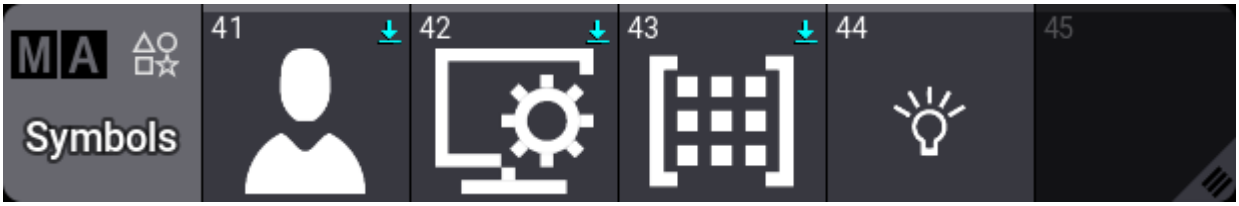
In the symbols pool, scroll down until you see an empty pool element. I had to scroll down to number 44. Right-click the empty pool element. This opens an **Edit Symbol** pop-up.

Click the Import button in the pop-up. This opens another pop-up called **Select Image for Import** (it may take a moment to load). You can scroll through the library, or in the **Filter,** you can write **lightbulb**. We want the symbol called "lightbulb.png.xml". Select it and click Import.

Now, the editor should look like this:



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



Back to Appearance

You create an appearance by editing an empty appearance object in the appearance pool. The **Appearances** pool can also be found in the **Pool** tab in the **Add Window**.

There are already some predefined appearances, so you might need to scroll through the pool to find an empty pool object. I had to scroll to number 16.

Edit an empty appearance pool object.

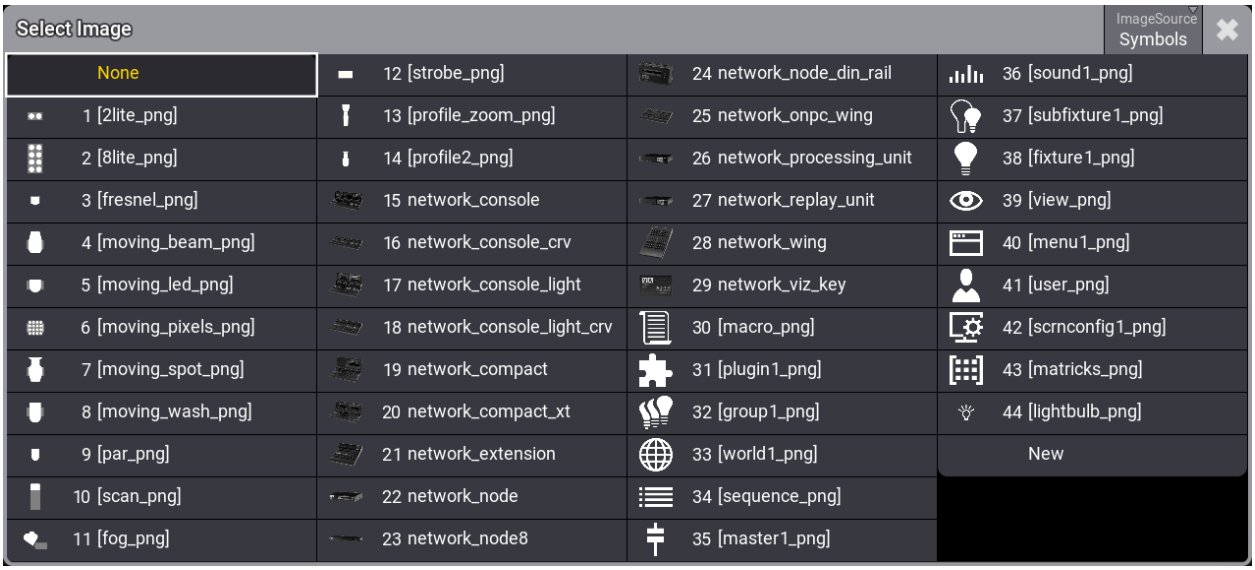
The editor looks like this:

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 has 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.

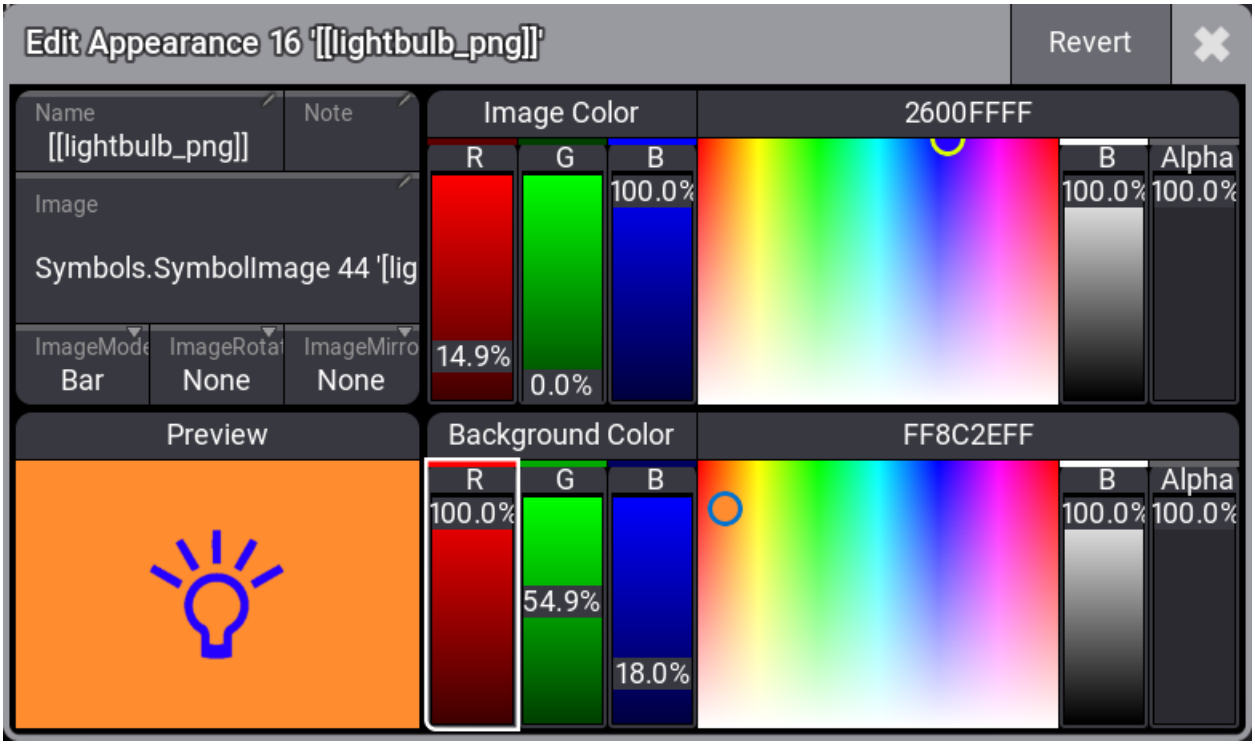
It defaults to using the "Images" pool as the source. This can be changed. Click the ImageSouce button until it says "Symbols" - and most likely becomes bigger.



Select the lightbulb symbol we imported.

Now, adjust the colors to match your needs.

Close the editor when you are happy. Here is where I ended:



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

In the previous chapter, we looked at the Swipey 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 Swipey menu on the appearance and select the Assign option. Now, click the first group. This assigns the appearance to the group.

Use the Swipey 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 appearance pool objects. Other pool objects that apply a look to an object, such as symbols, cannot have an appearance assigned.

Recap

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

The main manual also has a section for Symbols, 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.

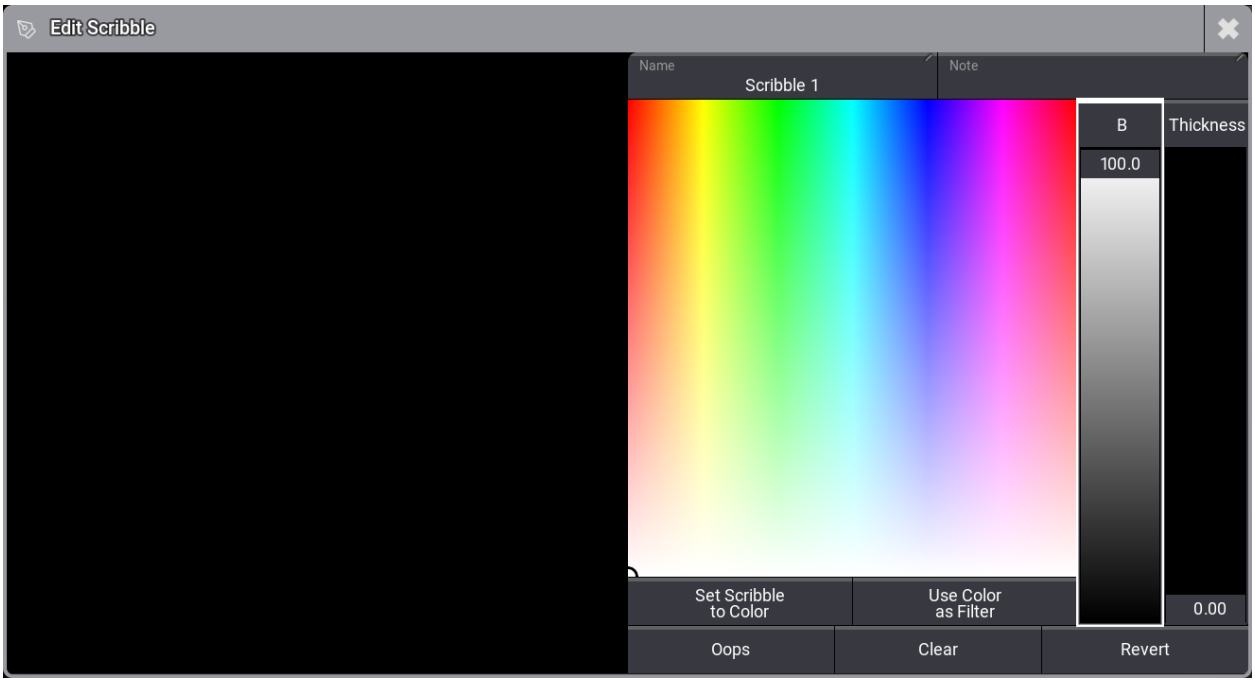
08 - Scribbles

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 **Scribbles** 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, oops, change some color, apply changes, and save the drawing to the pool.

Try the different drawing options.

When you are happy with your drawing, you can close the editor.

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 even the user-defined area.

When we label an object that can create a new scribble, there is an icon ( ) near the upper left corner of the **Edit Name pop-up**:

The icon with the fountain pen tip ( ) is the scribble icon. Clicking this opens the scribble editor at the bottom of the edit name pop-up. Creating a new scribble and applying it to the object adds the scribble to the pool so it can be used again on other objects.

The 'Scribble' button near the upper right corner can be clicked to open a small select pop-up where existing scribbles can be selected.

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.

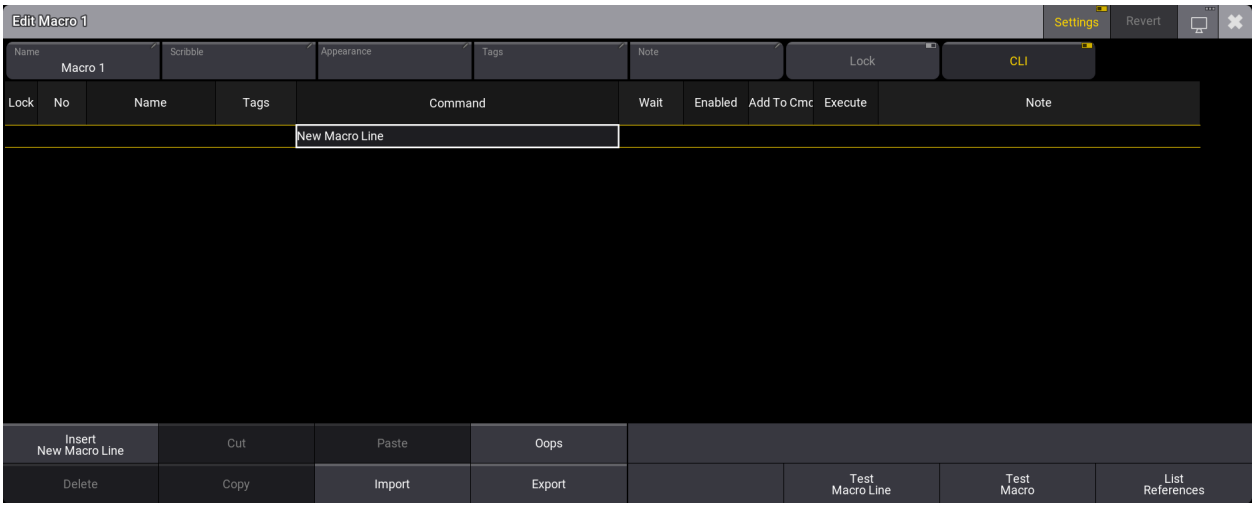
09 - Macros

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 (found in the Data Pool tab). 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. The command is automatically run if the **Execute** column says **Yes**.

Click Insert New Macro Line.

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

We get a command editor where we can write a command and see how the system would interpret the command.

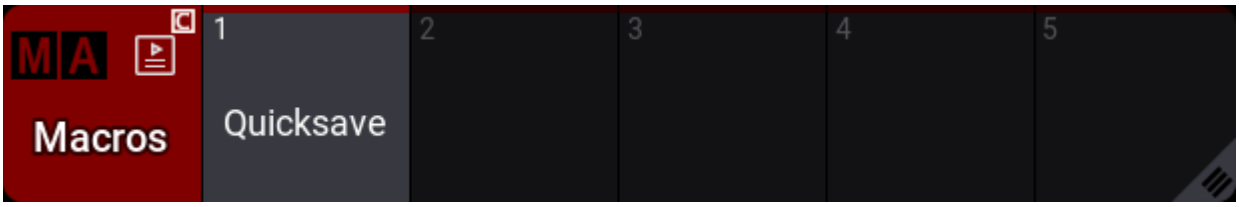
We are going to create a simple macro that saves the show.

Edit the command field in the editor and write **SaveShow**.

It is important that it is one word. Confirm the input with a 'Please' / 'Enter'.

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 simplest macros. A single keyword that saves our show.

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

We are going to create another macro. It uses multiple lines and a temporary group (number 999).

Edit a new empty macro pool object. Add a new macro line and write **Delete Group 999 /NoConfirmation** in the command editor. This deletes any group stored at number 999 without asking for confirmation.

Make sure to click New Macro Line below the command we just added, and then Insert New Macro Line. Now, we have a new macro line that will be executed right after the first line.

Write **Store Group 999 /Merge**. This stores the current selection in a new group.

We need another line with the command **Fixture Thru - Group 999**. This selects all fixtures except the ones in group 999.

The next line should be **At 0**. This gives the selected fixtures a dimmer value of 0 %.

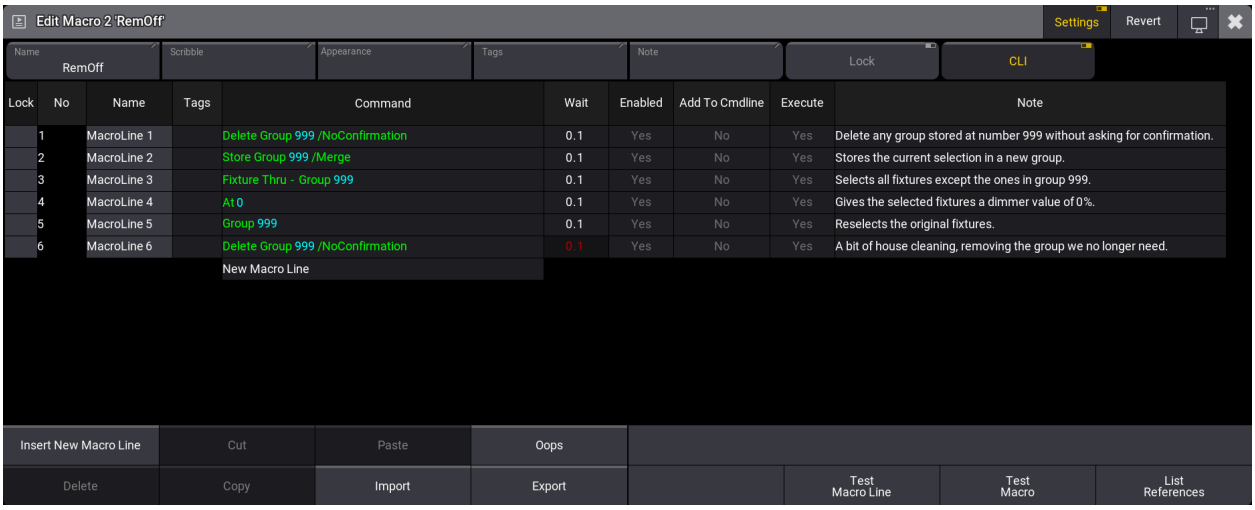
The next line is **Group 999**. This reselects the original fixtures.

The final line is the same as the first line **Delete Group 999 /NoConfirmation**. This is a bit of house cleaning, removing the group we no longer need.

All these lines are executed one after the other as fast as possible. This is nice, but some actions might take milliseconds to perform, such as storing a big group. So, we want to add a small delay between the macro lines. The **Wait** column defines the wait time before the next line is performed. It currently says "Follow". This means that the next line follows as fast as possible. Select all the lines in the **Wait** column and edit the value to **0.1**. This introduces a 100-millisecond wait time before executing the next macro line.

Edit the name of the macro and change it to "RemOff".

The result should look like this (I have added notes to each line for information only):



Notice that the wait time in the last line is in red text. This is because no more lines exist, and the wait is not performed or needed.

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. Filter the list or scroll down to find "help context sensitive.xml", select it, and click Import.

Now, you have imported all the settings for this macro, including a macro name. One of the settings is the **Execute** setting. This is set to "No". This means that the macro line is not automatically executed. It basically just adds the command to the command line and then waits for a user action that executes the command.

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.

Close the help pop-up and add more macros if you feel like it.

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 you feel it makes sense.

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

10 - Store Cues and Use Executors

There are different terms that you need to learn before we continue.

Cue

A **Cue** stores different values from fixture attributes. They can contain more than just the attribute values; it is all about the output of 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 mention the parts when they are relevant, and there is 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. A thick yellow frame is the default color for indicating a selected pool object.

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

Executors

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

Executors can also be called **Playbacks**. Different executor hardware exists: 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 want.

The window you need is called **Sequence Sheet**, and if you want to create one from scratch, it can be found in the "Tools" 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.

The lower part of the sequence sheet might display the Recipe information for the cue. We are looking at recipes in Chapter 17. The Recipe area can be hidden by entering the window settings (tapping the MA logo in the upper left corner of the window). In the "Mask" tab, disable "Show Recipe" by tapping it.

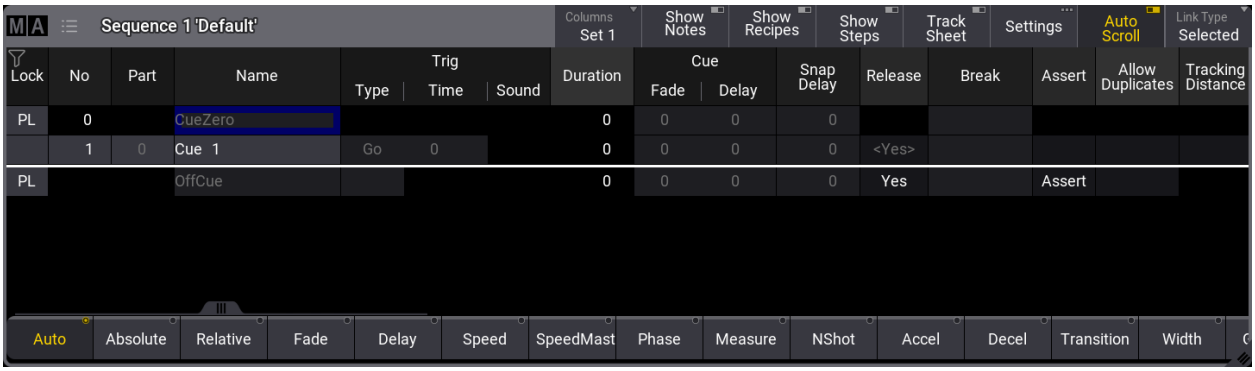
Start by clearing the programmer completely. Then select group 1 and give the fixtures a value of 100%.

Press Store and then Please.

Now, we have stored the active 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.



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

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

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.

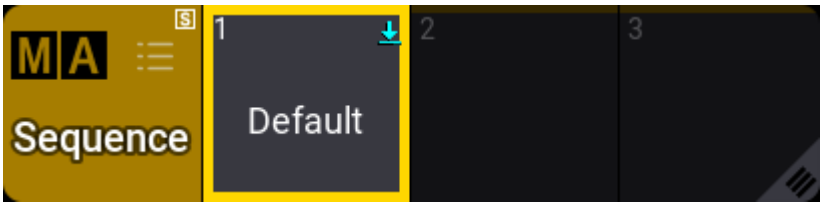
If you look at Cue 1, the type is "Go". This means that to execute the cue, you must press a 'Go' key or perform a "Go" action on the sequence.

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

Run the Cue

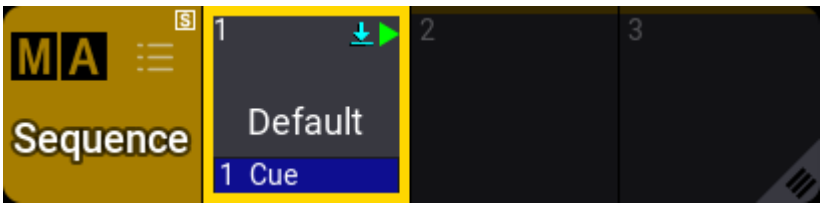
We want to trigger the cue. We will do this using a combination of the command line and the Sequence Pool.

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



Write **Go** in the command line and tap the sequence in the pool.

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

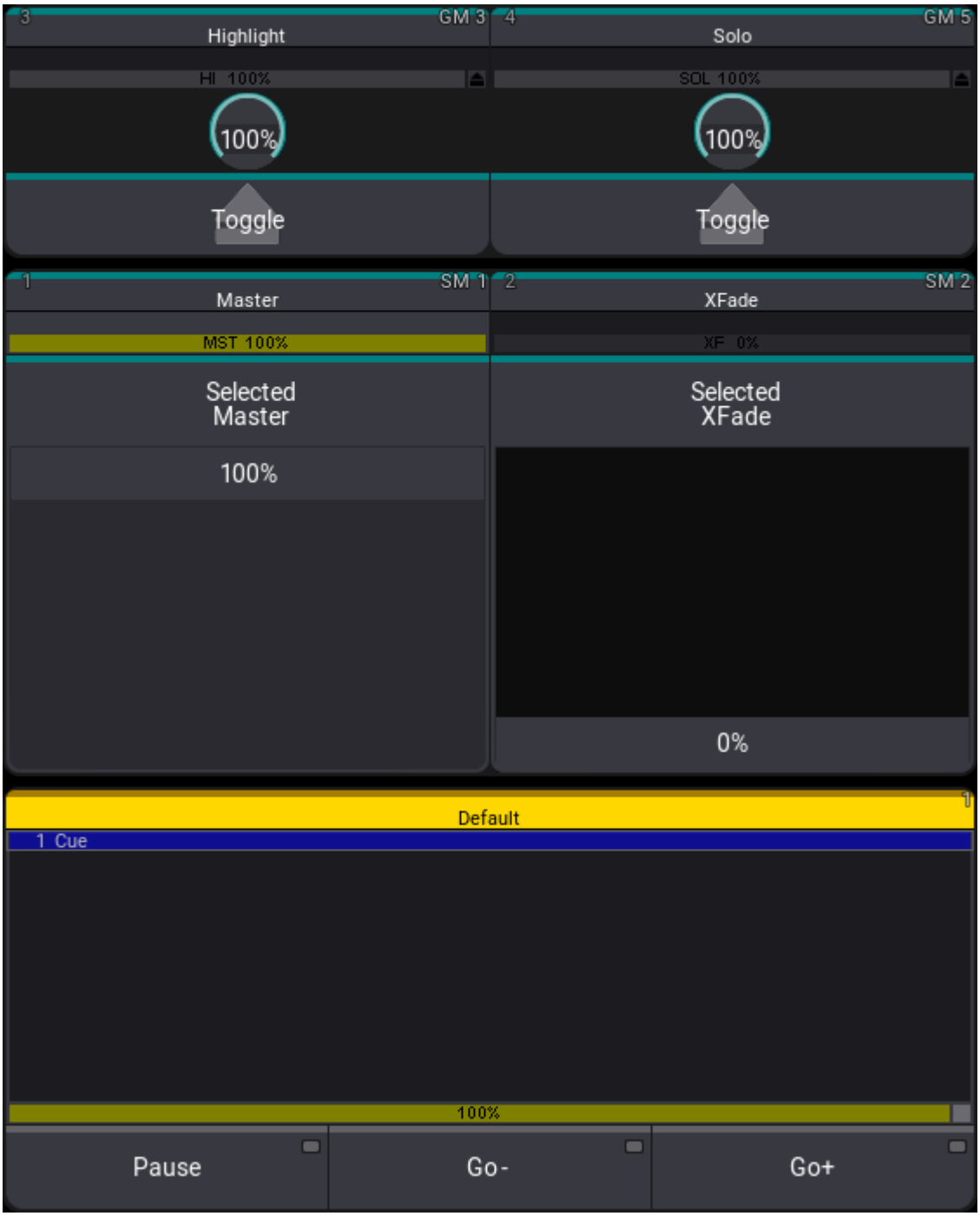


Notice that the pool object shows the active cue and a green playback icon in the upper right corner.

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.



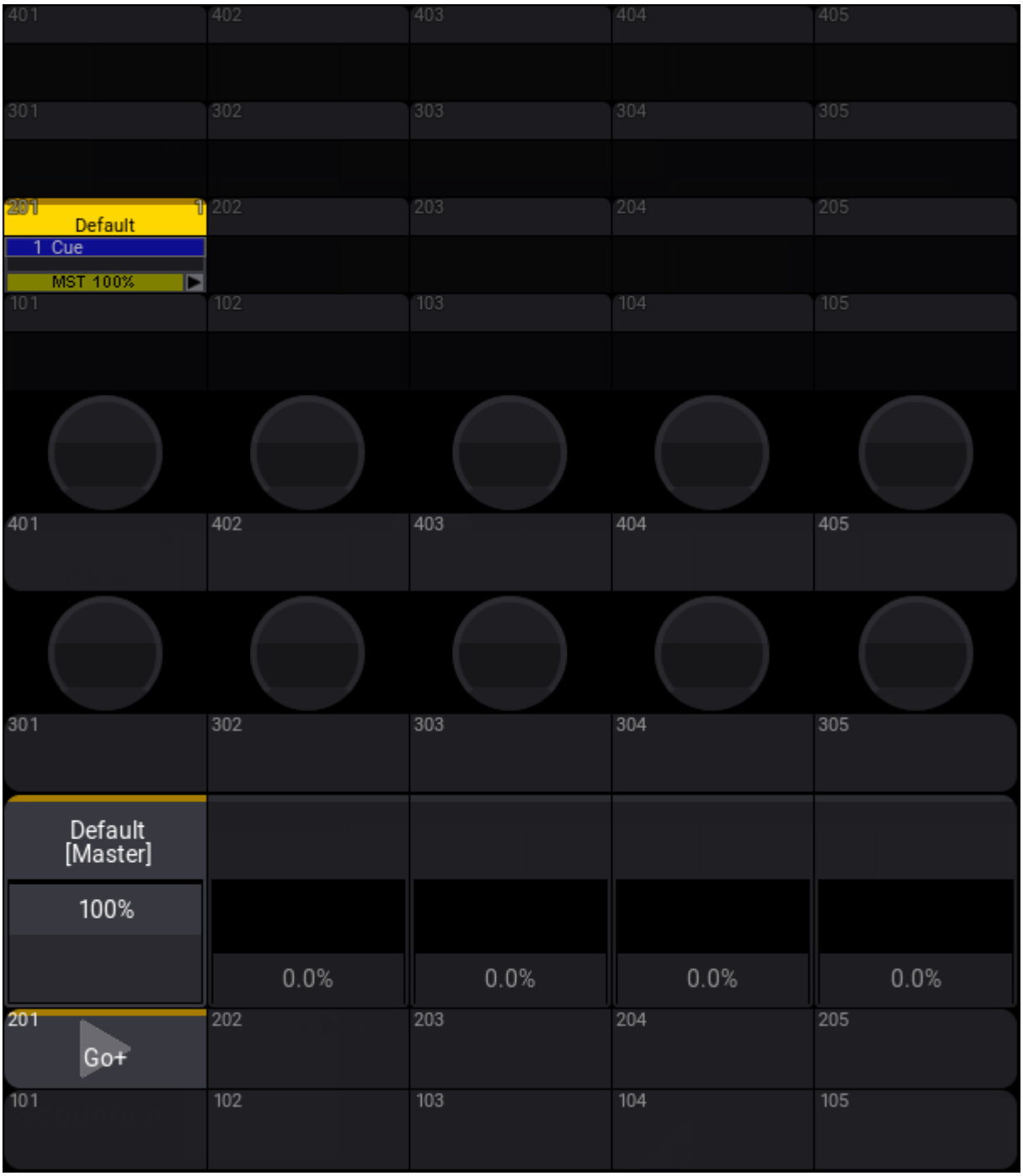
The master area always controls the selected sequence. The default function for the left fader is an output master. Moving it up and down adjusts the sequence's output level.

Assign Sequence Control to Executors

We can also assign sequence controls to other executors.

Sequence 1 is already assigned to an executor, as a default in a new show.

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 **Playbacks** and is in the 'More' tab.

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 has 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.

With sequence 1 already assigned to executor 201, 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** Quickey and then the executor button 202.

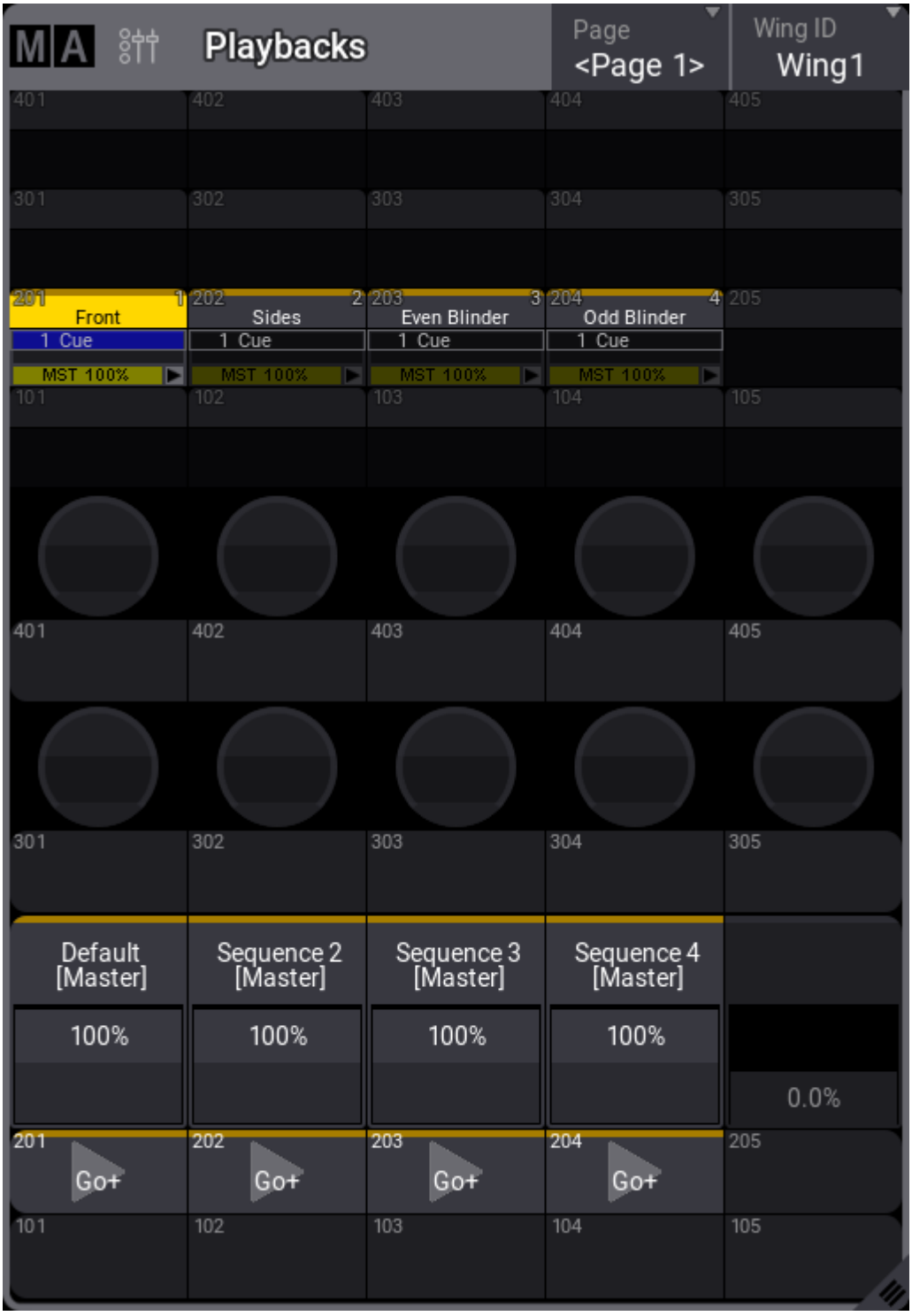
Now we have two faders, each controlling its own fixtures.

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.



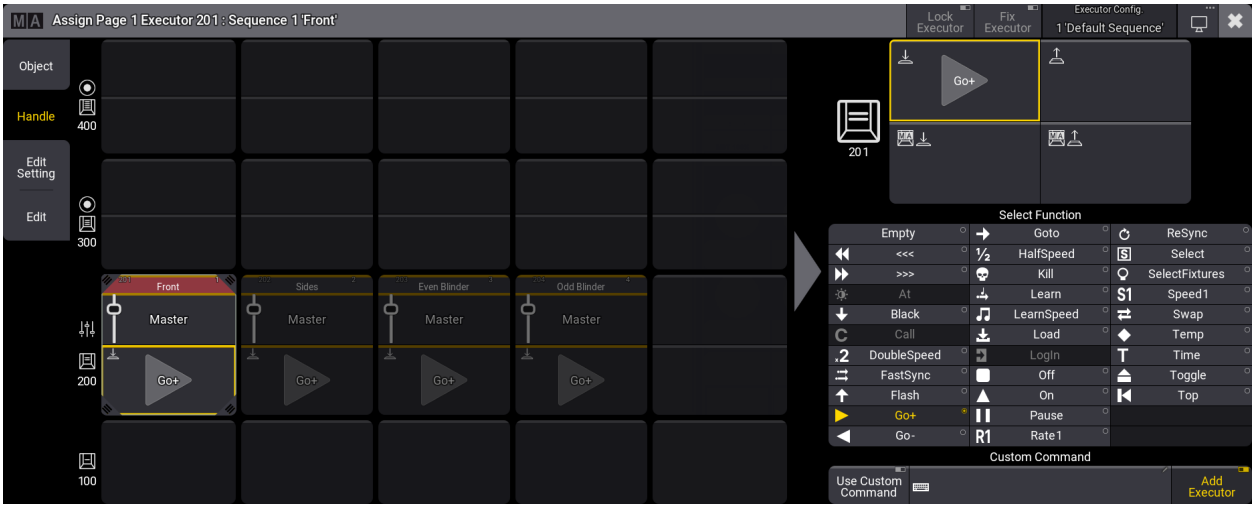
Modify the Executors

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 Assign and press executor 201.

This opens the **Assign Menu**:



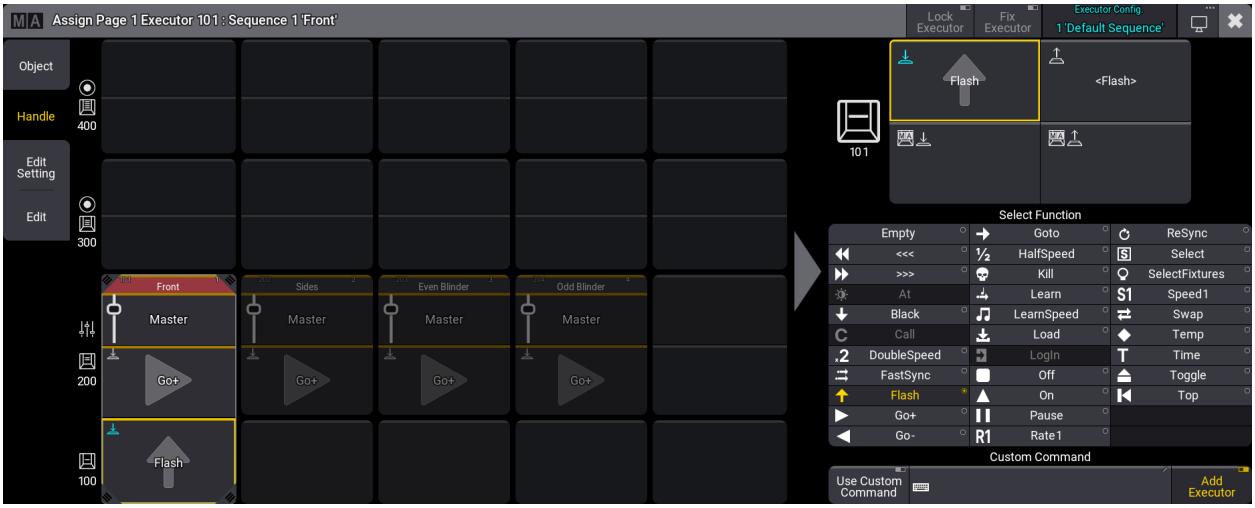
This menu can be used to adjust the height and width of the assigned objects, in this case, sequences. It is also used to change the functions assigned to the buttons, faders, and rotating knobs.

In the center part, we can use the four corners to change the size. Pressing and holding the object title (in the image above the red "Front") can be used to move the object to other available executors.

Tapping a button, fader, or knob in the center part gives it focus (a brighter yellow frame), and the right side can be used to assign a function to the selected button, fader, or knob.

We wanted to add the 101 to our control. Press and hold one of the lower corners of the highlighted Go+ button. Now move it down to include the 101.

Select the 101 button and select 'Flash' on the right side.



This has now changed the function (or command) assigned to the button. It has a cyan icon in the top left corner to indicate that this is different from the default assignment of the executor configuration. The text in the 'Executor Config.' button in the title bar is also cyan.

We can save this change to the default configuration.

Tap Executor Config. in the title bar of the Assign Menu. This opens a pop-up where we can perform different actions on the executor configurations. Let us store the current settings to the "Default Sequence" configuration by tapping Save.

Now tap the 202 button in the menu and change the size to include the 102. Now the flash is automatically assigned to the 102 button because it is the default configuration.

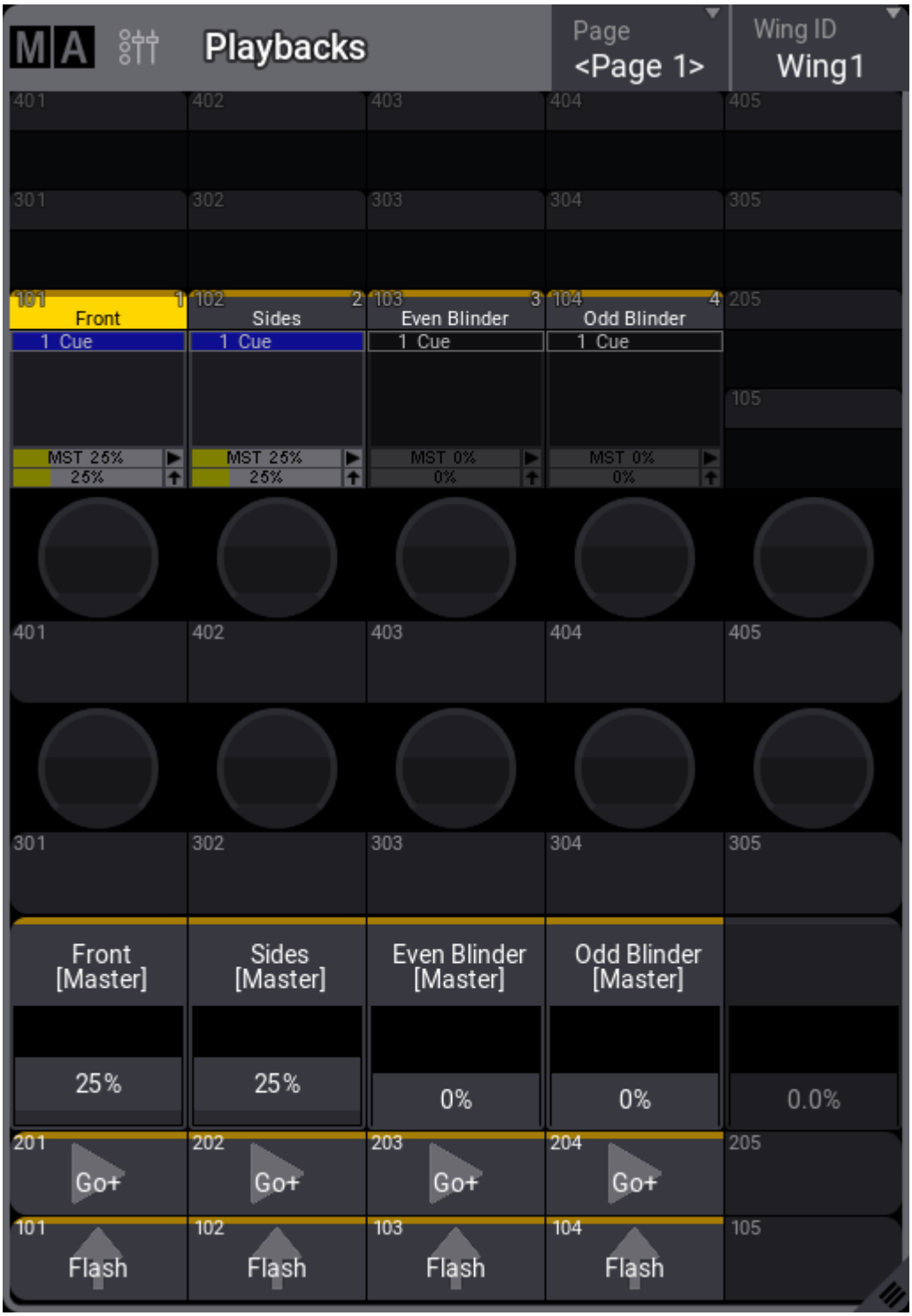
Repeat this for 203 and 204.

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

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

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:



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 Sequence Sheet 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.**

11 - Add Moving Lights

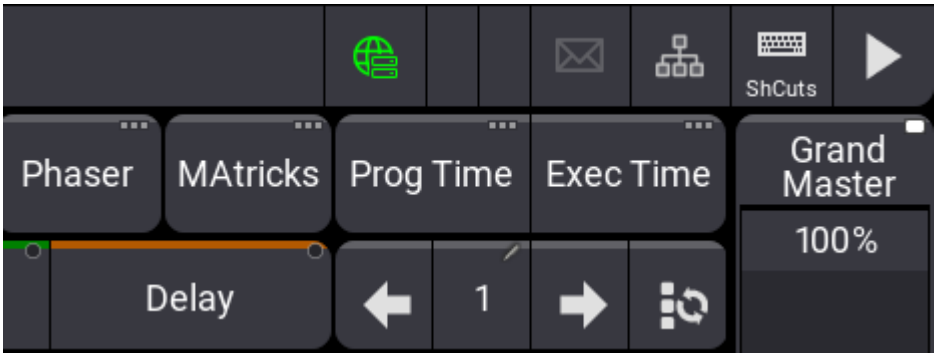
In this chapter, we will return to the patch and add some moving lights.

We are going to add a variety of fixtures and 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 connected to a **World Server**. MA Lighting offers a public world server for connection.

Let us start by checking the connection. The command line input bar displays a globe icon on the right-hand side when a connection to a world server is established.



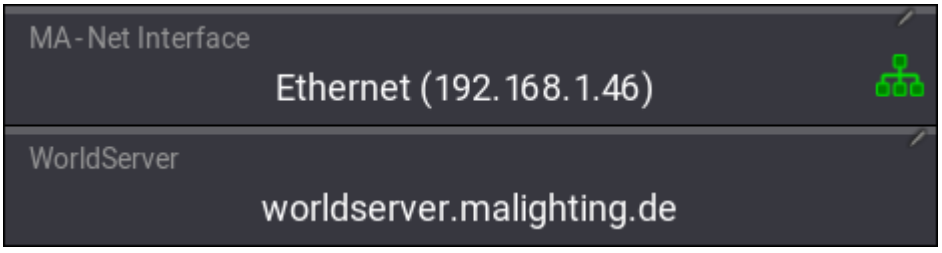
A green globe indicates a good connection to the server. If this is true, you can jump to Fixture Share Library below. Keep reading to learn how to change the world server's address.

If the globe is gray, 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:



The World Server address must be correct when the computer running grandMA3 onPC has an internet connection. 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 or using a mobile tether 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 may 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.

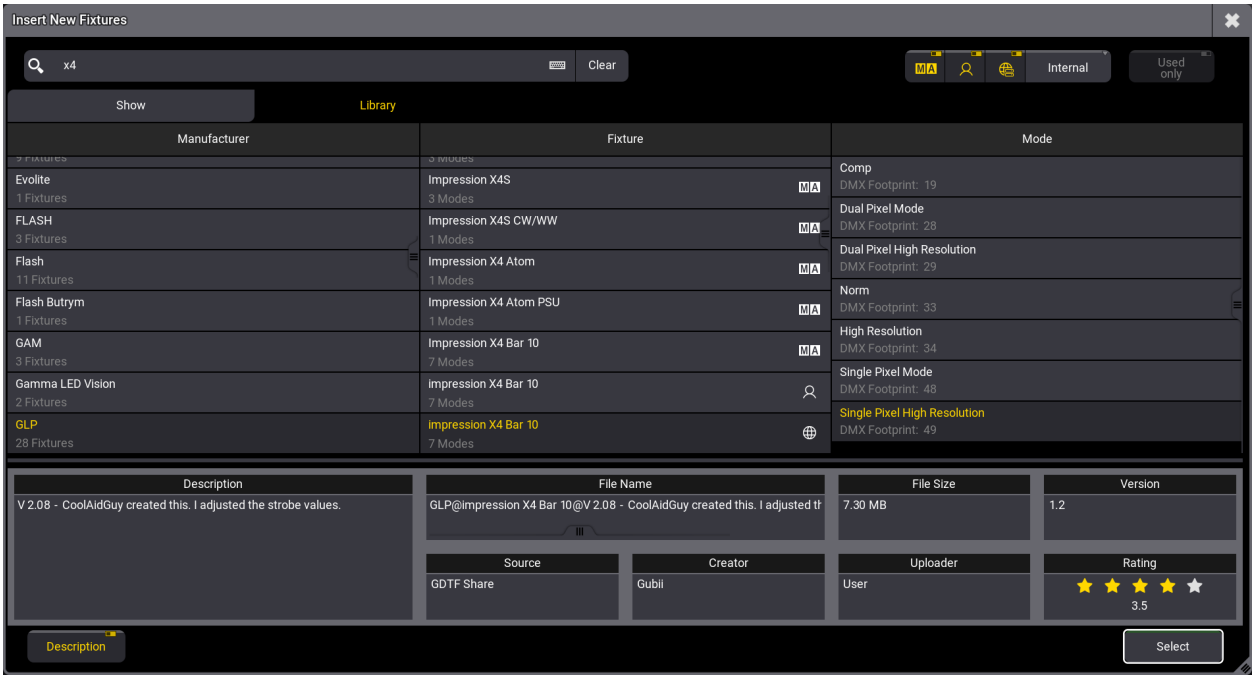
Select New Fixture at the bottom of the list - make sure to select the one outside the Blinder grouping fixture.

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 created files (user) are active, but we can also activate the library section from the world server by turning On the globe icon (globe).

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 cannot access the world server, just select the one from the "MA" library. It might not look correct in the 3D viewer, but it controls and behaves the same.

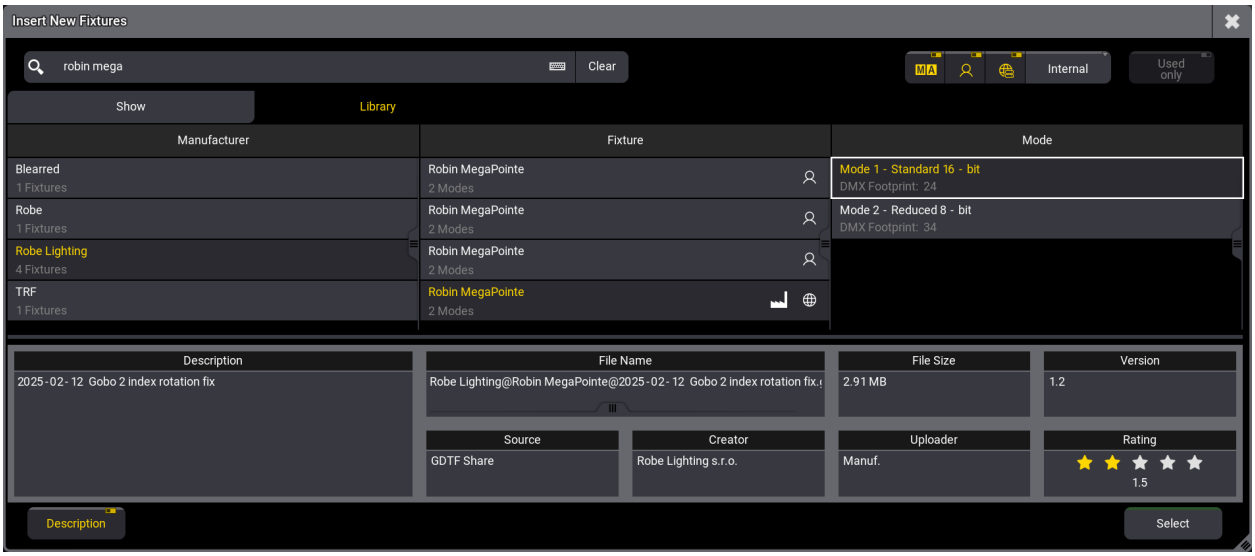
When you click Select, it might take a few seconds to download and import the fixture type.

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

Remember to click Create! to add the fixtures to the actual patch.

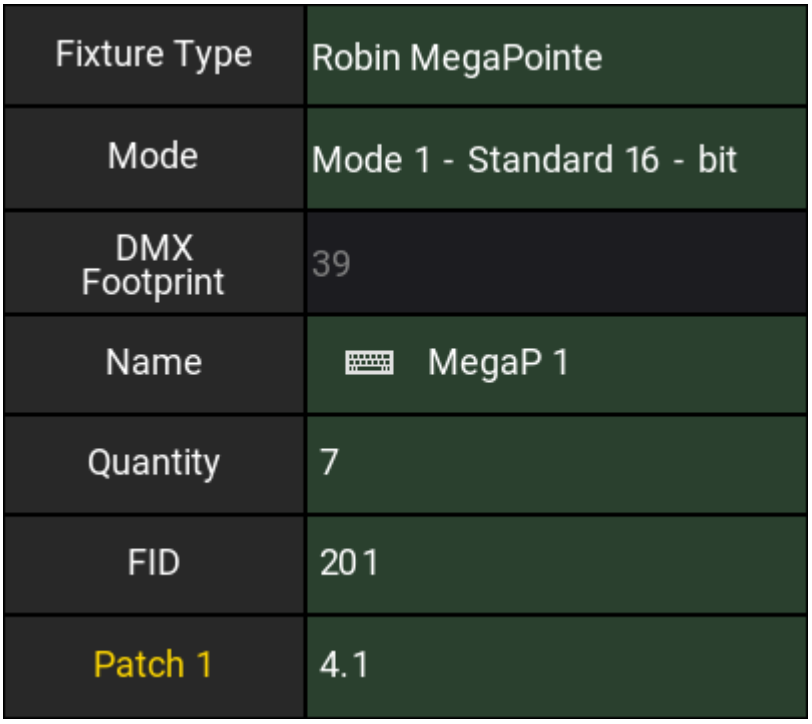
The next fixture type we need is the "Robin MegaPointe" from Robe Lighting using "Mode 1". Again, from the GDTF Share.



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".



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 factory.

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

Fixture Type	MAC Aura XB
Mode	Standard
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 Lamp on", 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.

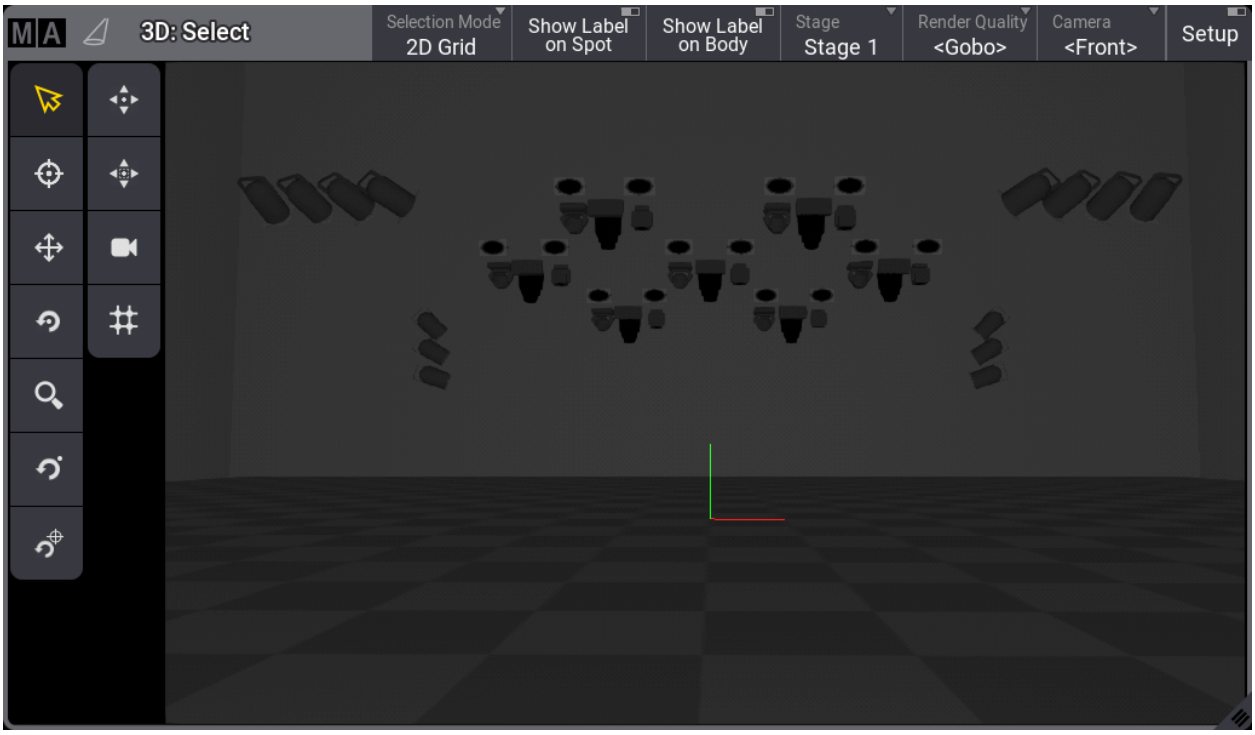
Remember that you have to change the patch menu to show **Full** columns to see the position columns.

FID:	Name:	Manufacturer:	Fixture:	Mode:	Patch:	X-Pos:	Y-Pos:	Z-Pos:

FID:	Name:	Manufacturer:	Fixture:	Mode:	Patch:	X-Pos:	Y-Pos:	Z-Pos:
101	X4 Bar 1	GLP	5 Impression X4 Bar 10	5 Single Pixel High Resolution	2.001	-1.5	0.5	4.5
102	X4 Bar 2	GLP	5 Impression X4 Bar 10	5 Single Pixel High Resolution	2.090	1.5	0.5	4.5
103	X4 Bar 3	GLP	5 Impression X4 Bar 10	5 Single Pixel High Resolution	2.179	-3.0	2.1	4.0
104	X4 Bar 4	GLP	5 Impression X4 Bar 10	5 Single Pixel High Resolution	2.268	0.0	2.1	4.0
105	X4 Bar 5	GLP	5 Impression X4 Bar 10	5 Single Pixel High Resolution	2.357	3.0	2.1	4.0
106	X4 Bar 6	GLP	5 Impression X4 Bar 10	5 Single Pixel High Resolution	3.001	-1.5	3.6	3.5
107	X4 Bar 7	GLP	5 Impression X4 Bar 10	5 Single Pixel High Resolution	3.090	1.5	3.6	3.5
201	MegaP 1	Robe Lighting	6 Robin MegaPointe	1 Mode 1 - Standard 16 - bit	4.001	-1.5	0.8	4.5
202	MegaP 2	Robe Lighting	6 Robin MegaPointe	1 Mode 1 - Standard 16 - bit	4.040	1.5	0.8	4.5
203	MegaP 3	Robe Lighting	6 Robin MegaPointe	1 Mode 1 - Standard 16 - bit	4.079	-3.0	2.4	4.0
204	MegaP 4	Robe Lighting	6 Robin MegaPointe	1 Mode 1 - Standard 16 - bit	4.118	0.0	2.4	4.0
205	MegaP 5	Robe Lighting	6 Robin MegaPointe	1 Mode 1 - Standard 16 - bit	4.157	3.0	2.4	4.0
206	MegaP 6	Robe Lighting	6 Robin MegaPointe	1 Mode 1 - Standard 16 - bit	4.196	-1.5	3.9	3.5
207	MegaP 7	Robe Lighting	6 Robin MegaPointe	1 Mode 1 - Standard 16 - bit	4.235	1.5	3.9	3.5
301	AuraXB 1	Martin Professional	7 Mac Aura XB	1 Standard (16 ch)	5.001	-1.0	0.8	4.5
302	AuraXB 2	Martin Professional	7 Mac Aura XB	1 Standard (16 ch)	5.015	2.0	0.8	4.5
303	AuraXB 3	Martin Professional	7 Mac Aura XB	1 Standard (16 ch)	5.029	-2.5	2.4	4.0
304	AuraXB 4	Martin Professional	7 Mac Aura XB	1 Standard (16 ch)	5.043	0.5	2.4	4.0
305	AuraXB 5	Martin Professional	7 Mac Aura XB	1 Standard (16 ch)	5.057	3.5	2.4	4.0
306	AuraXB 6	Martin Professional	7 Mac Aura XB	1 Standard (16 ch)	5.071	-1.0	3.9	3.5
307	AuraXB 7	Martin Professional	7 Mac Aura XB	1 Standard (16 ch)	5.085	2.0	3.9	3.5
401	Sharpy 1	Clay Paky	8 Sharpy	2 Standard Lamp on	6.001	-2.0	0.8	4.5
402	Sharpy 2	Clay Paky	8 Sharpy	2 Standard Lamp on	6.017	1.0	0.8	4.5
403	Sharpy 3	Clay Paky	8 Sharpy	2 Standard Lamp on	6.033	-3.5	2.4	4.0
404	Sharpy 4	Clay Paky	8 Sharpy	2 Standard Lamp on	6.049	-0.5	2.4	4.0
405	Sharpy 5	Clay Paky	8 Sharpy	2 Standard Lamp on	6.065	2.5	2.4	4.0
406	Sharpy 6	Clay Paky	8 Sharpy	2 Standard Lamp on	6.081	-2.0	3.9	3.5
407	Sharpy 7	Clay Paky	8 Sharpy	2 Standard Lamp on	6.097	1.0	3.9	3.5

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

The 3D Viewer should look like this:



Create new Groups

Create the following new 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 + 305 + 405
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 - no appearances or scribbles:

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.

12 - 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. If you are comfortable controlling the fixtures, feel free to skip this chapter. I do recommend reading it as you might learn something new.

We will need another version of the fixture sheet.

The first one we made primarily shows the intensity attributes using the "Dimmer+" mode.

We need a new one that allows us to view all the other attributes.

Create a new fixture sheet.

Let us adjust some of the sheet settings. Tap the MA 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.

We also want the 'Fixture Appearance' set to "Enabled", 'Fixture Graphic' should be "Gobo", and 'Fixture Graphic Source' should be "Output".

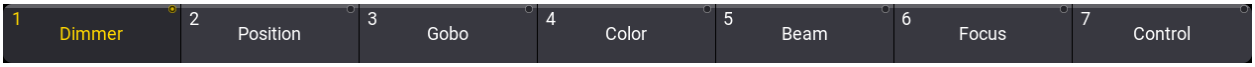
That is it for now. Please close the settings.

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 which feature group you control with the encoders.

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

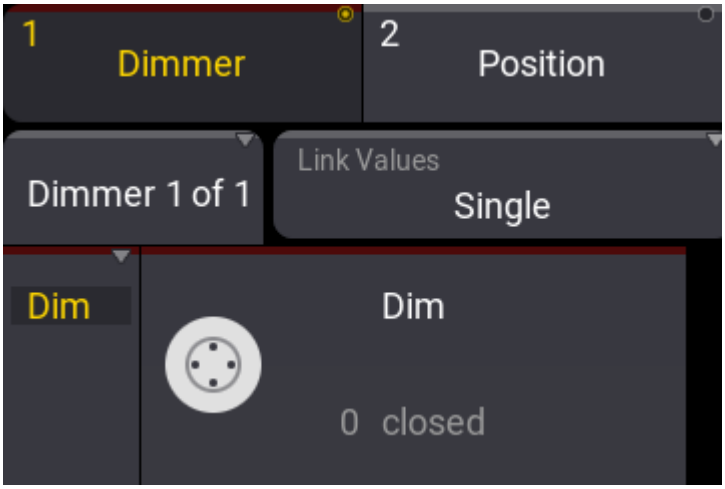
The bar will display the feature groups you have access to.

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, you can see that only the 'Dimmer' button has 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 turning the left encoder to turn up the lights. Please turn the fixtures to full.

Position

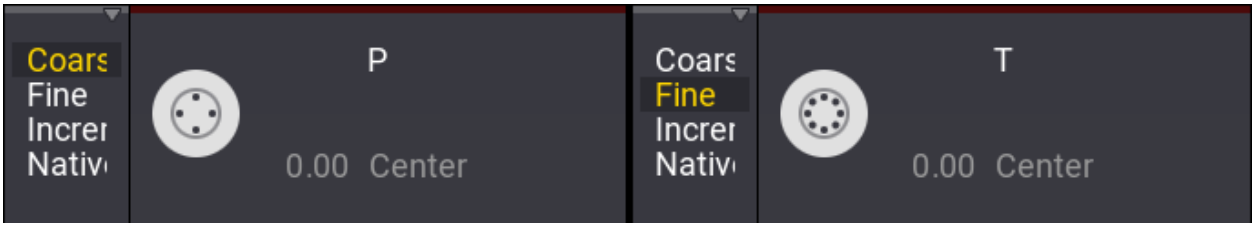
Select Position by tapping it in the bar. Notice how your encoder changes function according to your selected feature group. With the "Position", your encoders look like this:

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 on the left side 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.



These set the resolution of the encoder. Play around with it and choose the one you are comfortable with.

Notice that the Pan and Tilt can have negative values (below 0). This is because the fixture types are created with a default zero position in the middle of the movement range. So the fixtures can be moved in both directions from their default starting point.

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 whose rotation can be position indexed or continuously rotated.

Let us give the second wheel a try.

Tap Gobo in the feature group control bar.

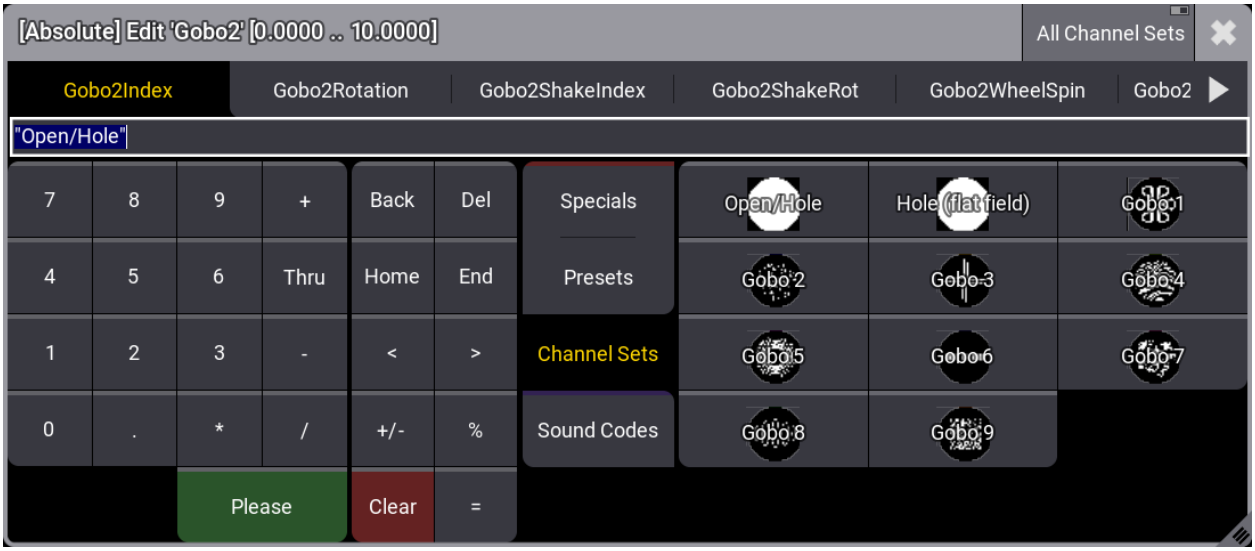
Now we have the gobo controls on the encoders. The first encoder is "G1" - this is gobo wheel one.

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 sections 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 if the dimmer is turned up - the shake function is not visualized.

A very good tool with fixtures that have defined Channel Sets like the gobos is the **sMArt** window. This can be created on an empty user-defined area. It can be found in the **Tools** 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.

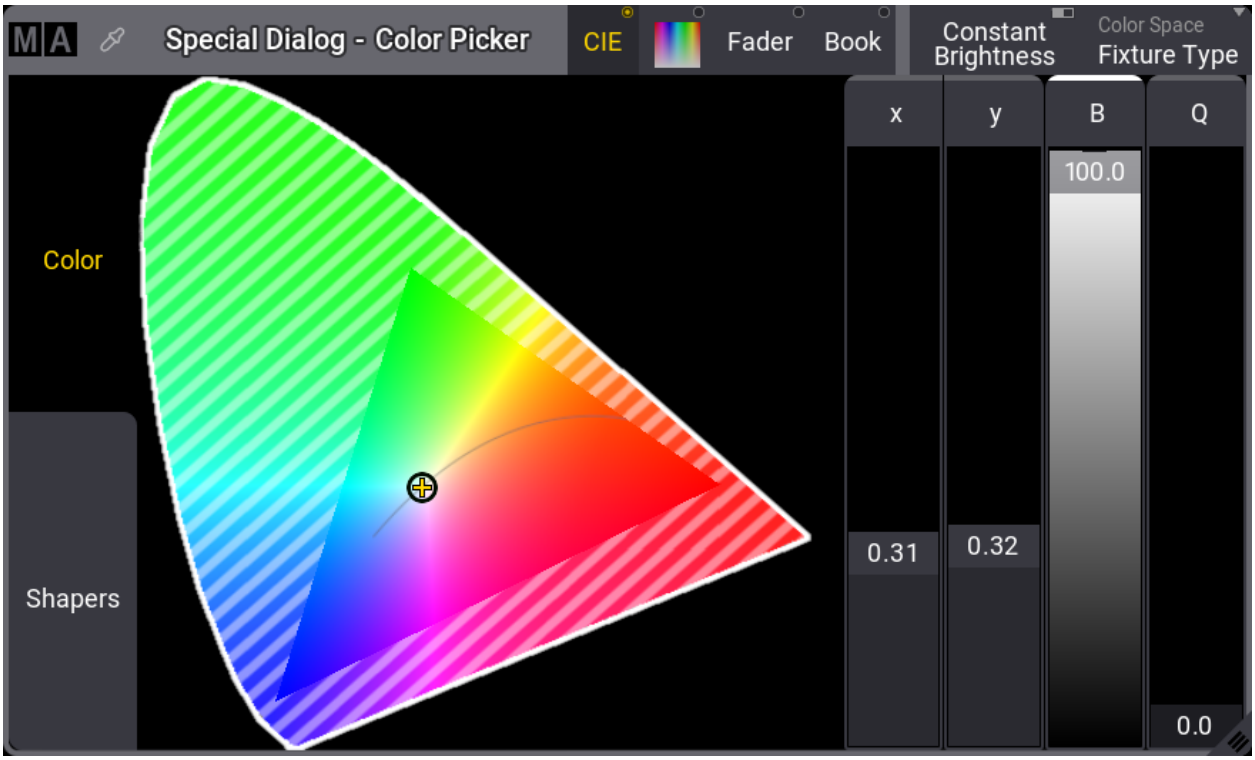
Color

Let us have a look at the colors.

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

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



The left side of the window has two vertical tabs called "Color" and "Shapers". Shapers are used with fixtures that have motorized beam shaper functions. None of our fixtures has this, so we are just going to look at the color 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 color area that 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 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 Sharpy, it works much like the gobo control, and the best tool can be the **sMArt** window.

The color wheels (C1, C2, etc.) may be on different feature pages. 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

This chapter 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**.

13 - 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.

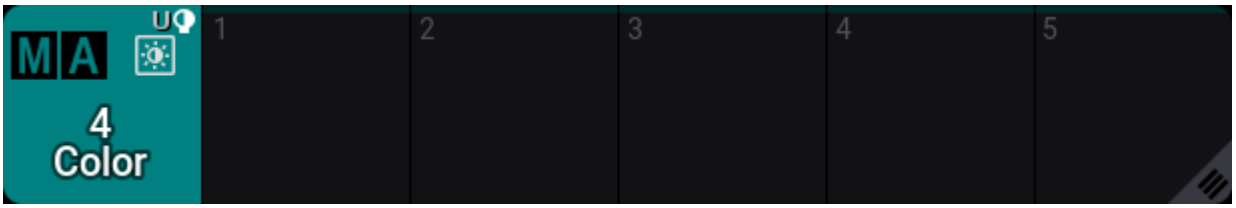
A preset pool looks a lot like the other ones we have looked at. There are several preset pools, so they have their own tab in the Add Window pop-up. The preset pools are created as windows in the user-defined area.

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 (a negative tilt value).

Finally, give them a nice color.

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

My fixture sheet uses the "Value" option in the "ChannelSet" setting in the Fixture Sheet Settings, and I have activated 'Prog Only' in the title bar. **Prog Only** means programmer only, and this filters the sheet to display only the programmer content.

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 subfixture. The color attributes are actually in the subfixtures. We do not need to select the subfixtures explicitly to apply the color. Since the main fixture does not have this attribute, it is passed on to the subfixtures when applied to the main fixture. Have a look at the dimmer attribute. The main fixture and subfixtures all have dimmer attributes. The value is only applied to the selected (main) fixture. The subfixtures' default dimmer value is at 100%, so the result is a colored light 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.

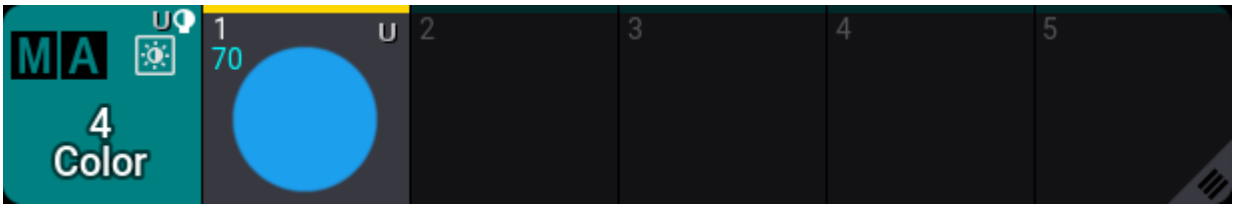
Two things happened.

First, our fixture sheet changed.

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 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.

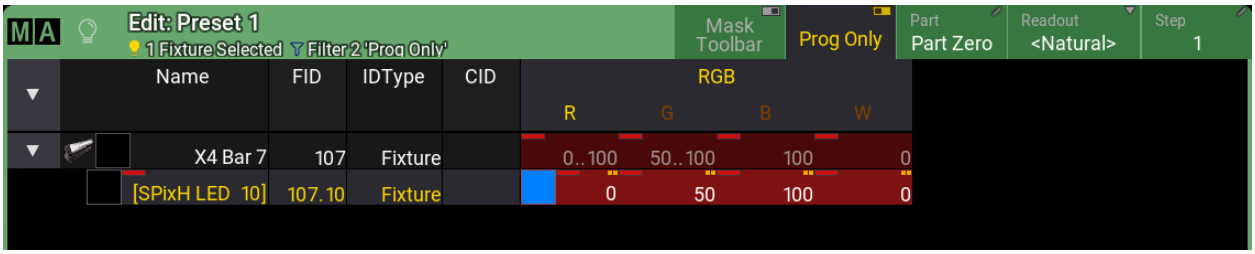
Notice the small "U" in the upper right corner of the preset. This indicates that the preset is a **Universal** preset.

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 looks like this:



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

We see here that the value is only stored for the last subfixture of the last X4 fixture, and there is are two small square yellow color indicators above each value.

This indicates that a value is a universal value.

All fixtures that have these attributes can use the universal values.

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 subfixtures and all the Mega Pointe and Auras.

We only want the X4 Bars, so clear the programmer again and then click group 6.

Click the preset again.

Now, we have called the preset reference into our programmer for the selected fixtures (group 6).

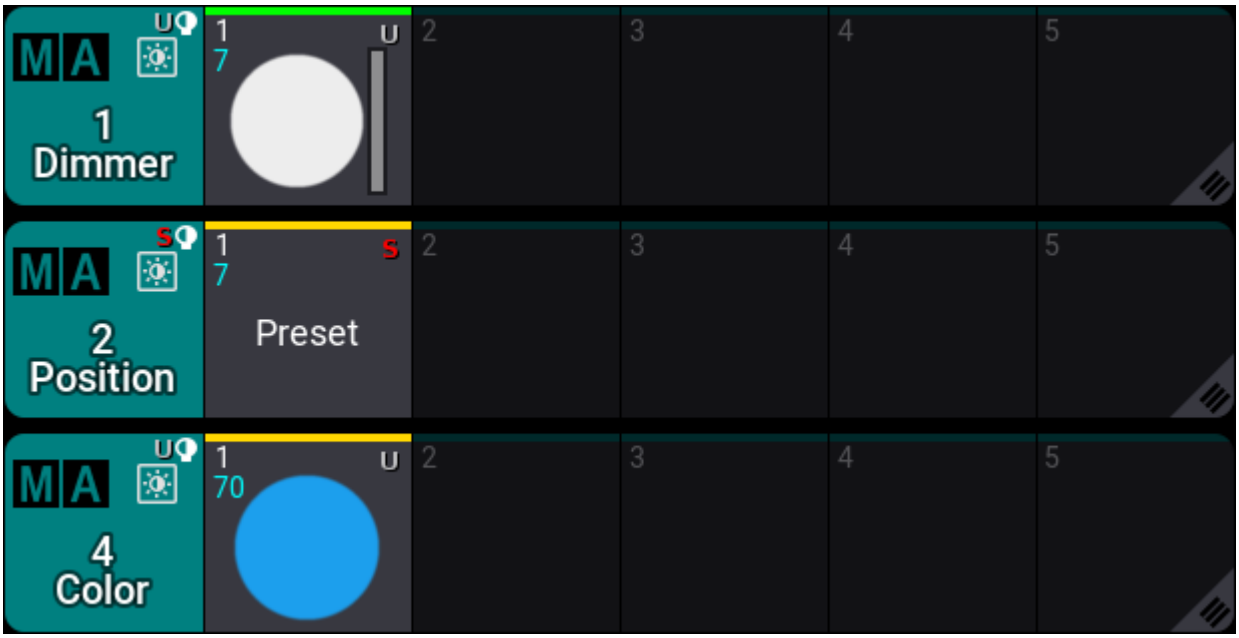
Notice that the preset number shows in the fixture sheet value cells.

If we want to turn On and tilt the X4 bars again, we 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):

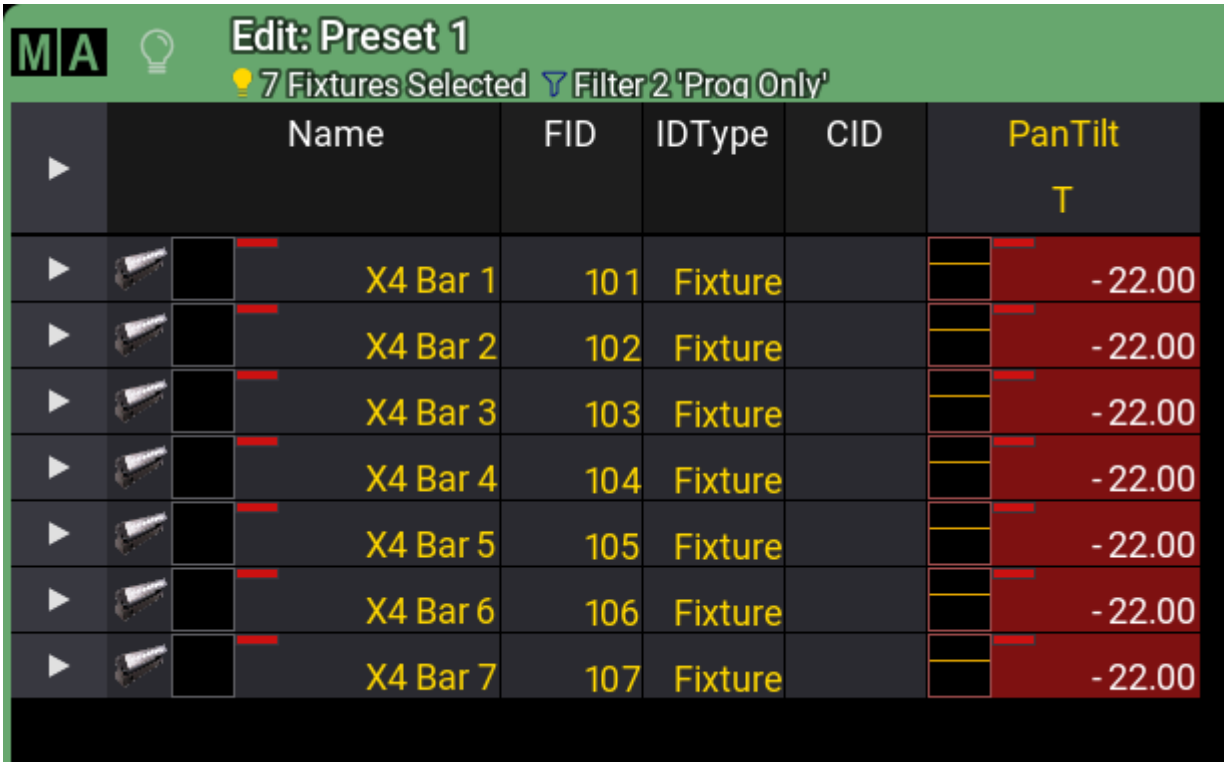


The position preset got a small red "S". This tells us it is a **Selective** preset. Selective presets only contain values that can be used by the fixtures that had the values when the preset was stored.

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.

The fixture sheet can be expanded or collapsed by tapping the white triangle arrow in the upper left corner.



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

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. Notice that it also has the small "U" in the upper right corner.

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

Clear the programmer.

There is a third mode called **Global**. This means that the preset has stored values for a specific fixture type. It is indicated by a small "G" in the preset's upper right corner and as a single small yellow square when editing the preset.

So, we could simplify it like this: Universal means stored values for the attribute. Any fixture with that attribute can use the preset. Global means values stored for a specific fixture type. Any fixture of the same type as the stored one can use the preset. Selective means stored value for the specific fixtures stored in the preset. There are details to this that make it less strict when the preset is called, but these are the general rules.

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 pool mode is used.

Each preset pool 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.

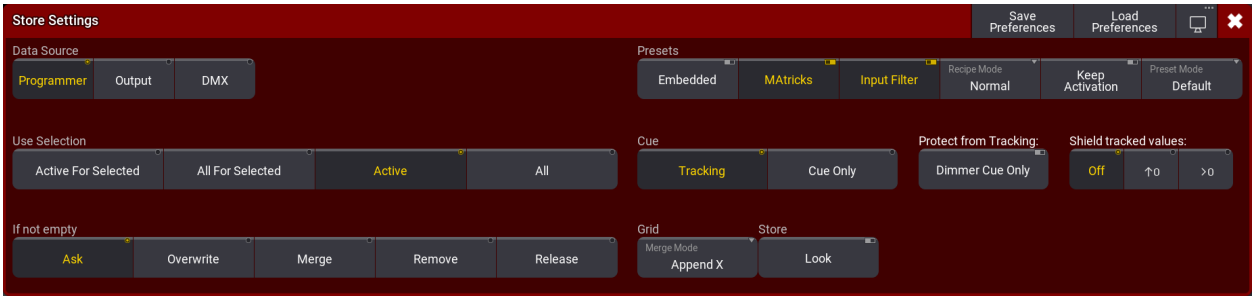
After making the selection, you can click the three presets.

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. You might need to close the Store Settings to click the 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 in the upper right corner area 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 each 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 and exit the edit mode.

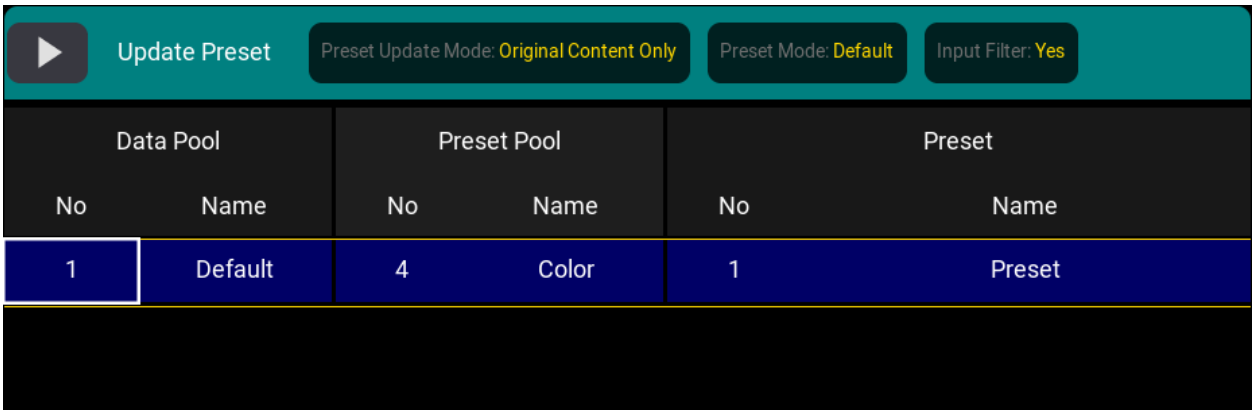
Select group 6 and click the color preset (not any of the All presets).

Change the color to something different.

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

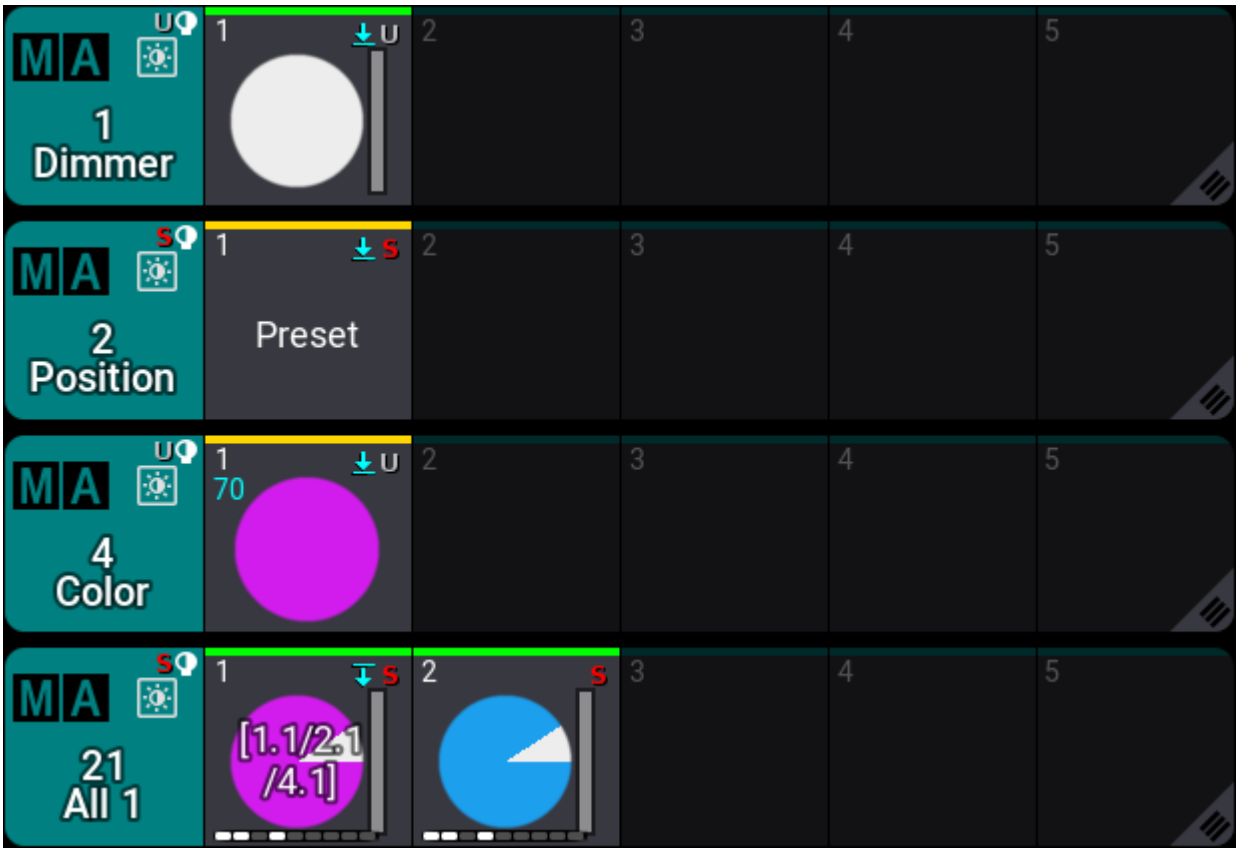
Press Update.

This opens the update menu.



The left side shows the color preset (shown in the image above). 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 is all the preset knowledge we need at the moment.

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

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

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

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 on 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.

14 - Phasers

We often 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 simultaneously, then we say 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

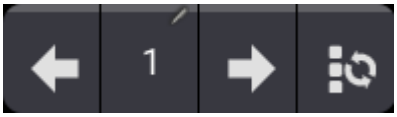
To try some of these concepts, let's create a simple dimmer chaser that fades between two values with the Even Blinders.

Clear the programmer.

Select Group 4.

Give them an active dimmer value of 0%.

Notice this small area on the encoder toolbar:

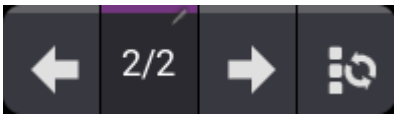


It is called the "Step Bar". It currently says "1". This shows us that we are working with values for step 1. Everything we have done so far in all the previous chapters has happened in step one.

We need to add another step with a new value.

Click the right-pointing arrow in the step bar.

Now it should say "2/2".



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 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 must turn On the **Layer toolbar** in the Fixture sheet if it is not currently visible.

Click the MA logo in the upper right corner of the sheet window to open the settings for the fixture sheet.

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, a layer toolbar is 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 that the values of the fixtures are dynamically changing the output.

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

The layers are organized into three different groupings. The first group (Values and Timings) is currently shown. The two other groups are layers relevant to Phasers.

Phaser layers are marked with a purple bar at the top. The same colored indicator is also displayed 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 Phaser Overall and then 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, it would take one minute to run through all the steps.

The speed encoder is currently empty. This means a speed is not defined, and the Phaser currently uses the default value (60 BPM).

The fixture sheet shows that the blinders are currently moving together. We can change this by giving them different values in the **Phase** layer.

Click Phase in the encoder toolbar. Then, click or short-press 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.

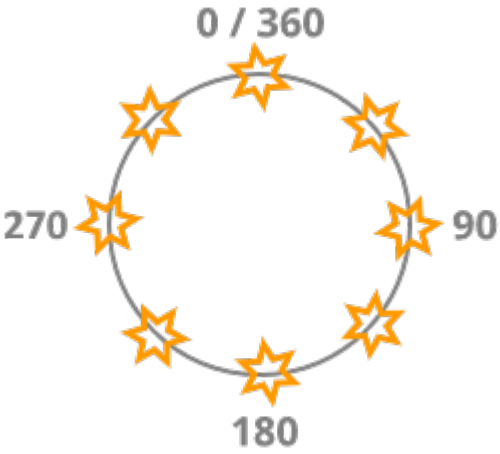
You can see this by selecting the "Phase" layer in the fixture sheet.

If you 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 while moving the bar to the side. On the console, you must touch the layer bar with two fingers and scroll sideways.

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.

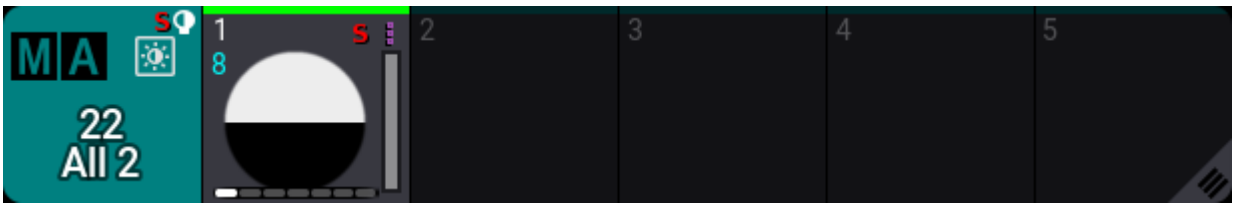
Imagine all the steps looping as a circle. On a circle, the values of 0 degrees and 360 degrees are the same location. So if the console literally did 0 to 360, then the first and last fixture would do the same.

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



Store and Use the Phaser

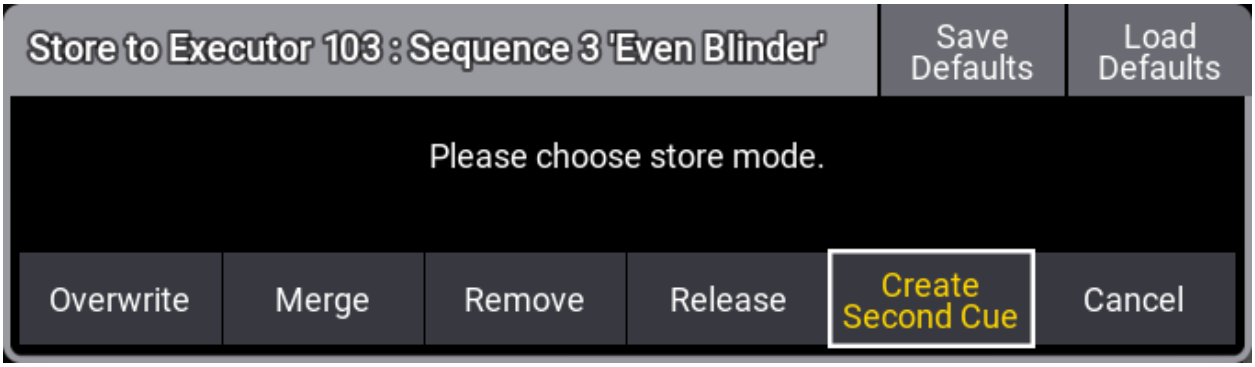
Store this in a new All Preset in preset pool 22 on the first preset.



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". This pop-up is the question.

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 (step) 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.

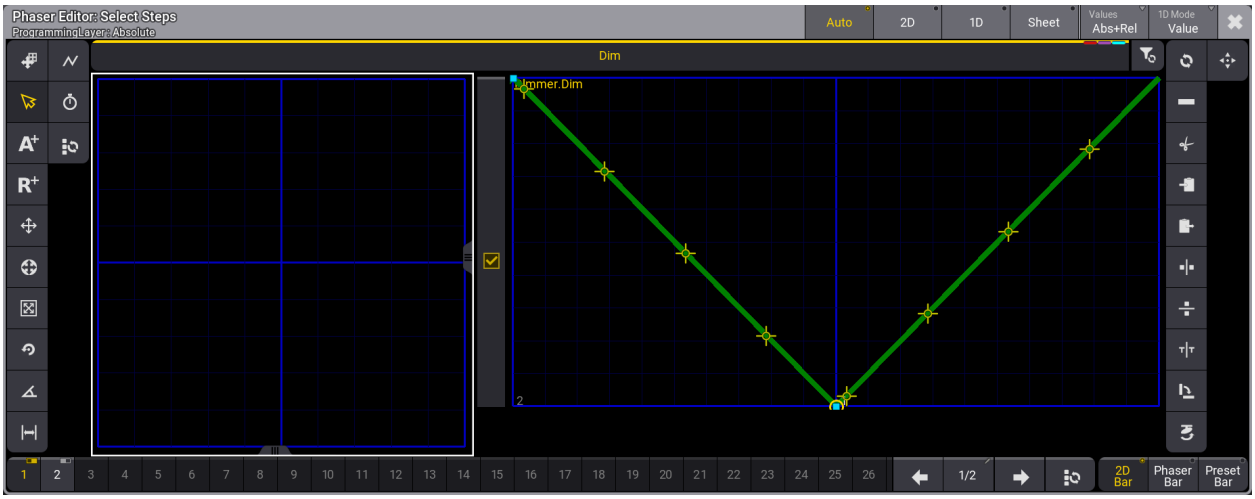
Many of the values we stored in the All Preset can be reused. Click it twice to call the phaser into the programmer.

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

The square on the left side (with the white frame) can be used when creating 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.

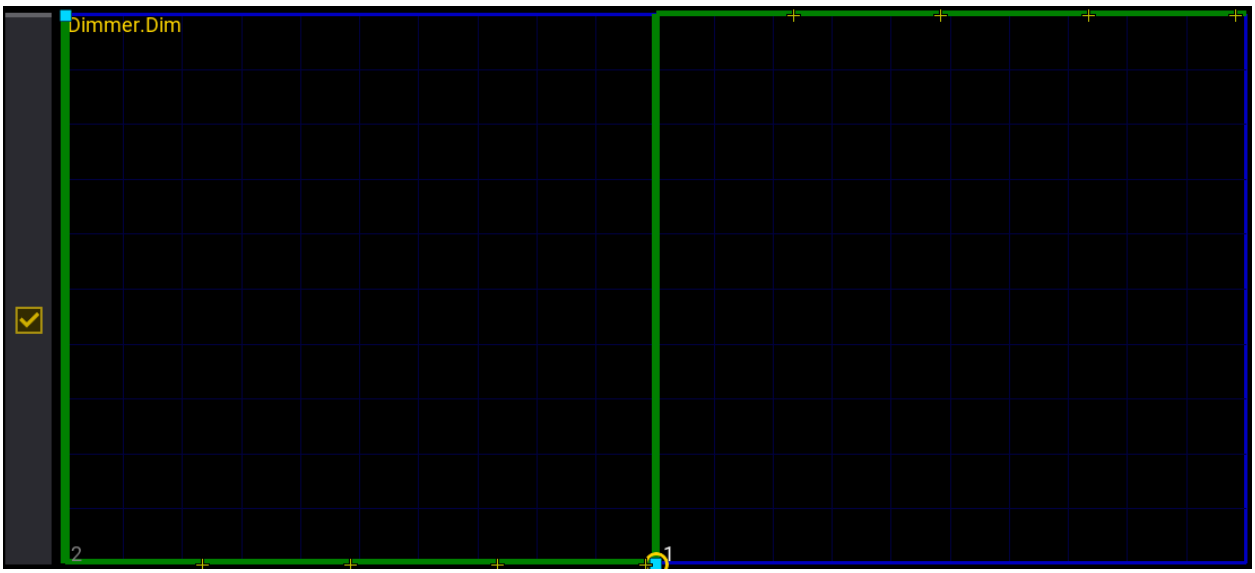
A button in the tools on the left-hand side can help us with this.

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 just store in 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, 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

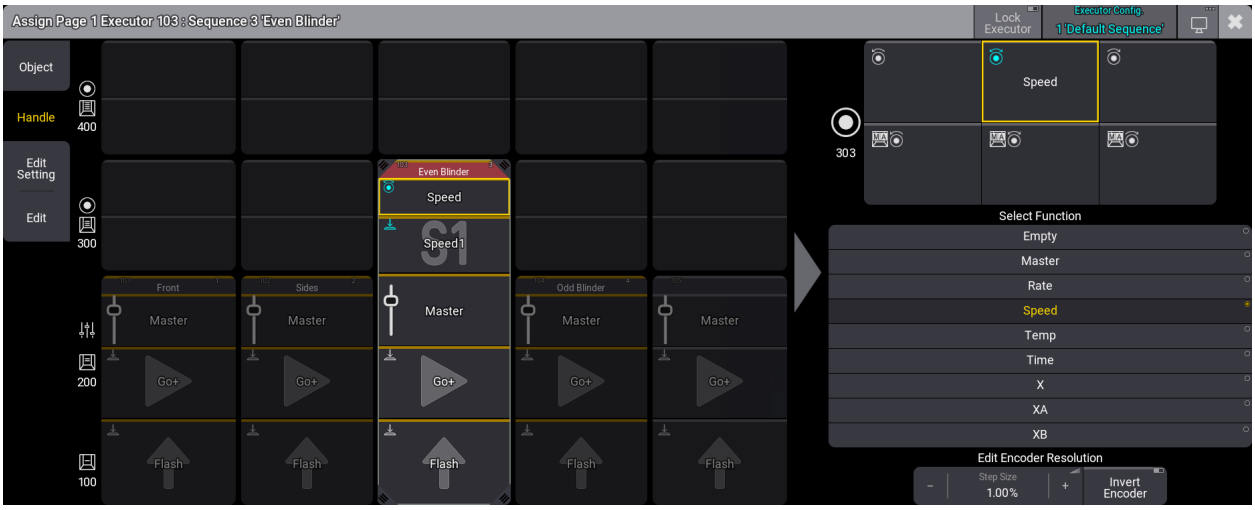
There are some things we should adjust to make this better. Right now, the sequence resets when we turn the master all the way down. It might be better if it stayed at the last cue we selected. And maybe we would like to be able to control the speed dynamically. Let us make these two changes.

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

We need to be on the **Handle** page in the menu. If it is not already active, click Handle on the left side.

We want to expand the executor even further upwards. Click and move one of the upper corners up to include the next row above.

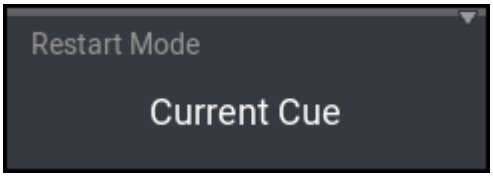
The key assignment might have changed (because we changed the size). Again, we want the lower executor button to be "Flash". We want the key for the 300 button to be "Speed1" and the Encoder for the 300 knob to be "Speed". The handle assignment should look like this:



Now, we need to adjust the executor's settings. Click Edit Setting on the left side to open the settings for the sequence.

There are many different settings. The one we want to change is "Restart Mode", which 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 rotating knob resets the speed back to 60 BPM. The knobs on the onPC can be turned like the encoders. Be aware that this is the speed of the entire sequence, not the Phasers - although since the Phasers are in the sequence, they will be affected by the sequence speed.

Create Phasers for the Odd Blinders

Now, repeat everything we just did, 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 layer 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.

15 - 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. The actual preset values are not important.

Create the Sequence

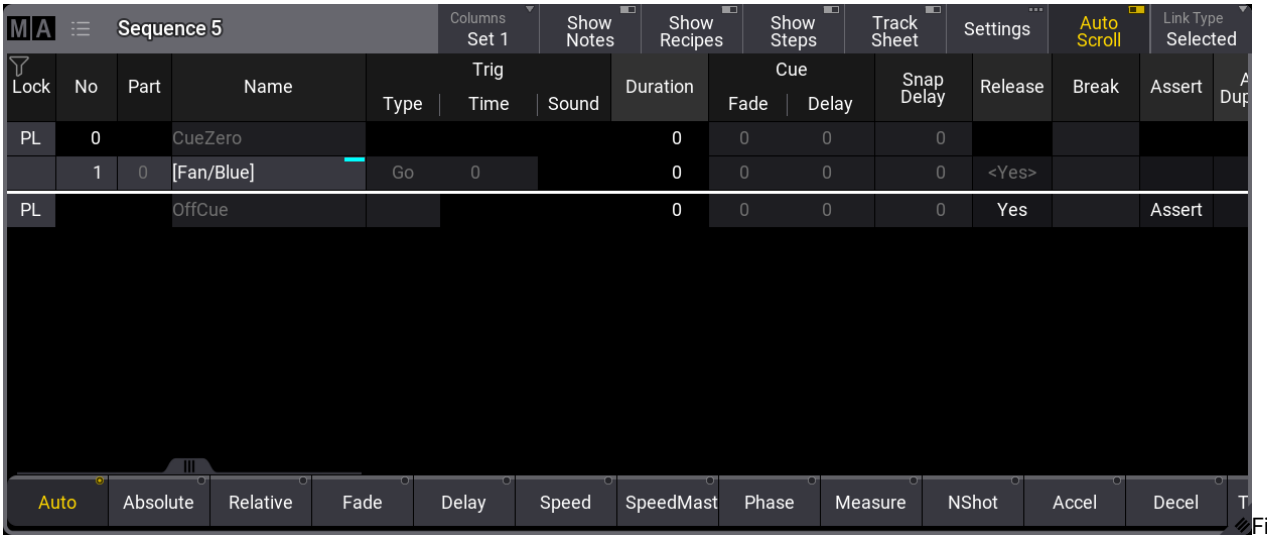
We begin by getting some values into our programmer. Start by clearing the programmer. Now select Group 7 (all the Mega Pointe) and turn them to 100%. Select a position preset and a color preset.

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

Now we have a new sequence (number 5), and executor 206 controls it.

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.

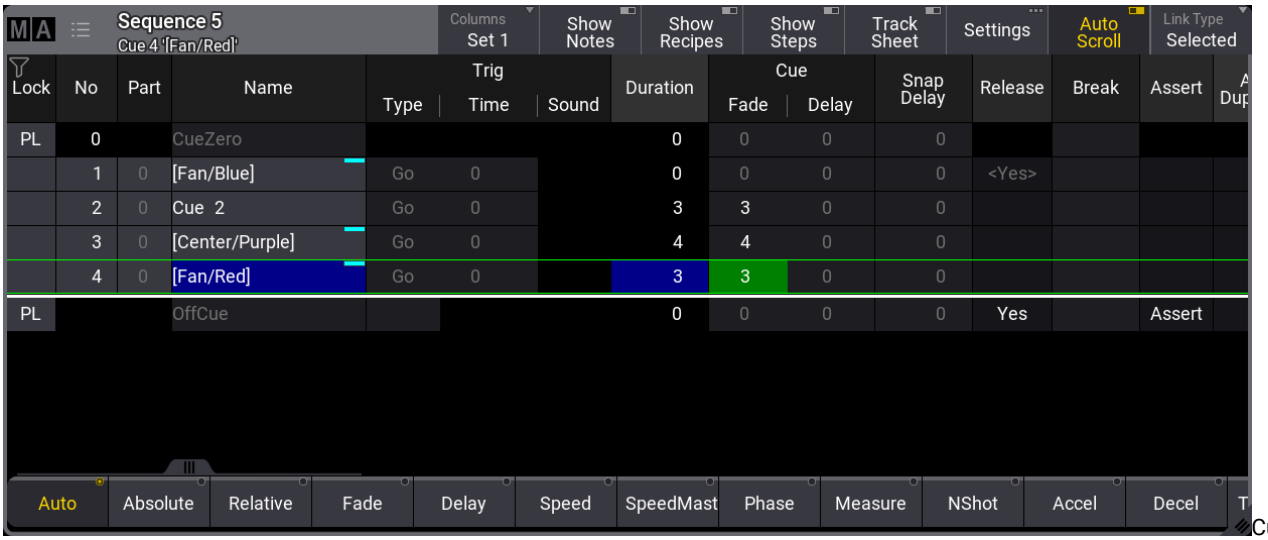
Clear the programmer.

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 to the output when we clear the programmer.

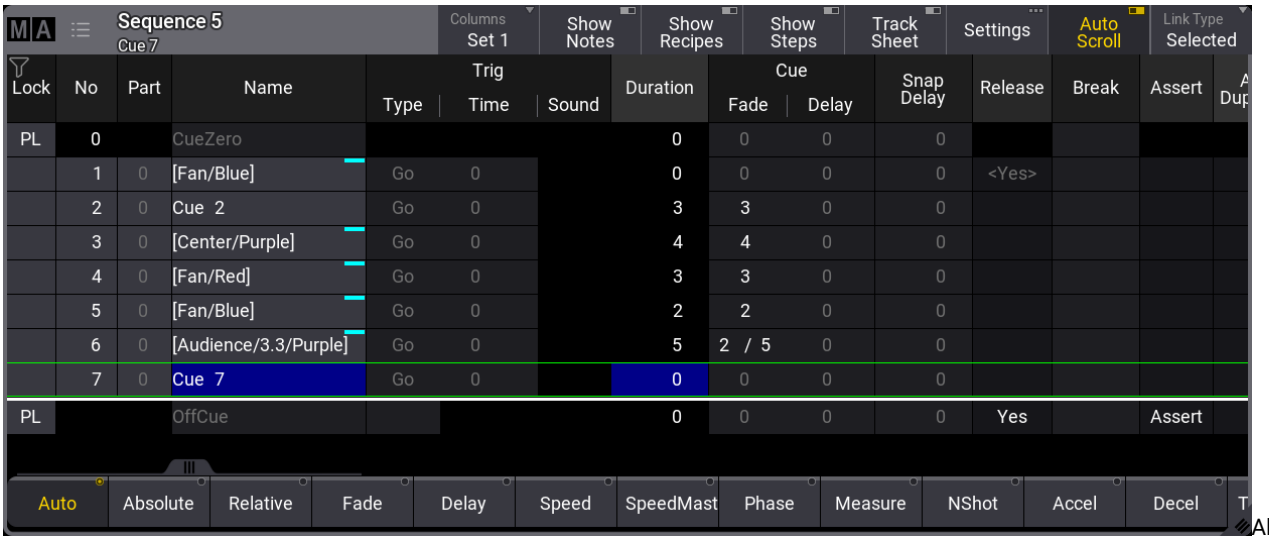
Now, we are going to change the cue timing.

Press Time 2 / 5 Please. This changed the current cue 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 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.



All Cues Created

Edit the Sequence

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

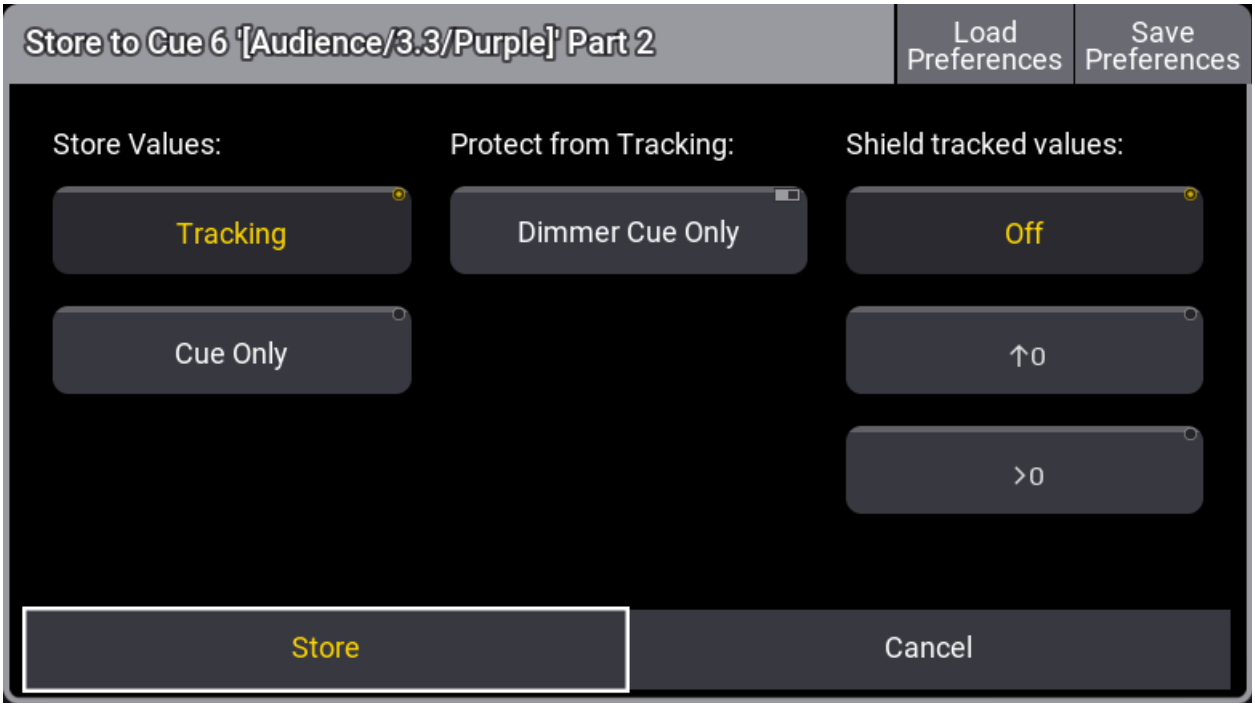
We would like cue 4 to automatically run, shortly after cue 3 is done. This can be done by changing the trigger for cue 4. The default trigger type is "Go" as we saw in chapter 8.

Edit the "Type" field for cue 4, select Time, edit the time column, and give it a value of 6 seconds. These settings mean that when we trigger cue 3 with a Go, 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, cue 4 is triggered and starts 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 it is the Auras that use the outfade time. So, let us change this to a different solution that makes what is happening more obvious. 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. Notice that pressing 'Cue' changes the keyword that will be used - the next time we press the key - to the "Part" keyword.

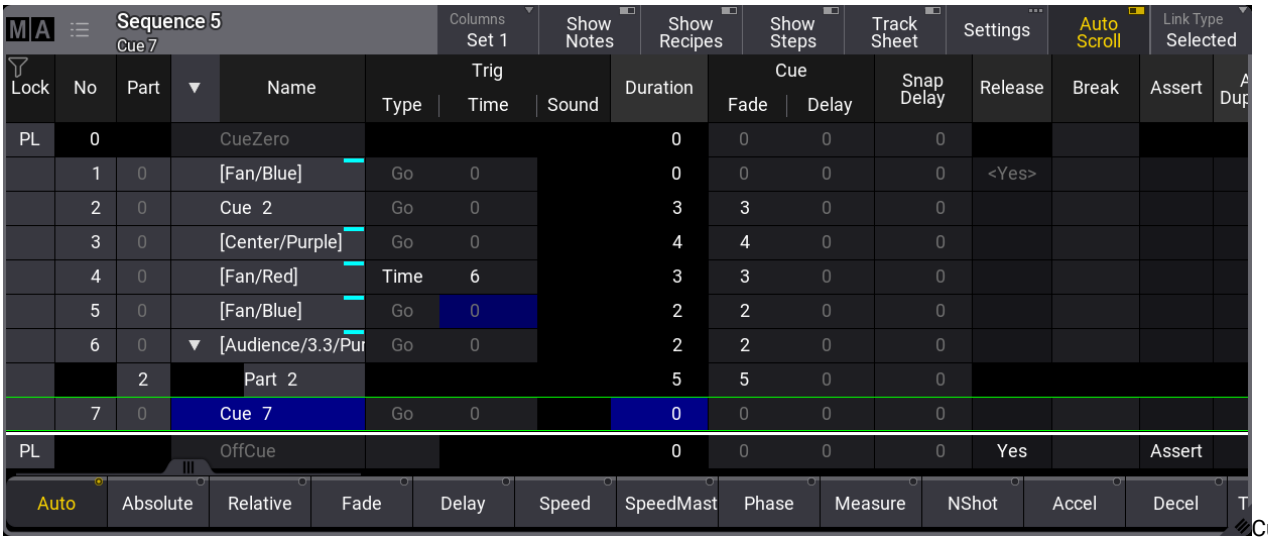
This command might give you a rather complex popup asking you how to store the values. Make sure "Tracking" is selected and that the pop-up looks like this:



Store cue 6 pop-up Confirm the settings by clicking Store. 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.

Press 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

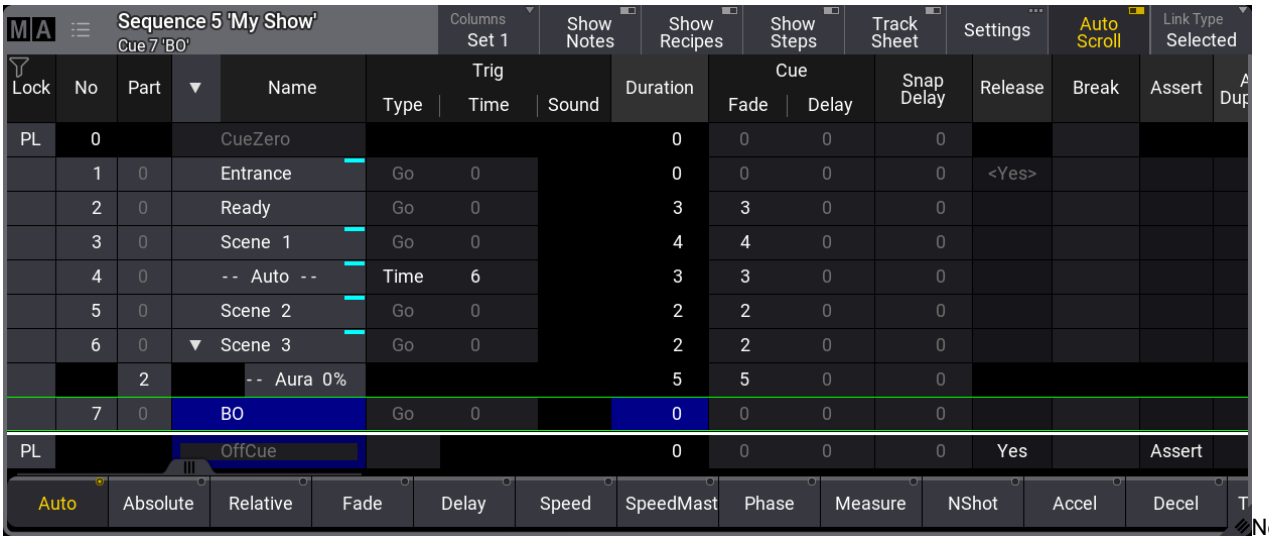
Separating the Auras in their own part instead of just using the outfade time can seem like extra work. In the end, it is a matter of personal programming style. I wanted to show you two ways this look could be achieved. I like to separate attributes that have different timing in part cues. It makes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

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 cue 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.



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 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.

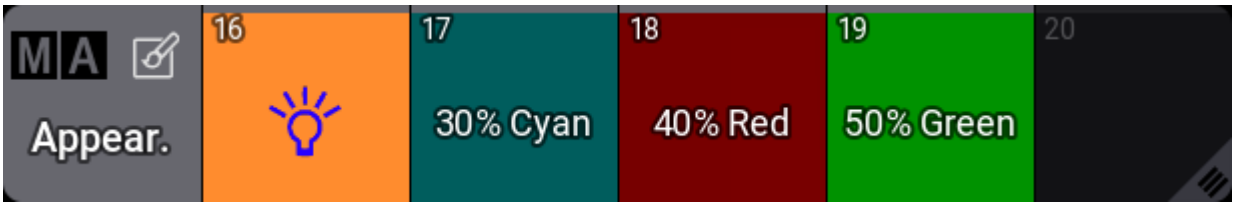
We need to create 3 new appearances. Edit an empty pool object. You might need to scroll in the pool to get to some empty pool objects.

In the **Background Color** fader, set the "R" fader to 0%, the "G" and "B" faders to 100%, and the "Alpha" fader to 30% (right-click the on-screen fader to open the calculator). 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%.

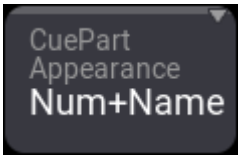
Those were the appearances we needed.



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".



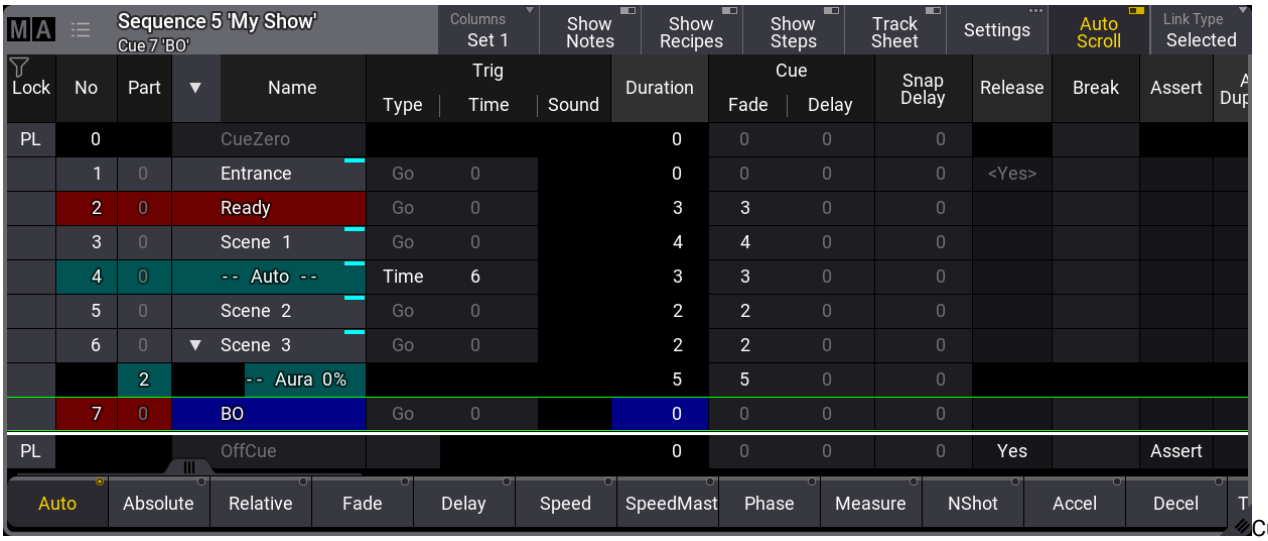
Close the settings.

The easiest way to assign the appearances to cues (or technically the cue parts) is by using the Swipey menu in the Appearance pool. If you forgot about Swipey, please revisit chapter 6.

Use the assign option and assign the "30% Cyan" to 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:



Cues with Appearances

Marking the cues with colors can help you 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 those 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.

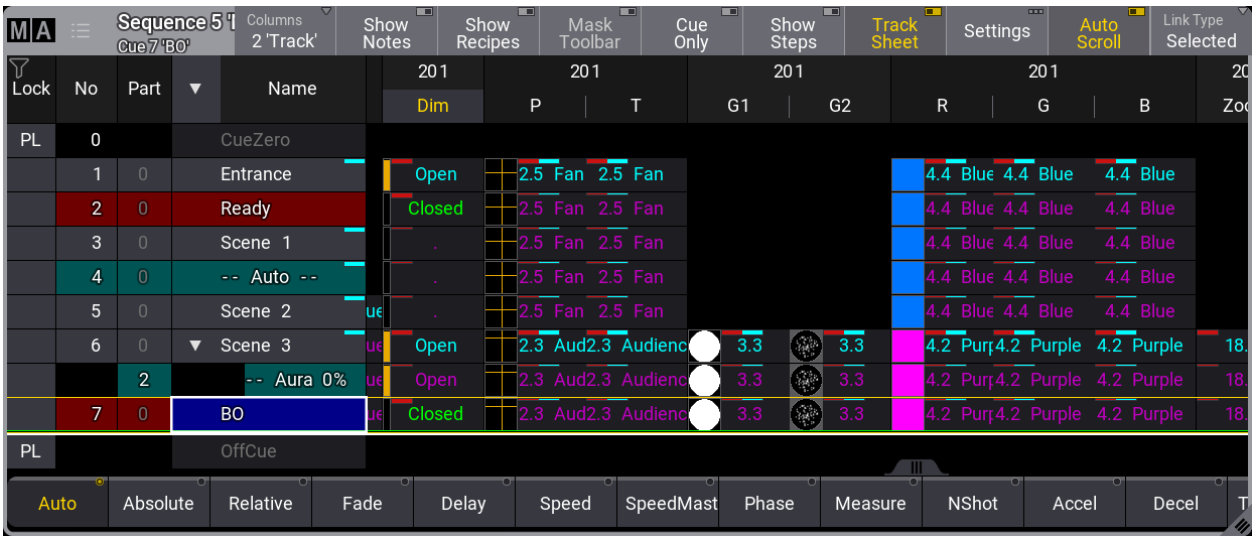
Turn this On if you like, and then close the settings.

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% (Open) in cue 1 and then at 0% (Closed) in cue 2. This then tracks to cue 6, where the value again is at 100%.

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

The cyan text color indicates that it is a new value. This value will use the **Cue In Fade** time.

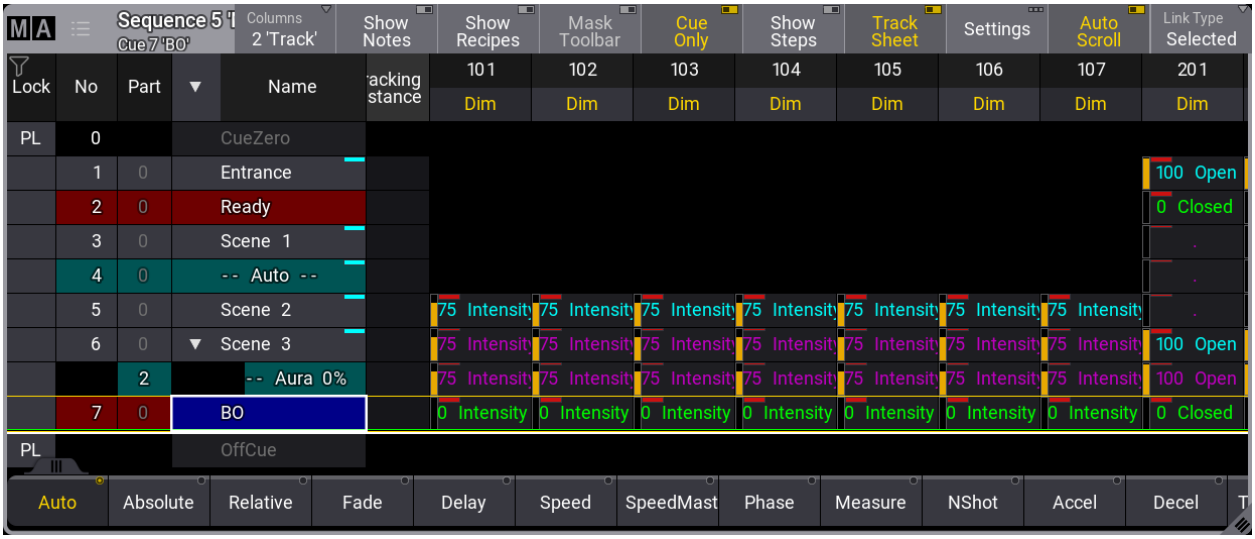
The green text colors are dimmer values going to a lower value, and they will use the **Cue Out Fade** to change the value. The **Cue Out Fade** is the same as the **Cue In Fade** unless you specify a different time.

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 will make a change for only one cue, so the first thing we want to do is turn On the Cue Only button in the title bar.

We would like to change some other settings. Open the Sequence Sheet settings, turn on "Feature Sort", and set "ChannelSet" to "Value+Name". This will order attributes of the same type next to each other and allow us to see the stored values.

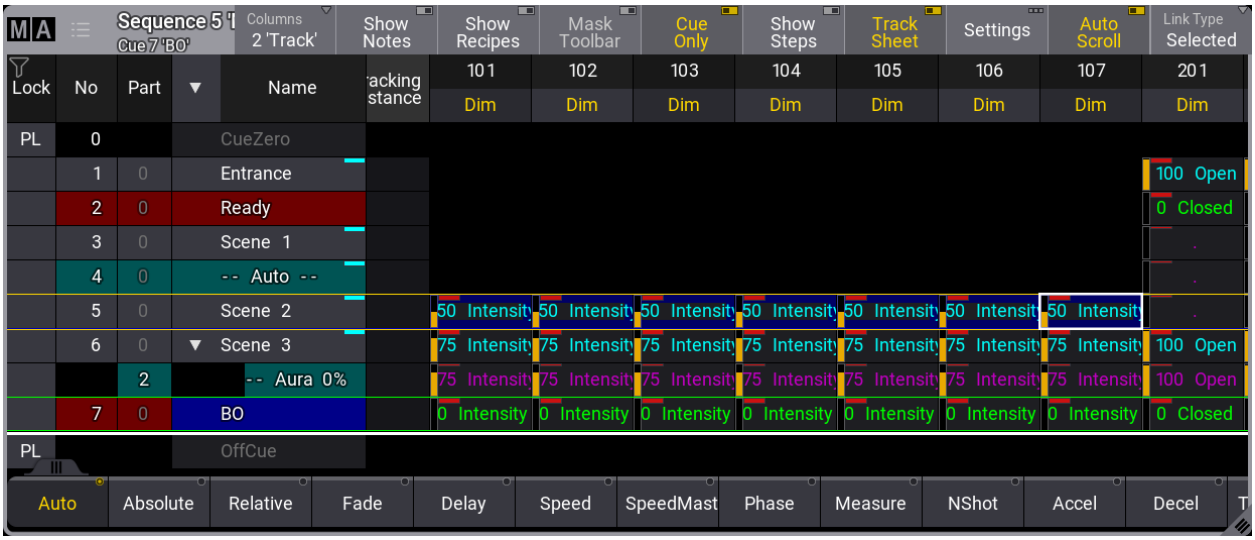


Feature Sort Activated

Now, use the mouse to click and drag through all the cells for fixtures 101 to 107 in cue 5 to mark them 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:



Dimmer Values Edited in Track Sheet

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

Move In Black

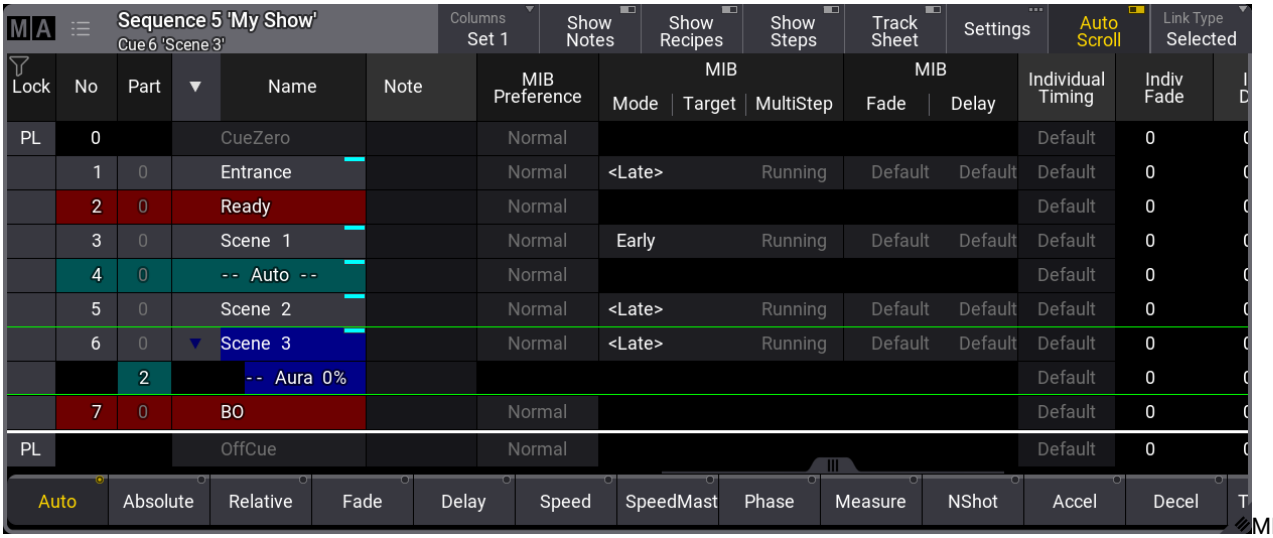
You might have noticed that, when running the cues, the fixtures faded to a new position, color, and gobo, along with the dimmer values. If we want the fixtures to already be at the next position, with the color and gobos ready, then you could store the color, gobo, and position values in the previous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

To use MIB, we must 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 else.

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.

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



MIB Result

The result in the output is that we do not see fixtures move while dimmers 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 information to know about tracking and MIB, but they are 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 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 chapter explores how we can output DMX from the system.

16 - Network and How to Output DMX

This 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 use an onPC solution, the limit is 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 into actual physical DMX universe outputs if we need to control fixtures without an Ethernet port.

The other direction is using grandMA3 consoles as the primary computing hardware. A console-based system can have grandMA3 onPC in the same system, but the limitation mentioned above is not valid.

The console system provides you with certain parameters from the start, depending on the console model. The way to expand the parameters in a console system is by adding grandMA3 processing units - this is the only way to add more parameters when there is a console in the system. Much of the grandMA3 hardware has physical DMX ports. These can (as a general rule) be used as DMX inputs or outputs.

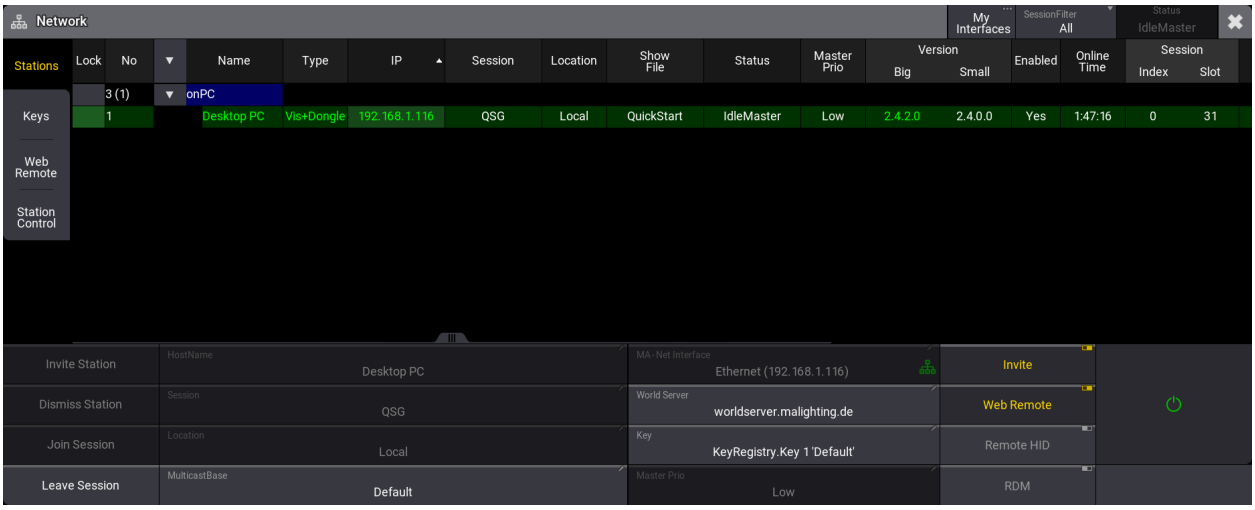
Session

The grandMA3 devices 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. A **Station** is any grandMA3 device capable of creating and running a session. 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.

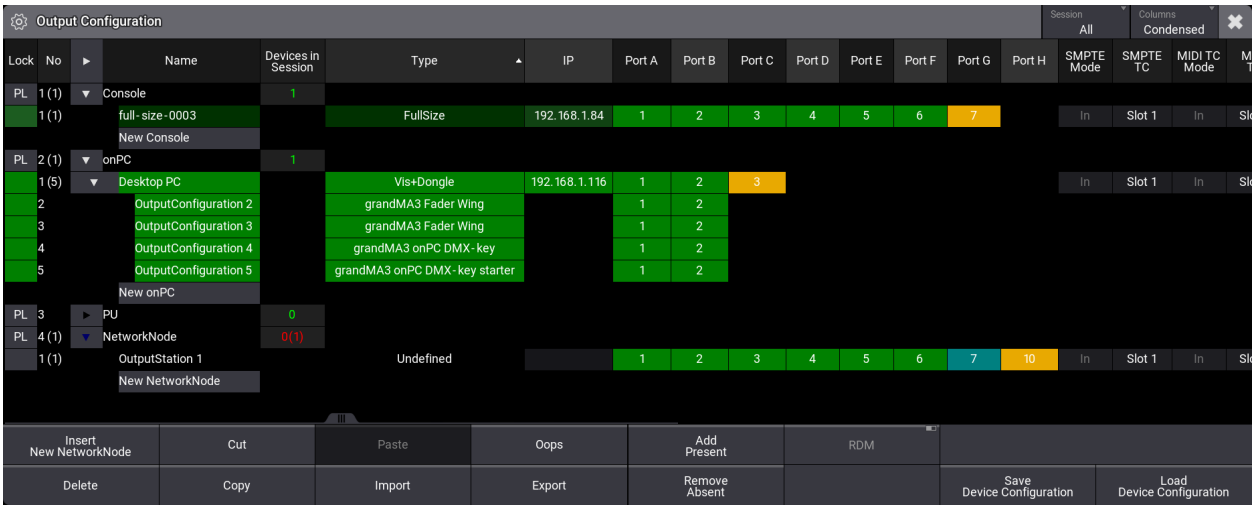


Other grandMA3 hardware on the network will appear in this menu and can be selected and invited into the session.

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 Connector 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 and all possible connected grandMA3 onPC devices. A grandMA3 onPC command wing is not connected in my current setup; instead, a grandMA3 Viz-key is connected. Up to two grandMA3 onPC fader wings can be connected to each grandMA3 onPC station. One of each of the two different grandMA3 onPC DMX-keys can also be connected to each grandMA3 onPC station. Their ports appear as children of the onPC station.

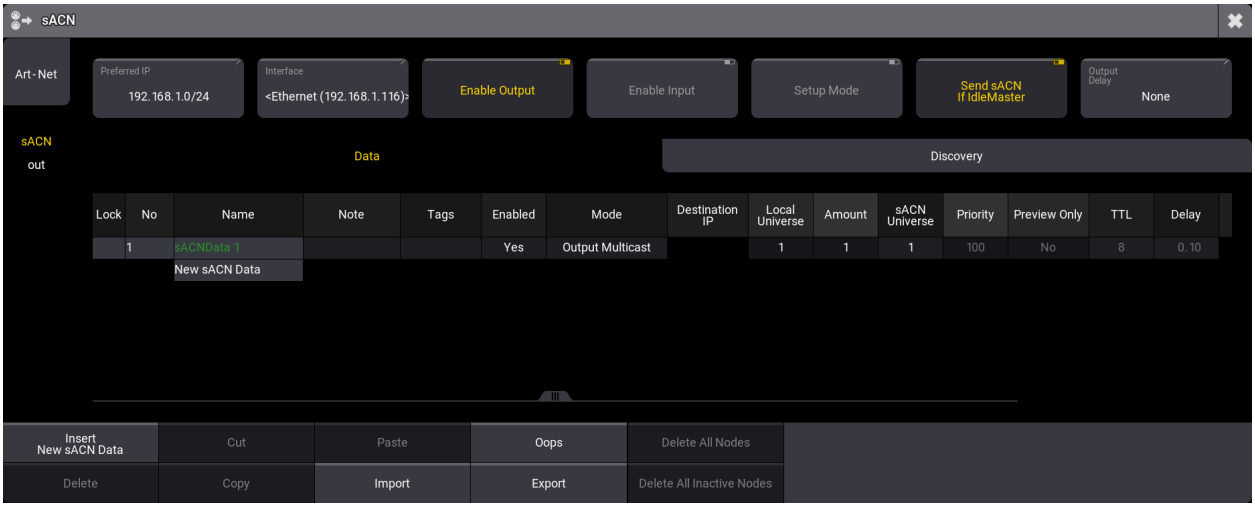
A (not connected) Network Node with a port configuration also exists.

Editing the fields for any port allows you to select which universe it should output or input DMX into.

Network DMX

Another option is to output (or input) DMX using Art-Net or sACN. To do this, open the menu pop-up again and then click 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 Start 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 supports Art-Net or sACN, and remember that you need some grandMA3 hardware to unlock the parameters, even when using Art-Net or sACN to output DMX.

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 Lighting's website (External Web Link).

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.

This was the final chapter in the original version of the Quick Start Guide. Since then, we have added a new chapter about recipes. Future chapters might also get added as new chapters at the end of the guide. The idea is to let users skip the entire quick start guide and just load their "old" quick start showfile to continue learning about the new stuff. This does not mean that the previous chapters do not contain new information (for instance, Quickeys was added since the first versions of this Quick Start Guide), but these new functions that deserve a chapter will be added at the end.

So, the next chapter is about Recipes.

17 - Recipes

In Chapter 15, we created a sequence with multiple cues using different presets.

Recipes can produce a similar result, but in a very flexible setup. This means we can program a show knowing that our fixtures might adjust in the future - both the amount and type. We can then choose to program our show so we are ready for future adjustments.

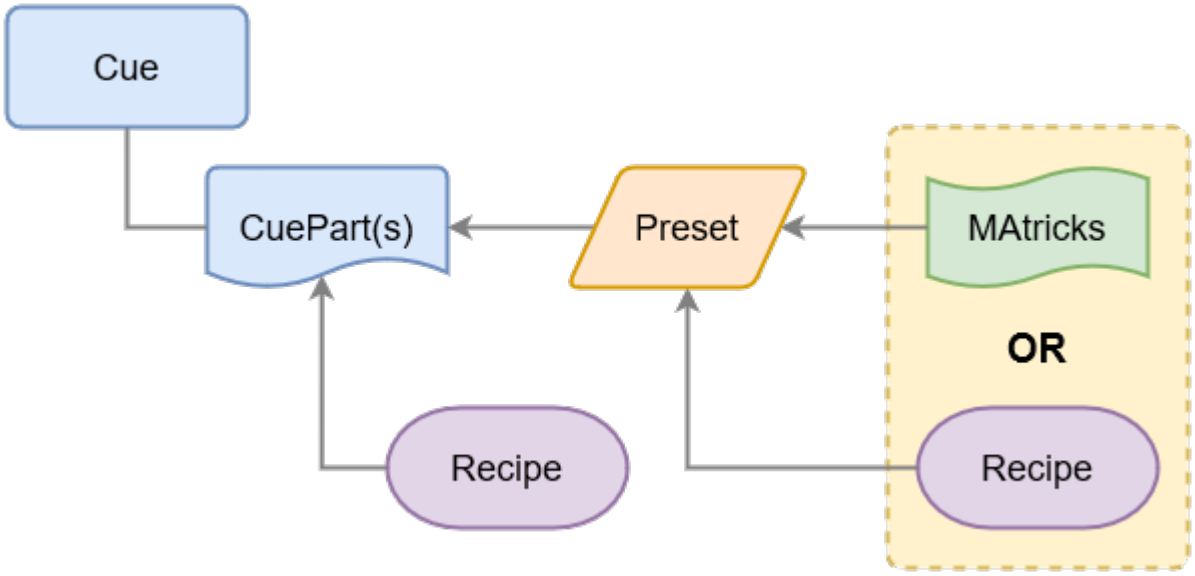
Let us have a look at the theory behind the recipes.

A recipe line can contain a set of information. This often involves a selection of fixtures (possibly from a group), a set of values (often from a preset), and information on how to apply those values to the fixtures. This information is then "cooked" into a cue or a new preset.

If an element is changed, the recipe can be re-cooked, and the cue or preset will reflect the updated information. The element containing information about how to apply the values to the selection is what makes the recipe unique compared to using all presets with embedded presets (like we did in chapter 13) and the flexibility in updating a few groups and then re-cooking an entire sequence, makes the recipes a unique and very flexible tool when you often have to make adjustments to your show setup - for instance in a touring show.

A recipe can contain multiple recipe lines. Each line can contain one set of information, making the entire recipe capable of having multiple sets of information.

This graphic is from the recipe topic:



This shows us that a recipe can be stored in a cue part or preset, which can then be used in a cue part. It also shows an element called "MAtricks", which is currently out of the scope of the quick start guide.

If a cue part contains its own recipes and uses recipe-based presets, it can be complex for the software to determine what output the fixture should produce. Ultimately, each fixture can only have output from one source at any given time.

So I suggest keeping it as simple as possible. You can create incredibly complex programming, and the software will still figure out what to do. There is a greater risk of confusing yourself and your colleagues.

Okay, let us do something and look at how it works.

View Setup

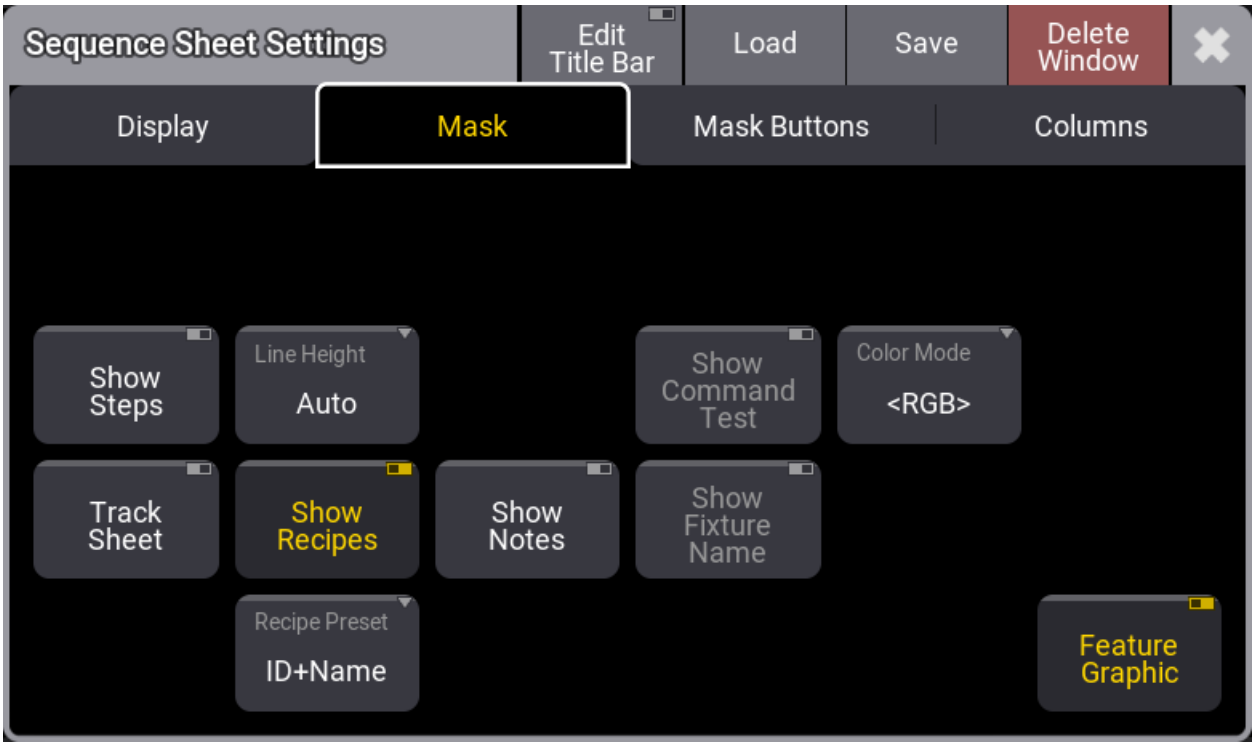
We should set up a view with the elements we will use.

We need a sequence sheet to look at the sequence - create one on an empty user area or call a view with a sequence sheet.

We also need a group pool with an empty group pool object. And we need the All preset pool number 1. It might also be useful to have a 3D Viewer visible.

We need to make sure the sequence sheet displays the recipe lines. It might show this by default, but to ensure it does, click the MA logo in the upper left corner of the sheet, then click the Mask tab. This tab contains settings for customizing the appearance of the sequence sheet. Click Show Recipes to toggle it On. This setting might also have a button in the title bar called 'Show Recipe'. This toggles the same setting as the one in 'Mask'.

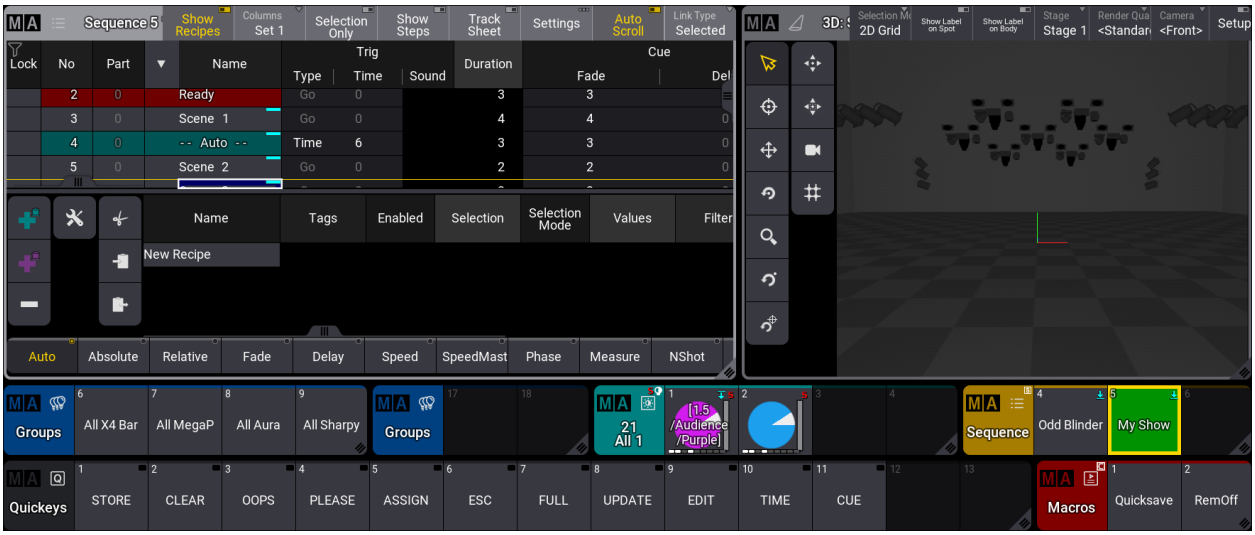
We also want to set how presets are displayed in the recipe lines. Change the setting called Recipe Preset until it says ID+Name.



Close the settings.

Now, the bottom part of the sequence sheet shows an area where recipes can be created and edited.

My view looks like this:



Cue with a Recipe

We are going to create a cue that uses a recipe.

Start by clearing the programmer and turn off any active sequences.

Then, store a new sequence and select it. For me, it will be sequence number 6.

The new sequence should contain an empty cue 1. You can assign an executor to control the sequence if you want.

We are going to create a recipe that uses a group. Select fixtures 201 and 202 and store this as a new group. This will be my group number 17.

We now have all the building blocks we need for our cue recipe.

You can see the recipe area at the bottom of the sequence sheet. Click cue 1 to select it - you may need to click the cue part number.

The separation between the normal sequence sheet and the recipe area can be adjusted by clicking and moving the gray bar, separating the two areas up or down.

Right-click New Recipe in the recipe area. Select Standard Recipe in the small pop-up.

This line has a lot of columns that can contain settings for the recipe line. It is outside the scope of this quick start guide to explain what each column does.

Right-click (or Edit) the field in the "Selection" column. This opens a selection pop-up with all the groups. Select the new group with the two Mega Pointes. Now right-click the "Values" field and select a color preset.

Now we can see the cue name changed, and it got a small "pot" (⬛) icon.

Lock	No	Part	Name
PL	0		CueZero
	1	0	[Purple]
PL			OffCue

Run the first cue of the sequence. We don't see anything. Select the group and give the fixtures a dimmer value. Store this into cue 1 using merge and clear the programmer.

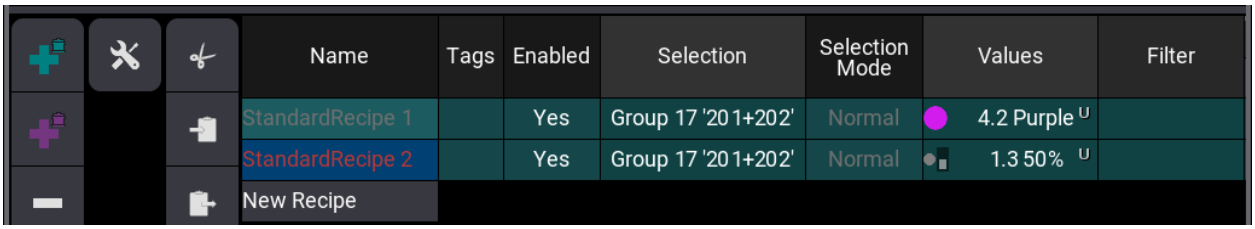
We can see that the fixtures get the color from the preset cooked into the cue, and the dimmer values are stored directly into the cue without referencing a preset or a recipe. Turn on Track Sheet to see what is stored in the cue. It appears that the color is just coming from the preset, just like if we stored it manually into the cue. Only the small green dot in the upper right corner of the value and the pot icon in the name indicate that some attributes are affected by a recipe. Notice that the pot has changed color (orange). This is because we now have a mix of values from a cooked preset and those stored directly in the cue.

You should have some dimmer presets, including one with a low level and one with 100%. If you do not, then please create these (as universal presets).

Let us create a new recipe line for cue 1, so we have two lines. This time, do this by clicking the existing recipe line, then the dark cyan plus icon in the menu on the left.

We also want the group to be the "selection" for this line. It might automatically already be the case, it not, use the swipey menu of the group and select Assign. Now, click the new recipe line. This assigns the group as the selection.

Use either of the two methods to select a dimmer preset with a lower dimmer value as the "value".



Notice that this does not change the output. This is because the cue's manually stored "hard" values have a higher priority than the recipe data.

The second line's name is red, and the pot icon in the cues' name is red. This indicates that some recipe values are not cooked.

Let us try to change the fixture selection in the group. Select group 7 and store the new selection into the group used in the recipe - in my example, group 17. You can choose to merge or overwrite the group.

The result is that the other spots turn on in my selected color and the lower dimmer value - they reference both the dimmer and color preset. The pot icon turned orange. That is because the cue contains cooked recipe data, and there is selective data overwriting some recipe data.

We will now remove the stored "hard" dimmer values from the cue.

With the group selection, give the fixtures a dimmer value - the actual value does not matter; we just need the active programmer value.

Execute the following command:

```
User name[Fixture]>Store Cue 1 /Remove
```

Clear the programmer.

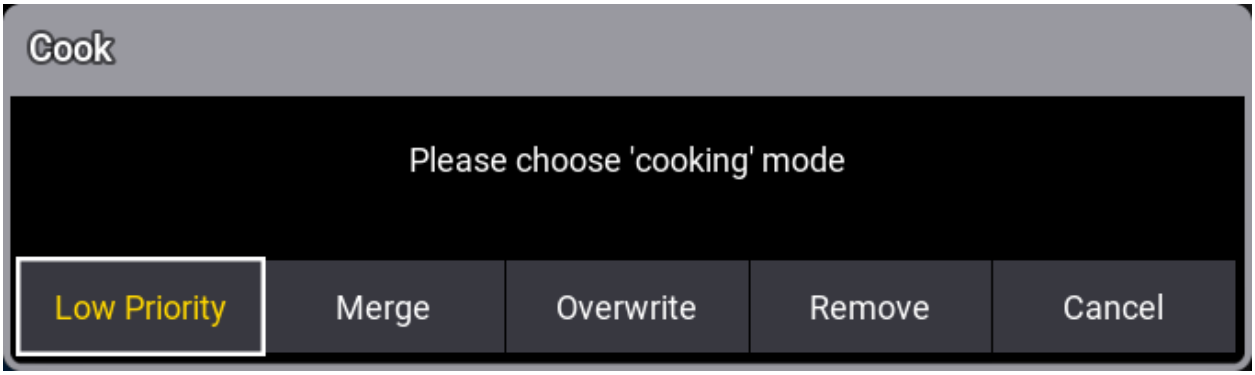
All the "hard-coded" dimmer values are now removed from the cue, and the fixtures have the dimmer values from the recipe. The recipe was automatically cooked with the store action, and the pot is green again. We can also manually cook the cue or sequence again.

Let us try the manual approach. Execute the following command:

```
User name[Fixture]>Cook Sequence 6
```

If your sequence is not number 6, please adjust the number to match.

This gives us a pop-up:



We did not specify how the values should be cooked into the cue in our command, so the software asks us what we want. Note that we can also use the cook command to remove recipe data.

We want to merge the recipe data, so click Merge.

The fixture now uses the dimmer preset.

Let us try to change the dimmer preset in the second recipe line. Select a different dimmer preset with a high output. You can use the assign method or right-click the values field in the line and select the desired preset. Notice how the cue name adjusts to represent the referenced presets.

Add a third recipe line and use the same group as the selection and a position preset as the value.

When the value and selection are added, it is automatically cooked into the cue, and the fixtures reflect the output.

The final change we will make is adjusting the fade and delay times for the dimmer recipe line.

Scroll the recipe to the right to show the MAtricks section. Click the black triangle icon to unfold all the MAtricks columns. Scroll to the "Fade X" and "Delay X" columns.

It is outside the scope to explain the X, but the fade and delay allow us to add a value range for the selection. Edit the "Fade X" cell and in the calculator pop-up click 3 Thru 1 0 Please. The "Delay X" value should be 1.

The result should look like this:

Name	MAtricks			Invert	Speed X	Phase X	Fade X	Delay X
	Y	Z	Shuffle					
StandardRecipe 1				Pan	60.00 BPM	0.00°	0.00	0.00
StandardRecipe 2			F:3.00..10.00 D:1.00	Pan	60.00 BPM	0.00°	3.00 .. 10.00	1.00
StandardRecipe 3				Pan	60.00 BPM	0.00°	0.00	0.00

Try to turn off the sequence and then run the cue. You can see that the individual fixtures use the individual fade times, matching the range in the recipe. It might be easier to see in a fixture sheet.

Finally, edit the group (Group 17) to contain only fixtures 201 and 202, and use the "overwrite" method to store only these two fixtures in the group.

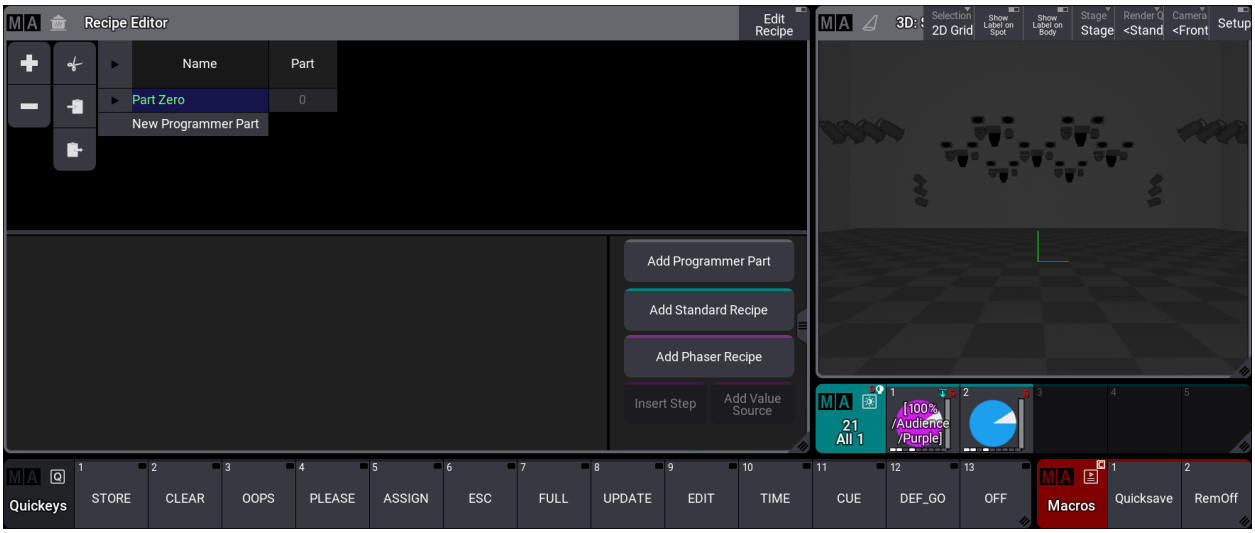
The output is now updated. If not, try turning off the sequence and running the cue again to see how the output adjusts to the new selection.

Preset Recipe

We are going to create a preset containing a recipe.

Clear the programmer and turn off the sequence.

We are going to adjust the view to include the "Recipe Editor" window found in the Tools section. We do not need the preset pools. My view looks like this:



The Recipe Editor is a window we can use to build and edit a recipe in the programmer. We will use this to create a new recipe and store it in a new preset.

Now we can build a recipe in the programmer.

Click Add Standard Recipe. This adds a recipe line.

Click the "Selection" cell. Now, the bottom part lets you select one of the groups. The bottom part changes to display the relevant pool or editor depending on the selected cell.

On the bottom left, there are three buttons that control how the pools are displayed or whether a relevant editor is displayed.

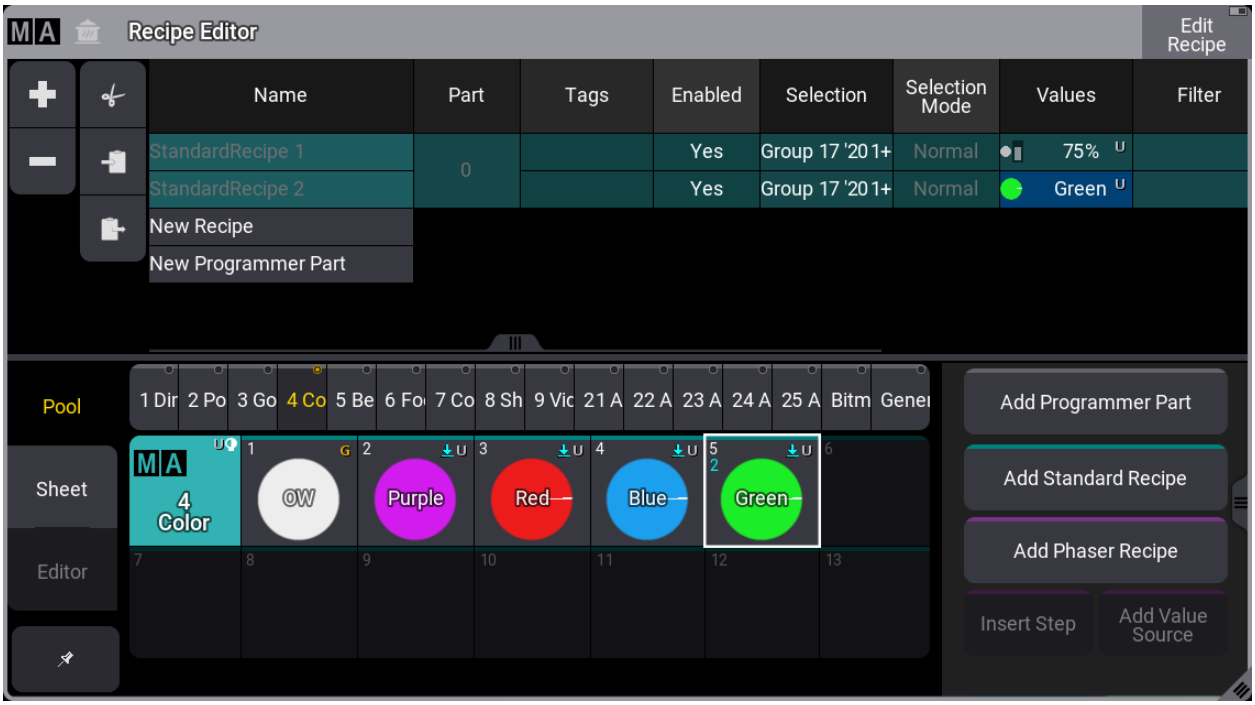
Click the group with the two fixtures (my group 17). Click the "Values" cell in the same recipe line.

At the top of the bottom part, we can now select a preset pool in a bar that can be hard to read. We need a dimmer preset, so click 1 Dimmer in the bar, then select one of the high value presets.

Now we need the second line. Click Add Standard Recipe again.

The group should be added automatically, so we need to click the color preset button 4 Color, and then one of the color presets.

My result looks like this:



These are programmer values, and they can be stored in a cue or a preset. Store this as a new "All 1" preset. My first available preset is number 3.

The preset is created, and the active programmer values are removed.

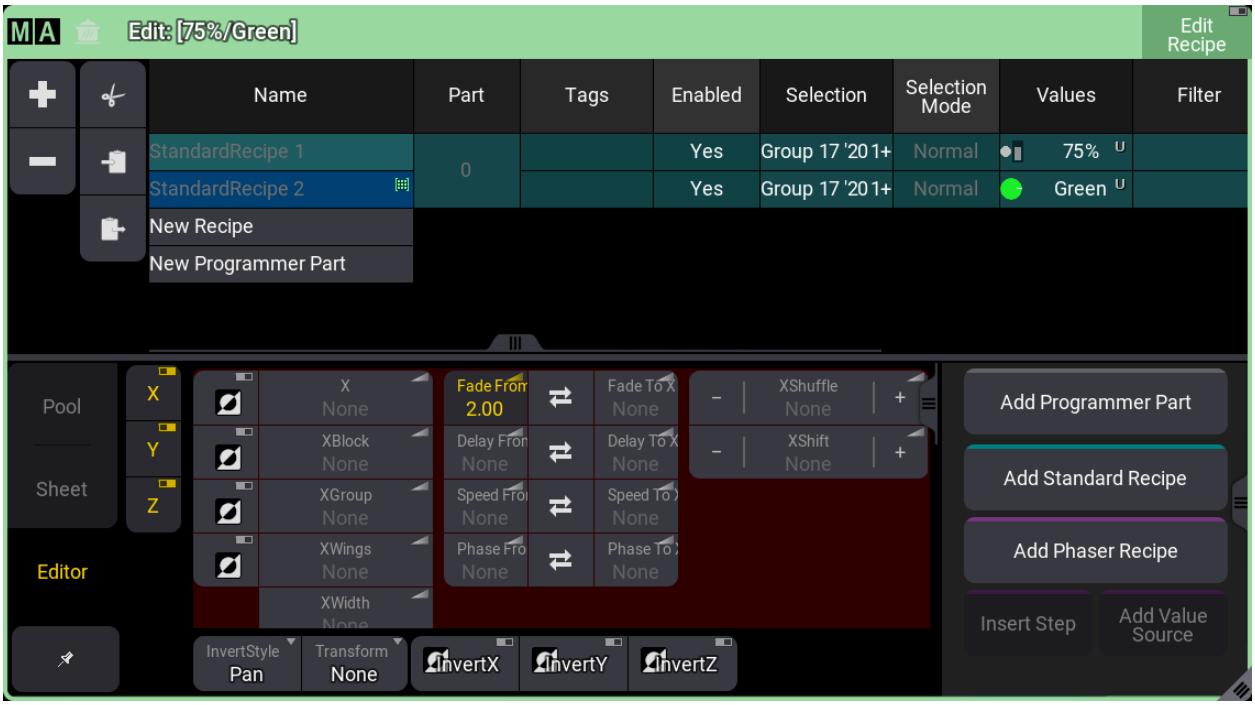
Clear the programmer.

Now, try the preset by clicking it twice. The fixture should turn on in the selected color. Let us try to adjust the preset.

Right-click the preset. The recipe lines are called back into the Recipe Editor, and the editor has a green frame to indicate the general edit mode.

We want to add a fade value for the color. This can be done by selecting the "Name" column in the color preset row.

Now the bottom part displays an MAtricks editor. Here, we need to change the "Fade From X" value to 2.



Click Update and then OK to update the preset. Clear the programmer and try clicking the preset twice to test the change. The color should fade in.

Click the group with all the Mega Pointe (Group 7) and store (merge) the selection into the group used in the recipe (my group 17).

This does not update the output. The programmer still only has the recipe information for the two fixtures. The added fixtures are not automatically cooked into our programmer. Click the preset to call the recipe values for the entire group.

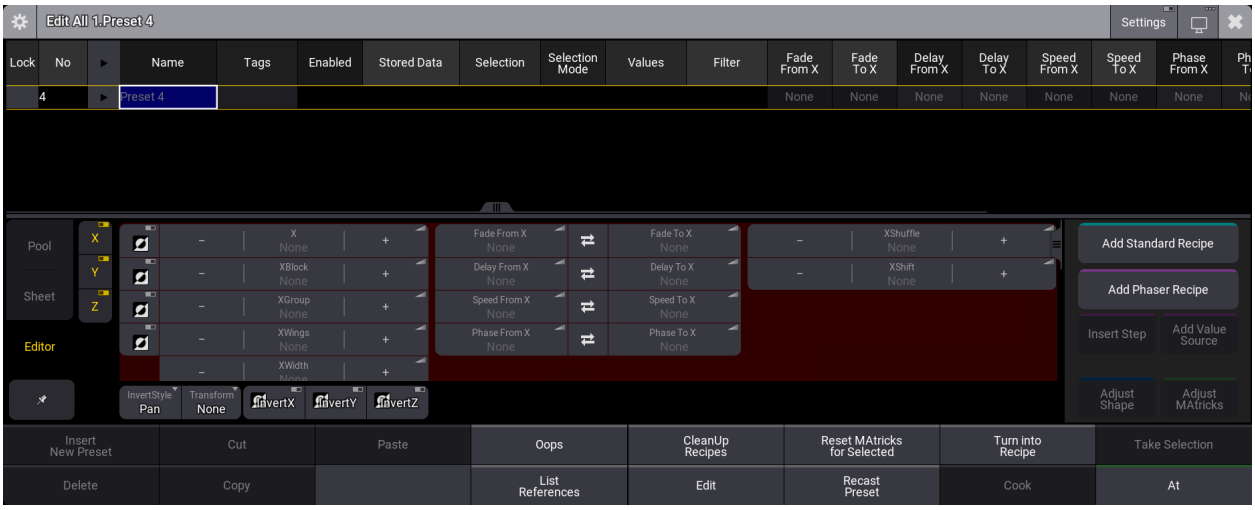
Recipe Preset without a Selection

Clear the programmer again.

We will now create a recipe preset that does not contain a selection. A preset without a selection can be applied to the current selection. The valid values are then cooked into the programmer.

Use the swipey menu on an empty preset in the All 1 preset pool. For me, the first empty pool object is number 4. In the swipey menu, select Edit Settings. This opens an editor for the pool object.

This is a big editor that uses a lot of space. We can get a bit more space for our needs if we turn off the 'Settings' in the title bar.



This big editor has the same recipe section as the Recipe Editor.

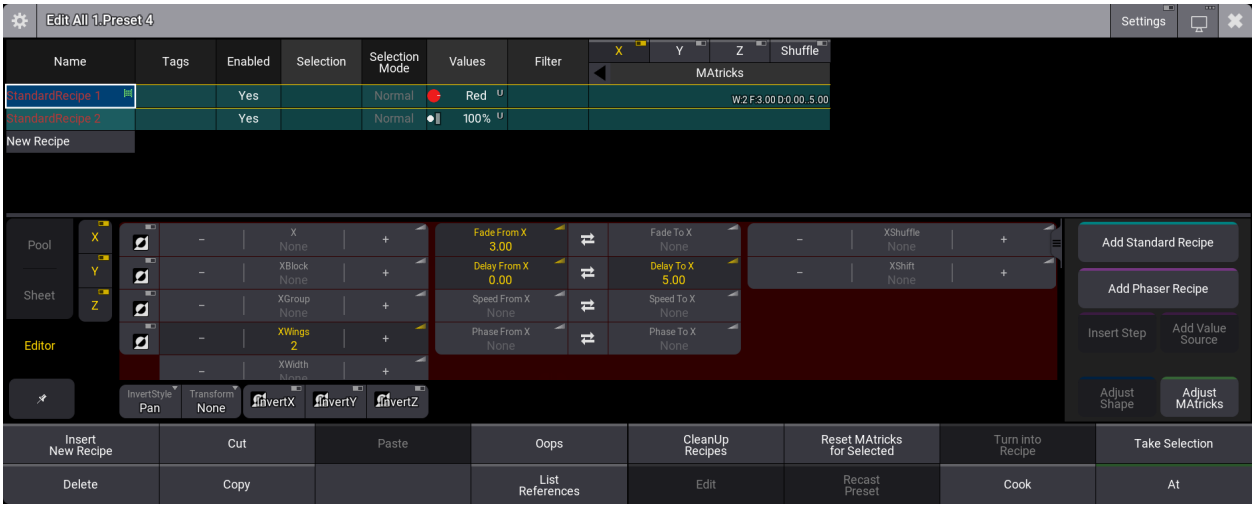
We need to add a recipe line. Click Add Standard Recipe.

This gives us the first recipe line. The input defaults to the selection, but we want to add a value. Please select the "Values" cell. Select a color preset as the value.

Select the name cell and in the MAtricks editor at the bottom, please edit the "XWings" to a value of 2 and the "Fade From X" value to 3, the "Delay From X" to 0 and "Delay To X" to 5.

Add an extra standard recipe line and a dimmer preset with a high value for the recipe line.

The result should look something like this:



Notice the MAtricks part changes to show the settings for the selected line.

Close the editor.

Ensure the programmer is empty. Select the group containing all the Auras, then click the new preset.

This calls the preset into the programmer using the fade and delay times and the recipe values. The programmer content does not refer to the recipe preset but to the content of the recipe preset. This can be seen in the Fixture Sheet.

A preset like this can be used to busk and play back values on the fly or to build other presets.

Clear the programmer.

Add Recipe Preset to the Sequence

Click the first preset we created twice.

Store this as cue number 2 in our recipe sequence.

Clear the programmer and run the two cues. It seems to work. The fixtures do what we wanted.

Turn off the sequence again.

Select fixtures 201 and 202 and store (Overwrite) the selection in the recipe group (Group 17).

Clear the programmer and run the two cues again.

Cue 1 looks as expected, but cue 2 still affects all the fixtures. Clicking the preset twice confirms that the preset actually updated to use the new group.

The problem with cue 2 is that the link to the preset was never updated to the new group content. The cue does not know that the recipe preset was changed to a smaller selection.

Let us fix the problem and simply add a recipe for the second cue.

The recipe line in the second cue should have our recipe group (Group 17) as the selection and the All preset as the "values".

Now we need to cook the sequence using the following command:

```
User name[Fixture]>Cook Sequence 6 /Overwrite
```

If your sequence is not number 6, please adjust the number to match.

Overwrite can be a very dangerous function, but in this case, it makes a lot of sense to use it because we only want the cues to contain the recipe content. The output is updated, but turn Off the sequence, clear the programmer, and try running the two cues again.

You can continue to play around with recipes if you want to explore further.

Remember to store your show when you are done.

Recap

This final chapter was a big one. Recipes can be an extensive topic, and we only scratched the surface.

There are many more details to recipes, but the hope is that you can see some of the advantages of using recipes in a show where flexibility is needed.

Recipes are explained in more detail in the Recipes topics. Using recipes in cues is explained in the Cue Recipes topic. Using them in presets is described in the Recipe Presets topic.

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, there is online E-learning and in-classroom learning - see more on MA Lightings website and possibly contact your local distributor.

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