

ChamSys Personality Creation Guide

This guide is designed to help users better understand the process of personality creation within the ChamSys MagicQ software on PC or console. Once personality files have been created, these can then be used on both the MagicQ and QuickQ software.

To create a personality file, you will need a copy of the DMX chart from the fixture manual. If you don't already have this, it can be obtained from the fixture manufacturer.

Updating Your Heads Library

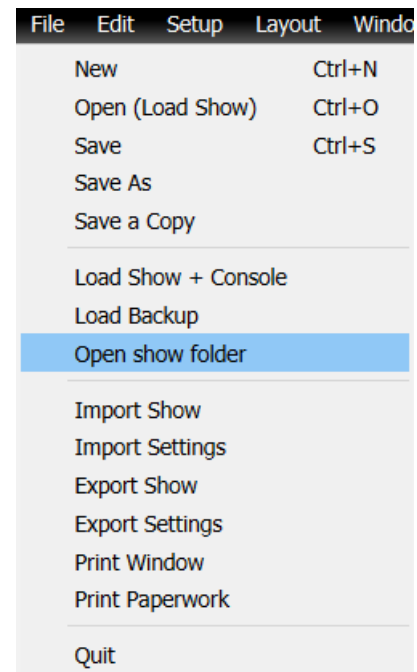
Before beginning to create a new fixture personality file please update your library using the latest heads.all file, linked below. Once the file is downloaded, you can use the methods below to update your library.

On a MagicQ console:

Copy the downloaded heads.all file to a USB memory drive, connect this to one of the USB sockets on the console and navigate to Setup > File Manager > USB Drive. Here you should see the heads.all file. Select it to install.

On PC/Mac/Linux:

Open the MagicQ application and go to File > Open Show Folder (see image, right). This will open your show folder in the file explorer. Open the heads folder and place the heads.all file here, replacing the previous file. Restart MagicQ and allow the heads library to be expanded. You can see the progress of this in the bottom right of the window.



Heads.all update file: <http://files.magicq.co.uk/files/heads.all>

Searching for Existing Personality Files

If the file required still can't be found after updating your heads library, we recommend searching through the library by channels before creating a new file, in case the file you require is listed under another name, or a similar one is available that could be edited.

The head library can be searched through within MagicQ by navigating to: Patch (press the patch key in the top right block of keys) > Choose Head (on screen) > Search.

Once in the Search window, enter the corresponding channel numbers followed by "Search It" to find any matching fixtures.

Note: The first time the search function is used, it may take some time to index the library before data can be entered.

In the example to the right, MagicQ is searching for a fixture with a total of 16 channels. Channel 7 is the intensity/dimmer channel, channel 8 being the shutter/strobe channel, and the pan/tilt attributes being on channels 1 and 3 respectively.

Note that the fixture searched for does not have a cyan or red channel, so this number is left at 0.

Search - fill out required fields - leave blank/0 for not used

Parameter	Value
Whole name	
Manufacturer	
Name	
Mode	
Number of channels	16
Intensity channel number	7
Shutter/strobe channel number	8
Pan channel number	1
Tilt channel number	3
Cyan/Red channel number	0

If searching by channels, the name, manufacturer, and mode fields can all be left blank.

If no matching fixtures are found, then a new personality file for your fixture is required.

Creating a New Personality File

To start creating a new personality/head file, navigate to **Patch > Edit Head > New Head**. Once you do this, MagicQ will pop up a keyboard and ask for a name for your new head file, as pictured below. The name should be in the format used in the example pictured of **MANUFACTURER_FIXTURE_MODE** without spaces, using only underscores () to separate the different sections. This can all be edited at any time if you make a mistake.

KEYBOARD

Enter new file name, e.g. Martin_Mac500_Mode2

CLOSE BLANK

! " £ \$ % ^ & * () _ + <--

Q W E R T Y U I O P { }

~ A S D F G H J K L : @ RET

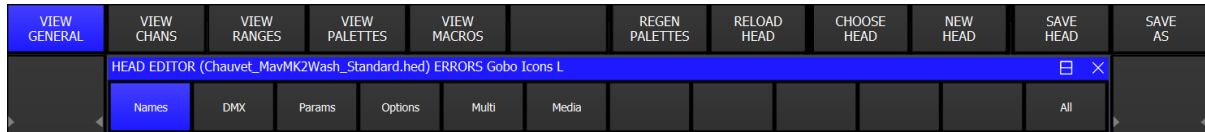
| Z X C V B N M < > ? ~

COPY PASTE

Once this is done, a blank fixture file will be created for you to begin work on.

In the following sections we will run through each tab of the head editor individually and all functions in detail, followed by guidelines for channels and ranges.

View General > Names



In the MagicQ head editor there is one row of tabs along the top on-screen soft buttons containing different window views, including VIEW GENERAL, VIEW CHANS (channels), VIEW RANGES and VIEW PALETTES. We will go into detail on these in later sections. The View General tab then contains sub sections in the lower tabs: Names, DMX, Params (parameters), Options, Multi and Media. We will start by looking at the Names tab and running through each parameter listed in the image below in detail.

Names	DMX	Params	Options	Multi	Media
Parameter		Value			
Manufacturer Name	Chauvet				
Short Name	MavMK1Spot				
Mode	Basic				
Longer Name	Maverick MK1 Spot				
Head Description					
Head File Version	User(12)				
Head File Save Date	Thu Jan 03 11:59:53 2019				
ESTA manufacturer ID (hex)	0000 [ESTA Reserved]				
RDM device model ID (hex)	0000				
RDM personality number	0				
GDTF UUID					
Capture Make					
Capture Name					
WYSIWYG Name					
Old file name					

It is first important to note that names can have spaces in them but should not contain an underscore (`_`) unless it is being used as the separator between manufacturer, short name, and mode as mentioned previously. For example, **Martin_MAC500_Mode 1.hed**. Also do not use `'*` `'?` or `'/'` in the head names. Other punctuation, symbols or special characters should also be avoided where possible. Just use A-Z, a-z and 0-9.

Manufacturer Name:

This should always contain the manufacturer name in as full a format as possible, but in keeping with other heads in the library from the same manufacturer.

Short Name:

Should summarise the name of the fixture in as concise but understandable way as possible. A maximum of 15 characters can be used.

Mode:

For fixtures where the modes are not named or numbered, channel counts should be used (e.g. "6ch"). The channel count should be in a numeric format, suffixed with a lower case "ch" and contain no spaces. "6Ch", "6CH" or "6 ch" should **not** be used.

For fixtures where modes are defined, the mode should be "Mode1", "Mode2", etc, with Mode capitalised and no spaces. For named modes, they should be named in full where possible, e.g. "Extended", "Standard", "Basic", "Short", etc. For fixtures with larger names, use capitalised easy to understand acronyms to keep under the 15-character limit. The full fixture can be defined within the "Longer Name" field.

Longer name:

This name will be displayed in the patch window and does not have the character limit of the short name, so the full and correct name of the fixture can be used. This should contain the full fixture name, without reference to the manufacturer or mode.

Head Description:

Usually the same as the longer name. Use this field for any extra information as well.

Head file version / save date:

Displays the version number and date last saved. These fields are not user editable.

ESTA manufacturer ID / RDM device model ID / RDM personality number:

These fields are filled out only for RDM compatible fixtures with information obtainable from the fixture manufacturer. The manufacturer and device IDs are hex format.

GDTF UUID:

The GDTF universally unique identifier. For use with GDTF files only.

Capture Make and Name:

Use these fields for entering the details of the head as referenced by the Capture Visualiser software so it can be auto patched from Capture.

WYSIWYG Name:

Use this field to enter the head file name in WYSIWYG for auto patching.

Old file name:

When using other personalities as a base for the fixture, ensure that this field is wiped blank by selecting it and pressing ENTER. This field should not be used by default on any new personalities.

View General > DMX

The DMX tab contains all fields relating to the DMX values of the personality file. This is where you would come to enter the number of channels a fixture has, before entering the data for these channels in the VIEW CHANS window. For example, the Chauvet Maverick MK1 Spot we are editing here is in Basic mode, which has 22 channels, so this is entered as the "**Num Of Chans**" value. See below descriptions of the other parameters.

Names	DMX	Params	Options	Multi	Media
Parameter					
Value					
Num Of Chans		22			
DMX Offset		0			
DMX Divby		001			
DMX Min		001			
DMX Max		491			

DMX Offset:

This is normally left at 0 except in special cases where fixtures must be patched at specific DMX offsets.

DMX Divby:

This is normally left at 1 except in special cases where it may be required.

DMX Min:

This is normally left at 1 unless the fixture has a minimum patch address, e.g. master layers in a media server.

DMX Max:

This determines the max channel a fixture can be patched on. Ensure this is correct by ensuring the correct number of channels is set, then by selecting the DMX Max field and pressing ENTER. This is normally left as automatically generated unless the fixture has a maximum patch address, e.g. the DIP switches do not go above 128 or 256.

View General > Params

This window is where parameters are defined, mostly for use with MagicVis, including pan/tilt data, beam angles and strobe speeds.

Names	DMX	Params	Options	Multi	Media
Parameter					
Value					
Pan Range	540 deg				
Tilt Range	270 deg				
Pan Invert	Yes				
Tilt Invert	No				
Pan Speed	0.00 s				
Tilt Speed	0.00 s				
Zoom Narrow	7.00 deg				
Zoom Wide	33.00 deg				
Slowest Strobe	0.00 Hz				
Fastest Strobe	0.00 Hz				
Slowest Rot Speed	0.00 s				
Fastest Rot Speed	0.00 s				

Pan/Tilt Range:

Enter the full range of the pan and tilt in these fields. If the fixture has several selectable pan ranges, enter the default one. This is entered as the degrees of rotation.

Pan/Tilt Invert:

Set to Yes if the pan or tilt needs to be inverted in MagicVis to match the reaction of the physical fixture. This affects MagicVis **ONLY**.

Pan/Tilt Speed:

Currently unused. Set the pan and tilt speeds for MagicVis.

Zoom Narrow/Wide:

Enter the narrow and wide zoom angles in degrees here. If the fixture does not have a zoom parameter, use the wide field to enter the beam angle of the fixture.

Slowest/Fastest Strobe:

Enter the slowest and fastest strobe rates in Hz if the information is given.

Slowest/Fastest Rot Speed:

If information is given for the rotate speed on the gobo wheels, enter these here in seconds. This is entered as the time for one complete revolution.

View General > Options

Here are various options for the personality file, as listed below.

Names	DMX	Params	Options	Multi	Media
Parameter					
Value					
Mov Head	Yoke				
Colour Mix	CMY				
Dimmer Curve	Linear				
Framing Type	None				
Virtual Chans	No				
Virtual Dim	No				
MQTrack	No				

Mov Head:

Select if the fixture has a yoke or a moving mirror. If the fixture has neither, set to yoke.

Colour Mix:

Set this correctly as per the colour mixing on the fixture. CMY for heads with Cyan, Magenta and Yellow channels or RGB for heads with Red, Green and Blue channels. RGBW is for RGB fixtures also with a White channel, while RGBA is for RGB fixtures also with an Amber channel. RGBAW would be used for RGB fixtures with both added Amber and White channels, while the RGBAWUV option is used if the fixture also has a UV channel present. For other types of colour mixing, use the closest match possible.

Dimmer Curve:

Unless information is given otherwise this is normally set to linear.

Framing Type:

If the fixture has internal framing/shuttering, set this value as appropriate for what the fixture features, otherwise leave set to None.

Virtual Chans:

To make the personality a virtual one, e.g. a dimmer and scroller, set this field to yes. This is used where the DMX attributes are at non-sequential addresses.

Virtual Dim:

Use this option if you wish to have a virtual dimmer automatically applied when the fixture is patched. This will only work if the fixture does not have a dimmer channel.

MQTrack:

Specific to MagicQ tracking systems and is only used by MagicQ inbuilt head files.

View General > Multi

This tab is used to define information about multi-element heads.

Names	DMX	Params	Options	Multi	Media
Parameter	Value				
Multiple heads type	Duplicate				
Number of elements	16				
Width	4				
Height	4				
Order	Left to right				
Custom elements	0				
Additional head manufacturer					
Additional head short name					
Additional head mode					
Additional head old patch name					
Additional head num of chans					

Multiple heads type:

When setting up a multi-element fixture, always use Duplicate as the type here. Some older multi-element styles are still available, but not recommended.

Number of elements:

This is entered automatically when setting element numbers of channels in the VIEW CHANS window. The creator only needs to enter the width and height, below.

Width/Height:

Set the width and height here to mimic how the elements are laid out on the physical fixture. For example, an LED bar with 10 elements is likely to have a width of 10, and height of 1. In the example pictured however, the Chauvet Nexus 4x4 LED panel has a width of 4 and a height of 4, totalling 16 elements, as seen in the number of elements.

Order:

Select the order in which the repeating elements are laid out in this field.

Custom elements:

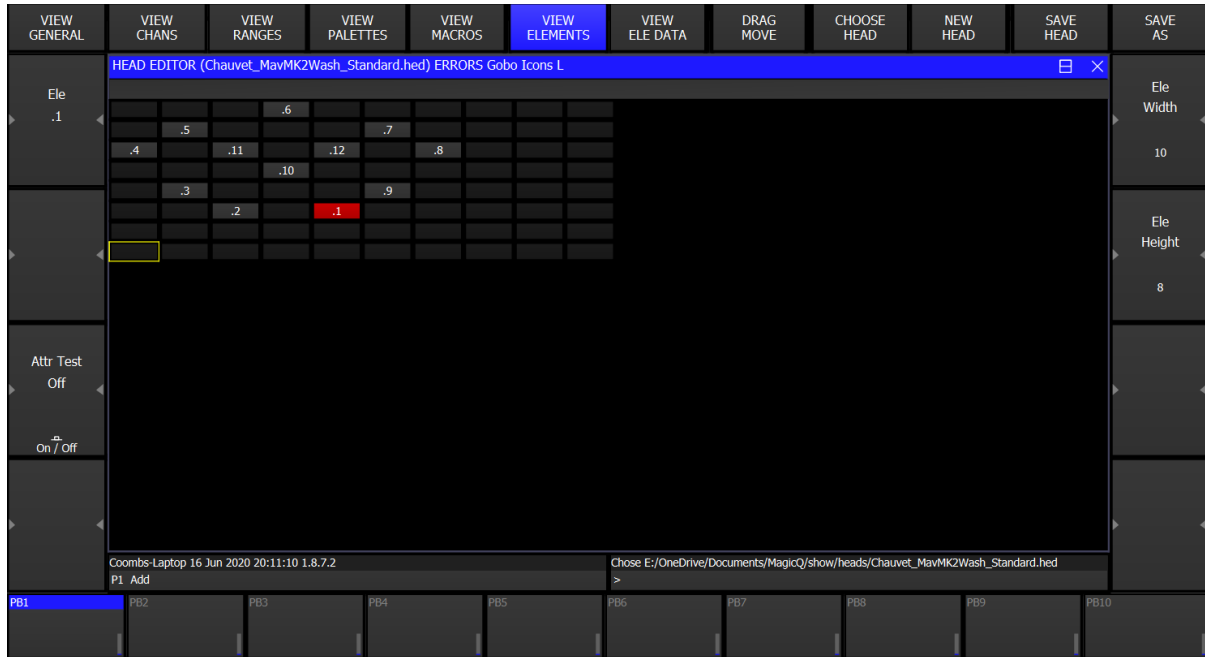
Here a custom element number can be set to be able to lay out elements in a grid, useful for fixtures with more complicated element layouts. See the next section on this.

Additional fields:

Not currently in use.

View General ► Multi ► View Elements

Once a value is set in the **custom elements** field under the **Multi tab** (usually similar to the number of elements), a new tab will appear in the top row between VIEW MACROS and REGEN PALETTES, labelled **VIEW ELEMENTS**. In this window, the fixture elements can be placed into a grid to better create custom shapes where required.



The width and height can be adjusted using the “Ele Width” and “Ele Height” options on the E and F encoders. Ensure there is enough space to lay out all elements as required. Once the width and height are set, elements can be inserted into the grid by simply selecting a square and typing in the element number, followed by ENTER.

When all elements are laid out correctly, you can return to the previous window by pressing the VIEW GENERAL tab again.

View General ► Media

The final tab under the VIEW GENERAL window is the Media tab. This is used only for media servers. Here you would usually set the server type to match the server the personality file is being created for, and the number of layers required. The other fields are usually left at the defaults of 0.

Names	DMX	Params	Options	Multi	Media
Parameter	Value				
Server Type	MagicHD				
Server Version	1				
Head no index	1				
Num of layers	10				
Options	0				

To the left is an example of the Media tab setup within a Media Server personality file for MagicHD.

View Channels

Once the number of channels for the fixture has been set under **VIEW GENERAL > DMX**, navigate to the **VIEW CHANS** (channels) tab. Here you should see a blank number of rows, one for each channel. If there are not enough channels set, you can also use the **INSERT** soft button at the top of the screen to add more. The example we will look at here is the Chauvet Maverick MK1 Spot in Basic mode, which has 22 channels.

VIEW GENERAL	VIEW CHANS	VIEW RANGES	VIEW PALETTES	VIEW MACROS	INSERT	REGEN PALETTES	CHOOSE HEAD	NEW HEAD	SAVE HEAD	SAVE AS							
HEAD EDITOR (Chauvet_MavMK1Spot_Basic.hed) L															Import GDTF		
Chan	Name	Type	Mav	Attrib no	Enc	Size	Instant	Slow enc	Invert	Locate	Default	Highlight	Lowlight	Element		Independent	Select
001	Pan	LTP	Pan (4)	P1X	16 bit hi	no	no	no	no	128	128	no level	no level	Main			
002	Pan F	LTP	Pan (4)	P1X	16 bit lo	no	no	no	no	000	000	no level	no level	Main			
003	Tilt	LTP	Tilt (5)	P1Y	16 bit hi	no	no	no	no	128	128	no level	no level	Main			
004	Tilt F	LTP	Tilt (5)	P1Y	16 bit lo	no	no	no	no	000	000	no level	no level	Main			
005	P/T Speed	LTP	Pos6-Speed (51)	P1F	8 bit	no	no	no	no	000	000	no level	no level	Main			
006	Dimmer	HTP	Int (0)	I1X	8 bit	no	no	no	no	255	000	255	no level	Main			
007	Strobe	LTP	Shutter (2)	B1A	8 bit	no	no	no	no	255	255	255	no level	Main			
008	Virtual Strobe	LTP	FX2 (15)	B2D	8 bit	no	no	no	no	000	000	000	no level	Main			
009	Cyan	LTP	Cyan (16)	C1A	8 bit	no	no	no	no	000	000	000	255	Main			
010	Magenta	LTP	Magenta (17)	C1B	8 bit	no	no	no	no	000	000	000	255	Main			
011	Yellow	LTP	Yellow (18)	C1C	8 bit	no	no	no	no	000	000	000	000	Main			
012	Col Wheel	LTP	White (19)	C1D	8 bit	no	no	no	no	000	000	000	000	Main			
013	Rot Gobo	LTP	Gobo1 (8)	B1X	8 bit	no	no	no	no	000	000	000	no level	Main			
014	Gobo Rot	LTP	Rotate1 (10)	B1F	8 bit	no	no	no	no	000	000	000	no level	Main			
015	Static Gobo	LTP	Gobo2 (9)	B1Y	8 bit	no	no	no	no	000	000	000	no level	Main			
016	Focus	LTP	Focus (12)	B1C	8 bit	no	no	no	no	000	000	000	no level	Main			
017	Zoom	LTP	Zoom (13)	B1D	8 bit	no	no	no	no	128	128	128	no level	Main			
018	Prism	LTP	FX1 Prism (14)	B2C	8 bit	no	no	no	no	000	000	000	no level	Main			
019	Prism Rot	LTP	Pri Rot (31)	B2E	8 bit	no	no	no	no	000	000	000	no level	Main			
020	Iris	LTP	Iris (3)	B1B	8 bit	no	no	no	no	000	000	000	no level	Main			
021	Frost	LTP	Frost1 (32)	B2A	8 bit	no	no	no	no	000	000	000	no level	Main			
022	Control	LTP	Cont1 (20)	B4A	8 bit	no	no	no	no	000	000	000	no level	Main			
Coombs-Laptop 18 Jun 2020 09:54:23 1.8.7.2								Chose Chauvet_MavMK1Spot_Basic.hed									
P1 Add								>									
PB1	PB2	PB3	PB4	PB5	PB6	PB7	PB8	PB9	PB10								

There is a total of 16 columns in this window, each of which are used to set different parameters of the channels. These are:

Chan (channel):

This simply lists the channel number and is not user editable. If you wish to reorder channels, press the MOVE key on the console, select the channel you wish to move, followed by the destination you wish to move it to.

Name:

This is where you would give a name for each channel. See the section on **Channel Parameter Guidelines** for more help on naming channels.

Type:

Determine whether a channel is controlled HTP (highest takes precedence) or LTP (lowest takes precedence). Except for in exceptional circumstances, all channels should be left set to LTP, apart from Dimmer channels, which should always be set to HTP.

Attrib. no (attribute number):

Set the attribute number for the channel here. These are always unique per channel, except on 16-bit or multi-element channels. Double click on the attribute number box to

pop up all the options here. Many are straightforward, but If you are unsure what attributes to assign to channels, see the **Channel Parameter Guidelines** section.

Enc (encoder):

This determines the console encoder wheel that a channel is assigned to. This is determined by the attribute set but can also be adjusted manually by typing in the correct format, as below.

The format for determining encoder location is ATTRIBUTE WINDOW, PAGE NUMBER, ENCODER LETTER. For example, if this is set to B3A, then this channel will appear in the Beam window, on page 3, encoder A. If this is set to C2C, then this channel will appear in the Colour window, on page 2, encoder C.

Size:

Used to determine whether a channel is 8-bit, or 16-bit. 24-bit is very uncommon, and currently unused. Most channels will be set to 8-bit, but 16-bit is used in cases where channels also have second, fine channels. For example, the fixture in the picture above has Pan and Pan F (fine) channels, as well as Tilt and Tilt F (fine). The standard channels are set to 16-bit hi, while the F (fine) channels are set to 16-bit lo. Both the standard and fine channels are set to the same attributes but setting the Size to 16-bit hi and lo removes clashes between these channels.

Instant:

Specifies whether a channel by default snaps immediately to new values rather than fading. This is useful for colour wheels and gobo wheels where you want immediate changes. If unsure, leave this at the default of No for all channels.

Slow enc (encoder):

This makes the encoder work more slowly than normal, which can be good for attributes where every possible DMX value represents a different function and therefore only small turns of the encoder are required to change function. If unsure, leave at No.

Invert:

This also defaults to No. Only set to Yes in rare cases where channels need to be used in reverse. For example, a fixture where the dimmer is at full when 0, and off at 255.

Locate:

The Locate field defines what value the channel is set to when a Locate action is performed on the head. For more help on setting these, see the **Channel Parameter Guidelines** section below.

Default:

The Default field defines what value the channel is set to by default on start-up. For more help on setting these, see the **Channel Parameter Guidelines** section below.

Highlight:

These are the values used to highlight certain fixtures when using the highlight programming function. Usually these are set the same as Locate values, except for Pan and Tilt channels, where these do not need to be specified. For more help on setting these, see the **Channel Parameter Guidelines** section below.

Lowlight:

These values are used on non-highlighted fixtures when using the highlight programming function. These should be set to dim the fixture (dimmer channels values at 128) and colour blue (blue at 255 for RGB fixtures, or cyan and magenta at 255 for CMY fixtures, with all other colour channels having lowlight set to 0. For more help on setting these, see the **Channel Parameter Guidelines** section below.

Element:

The Element field is used for multi-element personalities - these personalities have more than one instance of an attribute type within the personality - for example, a fixture with three individual RGB LED rings.

Heads are set as Duplicated Heads in the Multiple Heads Type field in the Head Editor (see **View General > Multi**, above). Duplicated elements always start from Element 1. All elements that are not duplicated are set to 0 (Main Element). For heads that have both a main element and a repeated element - e.g. a master RGB and then repeated RGB for each element then the master RGB is element 0 and the repeated RGBs start from 1.

Independent:

Also relating to multi element fixtures. Elements 2 and above of Duplicated Heads should normally be set as Independent. This field is hidden for element 0 (main) and element 1 and they are automatically independent from each other.

When set to "Ind" all elements act independently and are made active in the programmer and programmed into Cues. When set to "Dup" elements 2 and above are duplicated from element 1 when they are not explicitly in the programmer or active on a playback.

When set to "Ind" then the "Select" field also becomes active and defaults to "yes".

Select:

Some fixtures have multiple elements that operate completely separately to each other, for example centre RGB cells, and then an outside RGB ring. For these fixtures it is possible set Select for less important elements to "no", so they are not selected by default and therefore are only programmed when explicitly requested.

This is all columns in the View Channels window covered and should help you setup the channels of your fixture, using the DMX chart provided in the fixture manual. For further information on setting up different channels, see the **Channel Parameter Guidelines** section below. Next, we will look at the next tab along to the right – View Ranges.

View Ranges

In this window, you can define the ranges for any channels. All channels can have ranges between 0-255, and these will usually be outlined in the fixture manual. To insert ranges, click the **INSERT** soft button at the top of the screen, once per range. Below is an example of some ranges, descriptions for each column, and how they would be used. For further information on ranges for specific channels, see **Range Parameter Guidelines**.

If you would like to be sent some pre-defined ranges for gobos or colours, please contact support@chamsys.co.uk. Note that these will be guidelines only and require some editing to get them matching your fixture.

VIEW GENERAL	VIEW CHANS	VIEW RANGES	VIEW PALETTES	VIEW MACROS	INSERT	IMPORT RANGES	CAPTURE RANGE	CHOOSE HEAD	NEW HEAD	SAVE HEAD	SAVE AS																																																																																																																																																																																																																																										
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<table><thead><tr><th>Chan</th><th>Type</th><th>Name</th><th>Min</th><th>Max</th><th>Auto Pal</th><th>Icon</th><th>Dep Chan</th><th>Dep Val</th></tr></thead><tbody><tr><td>007 (Strobe)</td><td>Closed</td><td>Closed</td><td>000</td><td>003</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>007 (Strobe)</td><td>Open</td><td>Open</td><td>004</td><td>007</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>007 (Strobe)</td><td>Strobe S>F</td><td>Strobe S>F</td><td>008</td><td>076</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>007 (Strobe)</td><td>Pulse S>F</td><td>Pulse S>F</td><td>077</td><td>145</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>007 (Strobe)</td><td>Rnd Strobe S>F</td><td>Rnd Strobe S>F</td><td>146</td><td>215</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>007 (Strobe)</td><td>Open</td><td>Open</td><td>216</td><td>255</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Fixed</td><td>Open</td><td>000</td><td>007</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Fixed</td><td>Red</td><td>008</td><td>015</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Fixed</td><td>Orange</td><td>016</td><td>023</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Fixed</td><td>Green</td><td>024</td><td>031</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Fixed</td><td>Blue</td><td>032</td><td>039</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Fixed</td><td>Magenta</td><td>040</td><td>047</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Fixed</td><td>CTO</td><td>048</td><td>059</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Fixed</td><td>UV</td><td>060</td><td>064</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Split</td><td>White>Red</td><td>065</td><td>081</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Split</td><td>Red>Orange</td><td>082</td><td>098</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Split</td><td>Orange>Green</td><td>099</td><td>113</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Split</td><td>Green>Blue</td><td>114</td><td>131</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Split</td><td>Blue>Magenta</td><td>132</td><td>145</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Split</td><td>Magenta>Yellow</td><td>146</td><td>165</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Split</td><td>Yellow>Blue</td><td>166</td><td>175</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>Split</td><td>Blue>White</td><td>176</td><td>187</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>CCW F>S</td><td>Col Scroll CCW</td><td>188</td><td>219</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>None</td><td>Stop</td><td>220</td><td>223</td><td>0</td><td>[icon]</td><td></td><td></td></tr><tr><td>013 (Colour)</td><td>CW S>F</td><td>Col Scroll CW</td><td>224</td><td>255</td><td>0</td><td>[icon]</td><td></td><td></td></tr></tbody></table>												Chan	Type	Name	Min	Max	Auto Pal	Icon	Dep Chan	Dep Val	007 (Strobe)	Closed	Closed	000	003	0	[icon]			007 (Strobe)	Open	Open	004	007	0	[icon]			007 (Strobe)	Strobe S>F	Strobe S>F	008	076	0	[icon]			007 (Strobe)	Pulse S>F	Pulse S>F	077	145	0	[icon]			007 (Strobe)	Rnd Strobe S>F	Rnd Strobe S>F	146	215	0	[icon]			007 (Strobe)	Open	Open	216	255	0	[icon]			013 (Colour)	Fixed	Open	000	007	0	[icon]			013 (Colour)	Fixed	Red	008	015	0	[icon]			013 (Colour)	Fixed	Orange	016	023	0	[icon]			013 (Colour)	Fixed	Green	024	031	0	[icon]			013 (Colour)	Fixed	Blue	032	039	0	[icon]			013 (Colour)	Fixed	Magenta	040	047	0	[icon]			013 (Colour)	Fixed	CTO	048	059	0	[icon]			013 (Colour)	Fixed	UV	060	064	0	[icon]			013 (Colour)	Split	White>Red	065	081	0	[icon]			013 (Colour)	Split	Red>Orange	082	098	0	[icon]			013 (Colour)	Split	Orange>Green	099	113	0	[icon]			013 (Colour)	Split	Green>Blue	114	131	0	[icon]			013 (Colour)	Split	Blue>Magenta	132	145	0	[icon]			013 (Colour)	Split	Magenta>Yellow	146	165	0	[icon]			013 (Colour)	Split	Yellow>Blue	166	175	0	[icon]			013 (Colour)	Split	Blue>White	176	187	0	[icon]			013 (Colour)	CCW F>S	Col Scroll CCW	188	219	0	[icon]			013 (Colour)	None	Stop	220	223	0	[icon]			013 (Colour)	CW S>F	Col Scroll CW	224	255	0	[icon]		
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Chan (channel):

Define here the channel number for the ranges. Either type the number if known and press Enter, or double click to select from all channels set for the fixture in VIEW CHANS.

Type:

Some ranges require different types set to work correctly in MagicVis. For example, in the picture above the Strobe ranges have Types set for Open, Closed, Strobe, Pulse and Rnd Strobe. The Colour channel also has range types set – Fixed for single colours and Split for split colours. For more information on this, see **Range Parameter Guidelines**.

Name:

Set names for each range, ideally using the standard formats laid out in the **Range Parameter Guidelines** section below. If Range Types are set first, this often automatically adds names if this field is blank, but these can be edited if required.

Min (minimum):

Set the minimum, or lowest DMX value for each range, as per the fixture manual.

Max (maximum):

Set the maximum, or highest DMX value for each range, as per the fixture manual. As a shortcut, if the minimum values are set correctly, this field can simply be highlighted, and press ENTER to add in the correct values.

Auto Pal (palette):

Use this column to have MagicQ automatically set palettes for certain ranges. 0 (default) means no palettes will be set, while changing to 1 will have 1 palette set per range with this defined. This is usually used just for Gobo ranges but can also be used for the Colour ranges on a colour wheel, rather than using **VIEW PALETTES**.

Icon:

Set icons for the ranges here. Double click to select icons from the library. Alternatively, you can go to <https://www.dropbox.com/s/ovr5ezkdym9vmkf/autoiconmap.csv?dl=0> to download an auto icons file. Once this file is placed in your icons folder, you will be able to hold the **SHIFT** key and press the **AUTO ICONS** soft button at the top of the screen to add some icons in automatically, based on the range names. This may take some time on the first use after starting MagicQ.

Dep (dependent) channel:

In some rare cases, range functions may be dependent on other channel ranges being set to certain values. If ranges are dependent on another channel, set the channel the ranges are dependent on here.

Dep (dependent) value:

Once the dependent channel is set, use this column to set the first value each range is dependent on. For example, if the channel this is dependent on needs to be set between 10-20 for these ranges to be active, set the dependent value to 10. This will then work for 10 onwards, until another dependent value is set i.e. 21.

It is worth noting that usually in the case of dependent channels, there will be more than one range with the same min and max values. Setting up the dependent channel and values correctly will avoid clashes in the ranges. If there are any clashes due to mistakes, these will be highlighted with an exclamation mark (!).

View Palettes

In this window, palettes are defined to appear in the attribute windows when the fixture is patched. The palettes view should usually contain only the standard ten colour palettes as pictured below, but other palettes can be added here if desired.

Below is an example of standard RGB colour mixing palettes and underneath the picture is descriptions for each column in this window, should you wish to create your own palettes. As with channels and ranges, press the **INSERT** soft button to add palettes. Each row defines one palette, containing the information and channels making up that palette, as outlined below.

VIEW GENERAL
VIEW CHANS
VIEW RANGES
VIEW PALETTES
VIEW MACROS
INSERT
IMPORT PALETTES
CAPTURE PALETTE
CHOOSE HEAD
NEW HEAD
SAVE HEAD
SAVE AS

HEAD EDITOR (Chauvet_Nexus4x4_48ch.hed) L

Type	Name	Chans	Icon	Chan 1	Level 1	Chan 2	Level 2	Chan 3	Level 3	Chan 4	Level 4	Colour
Colour	White	3		001 (Red)	255	002 (Green)	255	003 (Blue)	255			
Colour	Red	3		001 (Red)	255	002 (Green)	000	003 (Blue)	000			
Colour	Amber	3		001 (Red)	255	002 (Green)	127	003 (Blue)	000			
Colour	Yellow	3		001 (Red)	255	002 (Green)	255	003 (Blue)	000			
Colour	Green	3		001 (Red)	000	002 (Green)	255	003 (Blue)	000			
Colour	Cyan	3		001 (Red)	000	002 (Green)	255	003 (Blue)	255			
Colour	Blue	3		001 (Red)	000	002 (Green)	000	003 (Blue)	255			
Colour	Pink	3		001 (Red)	255	002 (Green)	105	003 (Blue)	180			
Colour	UV	3		001 (Red)	075	002 (Green)	000	003 (Blue)	130			
Colour	Magenta	3		001 (Red)	255	002 (Green)	000	003 (Blue)	255			
End												

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P1 Add A

Attr Test Off

On / Off

PB1
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PB8
PB9
PB10

Type:

Set the attribute type here, choosing between Intensity, Position, Colour, Beam and Colour Picker. This will define the attribute window the palettes appear in.

Name:

Each palette can be given a unique name to identify it when programming. Usually this would be the name of the colour, for example.

Chans:

Set the number of channels the palette will use here. For RGB fixtures as above, this is set to 3, as we want our palettes to use the Red, Green and Blue channels. If the fixture had RGBW channels, we would set this to 4 instead, for example.

Icon:

Set an icon to appear on the palette here. Double click to select from the icon library. As mentioned in the **VIEW RANGES** section, the auto icon option can also be used here, with the auto icons file available from ChamSys upon request.

Chan (channel) (1, 2, 3 etc):

Set the channels to be used in your palettes here. In the example above, channel 1 is Red, channel 2 is green, and channel 3 is blue, since this is an RGB fixture.

Level (1, 2, 3 etc):

Set the levels for these channels to be used in the palettes. For example, to make a White colour to be used in a White palette, the Level column is set to 255 (full) for all three of the Red, Green and Blue channels, as pictured above.

Using pre-defined palette files:

Alternatively, pre-defined files are available for standard colour palettes which can simply be imported in using the **IMPORT PAlettes** soft button at the top of the screen. These files are available on request from support@chamsys.co.uk.

To use these, import the pre-defined standard palette files as appropriate for the fixture and then modify these to suit the colour output from the fixture. Note that in most cases, the channel columns will need changes to the correct channels.

If the fixture is not available for testing, then these are reasonably accurate across fixtures and close enough for their purpose. If the fixture is available for testing though these should be checked and modified as appropriate.

The standard palettes for fixtures with colour wheels will require modification to meet the values of the different colours. As mentioned previously in the **VIEW RANGES** section though, colour wheels can use the auto palette option instead.

If the fixture has a colour macro or colour mode channel these should be added to the standard palettes by increasing the channel count. They should be added at a value which disables them and allows the colour mixing to be used, usually 0.

View Macros

Here you would define built-in fixture macros. The standard macros that should be defined for all fixtures are "Reset", "Lamp On" and "Lamp Off". These should always be defined unless the fixture does not have one of these functions. Other macros which require a series of channels to follow a sequence of values should also be defined.

Normally a macro should start in a safe range, move to the macro range, and then move back to a safe range. If the macro requires other channels to be set to a specific value, set these values in the first range before moving to the macro range.

Below is an example of Macros set for Lamp On, Lamp Off and Reset. Underneath the picture is descriptions for each column. In this example, the Reset macro uses 1 channel. This is the channel containing the Reset range – usually a control/function channel, or a specific Reset channel. There are 3 steps in the Reset macro. Step 1 holds channel 30 at 0 (no function/safe) for 5 seconds, step 2 holds at 205 (the Reset range) for 5 seconds, then step 3 holds at 0 again for a further 5 seconds.

VIEW GENERAL	VIEW CHANS	VIEW RANGES	VIEW PALETTES	VIEW MACROS	INSERT	IMPORT MACROS		CHOOSE HEAD	NEW HEAD	SAVE HEAD	SAVE AS									
HEAD EDITOR (Chauvet_MavMK1Hybrid_30ch.hed) ERRORS Gobo Types L																				
Name	Chans	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	Steps	D1	D2	D3	D4	D5	D6	D7	D8
Lamp On	1	030										3	5.0s	000	5.0s	134	5.0s	000		
Lamp Off	1	030										3	5.0s	000	5.0s	234	5.0s	000		
Reset	1	030										3	5.0s	000	5.0s	205	5.0s	000		
End																				

Name:

Set a name for the macros here. The names for Lamp On, Lamp Off and Reset should always be exact as these names are specifically looked for in the software for the lamp on all/lamp off all/reset all and keypad shortcuts for the functions. Name any other macros so they can be easily identified.

Chans (channels):

Set this field to the number of channels used by the macro. Most often, only 1 channel will be used, so this would be set to 1.

C1, C2, C3 etc:

Enter the channel numbers used in these fields. As mentioned above, usually only C1 will be used when the macro requires only 1 channel.

Steps:

Set the number of steps to the number of steps in the macro – i.e. how many ranges the macro will stop in. There should be at least two, normally three.

D1, D2, D3 etc:

Use the D fields to set the time for each step and then the DMX value for each of the channels under the C fields. Usually 5 seconds is enough for each step, but some fixture manuals may specify the time required.

Setting up Multi-Element Heads

Modern lighting fixtures often contain multiple elements for the same attributes on the fixture. Most commonly this will be colour channels, such as RGB or CMY, but can also include other attributes, such as Pan and Tilt. These channels will all be set to the same attributes but will cause errors if setup incorrectly. For example, if a fixture has 10x Red channels, all 10 of these channels will be set to attribute 16.

Once the channels are setup as normal and all attributes have been set, you will first need to navigate back to **VIEW GENERAL > MULTI** and following the guidelines in the previous section on this tab to first set the multi element type to duplicate, and then set the width and height appropriate for the fixture.

Names	DMX	Params	Options	Multi
Parameter		Value		
Multiple heads type		Duplicate		
Number of elements		16		
Width		4		
Height		4		
Order		Left to right		
Custom elements		0		
Additional head manufacturer				
Additional head short name				
Additional head mode				
Additional head old patch name				
Additional head num of chans				

When this has been set, navigate back to the **VIEW CHANS** tab. You will now need to set the element numbers in the **Element** column. If you are unsure on this, check back to the previous section on the **View Channels** window for more information. Be sure to check whether the first set of channels should be set to Main or element 1, as per the fixture manual. Finally, choose whether to set the **Independent** and **Select** columns to Yes or No. Again, see the **View Channels** section for more information on this. See the picture below for an example of correctly setup multi element channels.

VIEW GENERAL	VIEW CHANS	VIEW RANGES	VIEW PALETTES	VIEW MACROS	INSERT	REGEN PALETTES	CHOOSE HEAD	NEW HEAD	SAVE HEAD	SAVE AS							
HEAD EDITOR (Chauvet_Nexus4x4_48ch.hed) L																	
	Chan	Name	Type	Attrib no	Enc	Size	Instant	Slow enc	Invert	Locate	Default	Highlight	Lowlight	Element	Independent	Select	Import GDTF
	001	Red	LTP	Cyan (16)	C1A	8 bit	no	no	no	255	000	255	000	Ind 1			
	002	Green	LTP	Magenta (17)	C1B	8 bit	no	no	no	255	000	255	000	Ind 1			
	003	Blue	LTP	Yellow (18)	C1C	8 bit	no	no	no	255	000	255	255	Ind 1			
	004	Red	LTP	Cyan (16)	C1A	8 bit	no	no	no	255	000	255	000	Ind 2	yes	yes	
	005	Green	LTP	Magenta (17)	C1B	8 bit	no	no	no	255	000	255	000	Ind 2	yes	yes	
	006	Blue	LTP	Yellow (18)	C1C	8 bit	no	no	no	255	000	255	255	Ind 2	yes	yes	
	007	Red	LTP	Cyan (16)	C1A	8 bit	no	no	no	255	000	255	000	Ind 3	yes	yes	
	008	Green	LTP	Magenta (17)	C1B	8 bit	no	no	no	255	000	255	000	Ind 3	yes	yes	
	009	Blue	LTP	Yellow (18)	C1C	8 bit	no	no	no	255	000	255	255	Ind 3	yes	yes	
	010	Red	LTP	Cyan (16)	C1A	8 bit	no	no	no	255	000	255	000	Ind 4	yes	yes	
	011	Green	LTP	Magenta (17)	C1B	8 bit	no	no	no	255	000	255	000	Ind 4	yes	yes	
Attr Test Off	012	Blue	LTP	Yellow (18)	C1C	8 bit	no	no	no	255	000	255	255	Ind 4	yes	yes	
	013	Red	LTP	Cyan (16)	C1A	8 bit	no	no	no	255	000	255	000	Ind 5	yes	yes	
	014	Green	LTP	Magenta (17)	C1B	8 bit	no	no	no	255	000	255	000	Ind 5	yes	yes	
	015	Blue	LTP	Yellow (18)	C1C	8 bit	no	no	no	255	000	255	255	Ind 5	yes	yes	
On / Off	016	Red	LTP	Cyan (16)	C1A	8 bit	no	no	no	255	000	255	000	Ind 6	yes	yes	
	017	Green	LTP	Magenta (17)	C1B	8 bit	no	no	no	255	000	255	000	Ind 6	yes	yes	
	018	Blue	LTP	Yellow (18)	C1C	8 bit	no	no	no	255	000	255	255	Ind 6	yes	yes	
	019	Red	LTP	Cyan (16)	C1A	8 bit	no	no	no	255	000	255	000	Ind 7	yes	yes	
	020	Green	LTP	Magenta (17)	C1B	8 bit	no	no	no	255	000	255	000	Ind 7	yes	yes	
	021	Blue	LTP	Yellow (18)	C1C	8 bit	no	no	no	255	000	255	255	Ind 7	yes	yes	
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P1 Add											>						
PB1	PB2	PB3	PB4	PB5	PB6	PB7	PB8	PB9	PB10								

Once this is all setup correctly, there should be no clashes on channels, and "DUP" should no longer be displayed next to channel attributes.

Channel Parameter Guidelines

General:

As a general naming convention for 16Bit channels, they should be suffixed with an "F". So, this would be "Pan F", "Tilt F", "Gobo Rot F", etc. Do not use "Fine" or "Lo".

As a general naming convention for 24Bit channels, they should be suffixed with an "FF". So, this would be "Start Point FF", "End Point FF", "Gobo Rot FF", etc. Do not use "Fine24" or "24bit".

16 bit coarse and fine channels are defined by the Size settings. Set these can be set as appropriate. 8Bit for 8Bit channels, 16Bit Hi for the main 16Bit Channel and 16Bit Lo for the Fine channel.

It Is the same for 24Bit Channels, you will set 16Bit Hi for the main 24Bit Channel and 16Bit Lo for the Fine channel then 24Bit for the 3rd 24Bit Channel.

Unless specified otherwise, channels should usually be set to type LTP. Dimmer channels should always be HTP.

To show multiple options use a forward slash, e.g. "Shutter/Dimmer" or "Strobe/Speed".

Use "Col" not "Colour" or "Color".

Use "Rot" not "Rotate" or "Rotation".

Use "Speed" not "Sp" or "Spd".

Use "Gobo" not "Go" or "Gob".

Dimmer Channel:

The dimmer channel should always be on attribute 0 (IIX) and unless there is particularly good reason not to, the channel type should always be HTP. Locate and highlight value should be the fully open dimmer value. Default value should be fully closed. For fixtures with colour parameters lowlight value should be the fully open value, for fixtures with only a dimmer, the lowlight value should be 50% open. The channel should be called "Dimmer" not "Dim".

Dimmer Speed/Dimmer Mode:

This should always be on attribute 1 (IIX). Ranges should be used to define its function. The channel should be labelled as appropriate.

Dim/Strobe Channels Ranges:

For heads that have Dimmer and Strobe on the same channel ranges should be set as shown below:

Channel Name	Type
Closed	No Range
Dimmer	Intensity
Strobe	Strobe
Open	No Range

In the event of a mixed shutter and dimmer channel, assign this to I1X. The channel should be called "Dimmer/Strobe", "Dimmer/Shutter" or whatever is appropriate.

Pan and Tilt Channels:

The pan should always be on attribute 4 (P1X). Tilt should always be on attribute 5 (P1Y). These channels should be named "Pan" and "Tilt". If they are a 16-bit channel, then set the options as such and for the fine channels name them "Pan F" and "Tilt F". These channels should locate to 50%, usually 128. Fine channel should, unless specified otherwise, locate to 0. No highlight or lowlight values should be set for these channels.

Pan/Tilt Speed:

This channel should always be on attribute 51 (P1F). Label the channel as "P/T Speed". Do not use "Pan Tilt Speed" or any other variant. This channel should locate to the fastest speed possible, preferably in a console/DMX control range rather than on a head speed control range to allow the console to control the fade between positions. No highlight or lowlight values should be set for this channel.

Pan/Tilt Macros:

This channel should always be on attribute 50 (P1E). Label this channel as "P/T Macro". Do not use "Pan Tilt Macro", "Movement Macro" or any other variant. This channel should locate and default to the no macro range. No highlight and lowlight values should be set.

Additional Pan/Tilt channels:

If there are any additional pan/tilt channels these are normally assigned to P1D first, then P1C, P1B and P1A. If rotate channels need assigning then P1D is X rotate, P1C is Y rotate and P1B is Z rotate.

Fixed colour wheels:

The first fixed colour wheel in the fixture should be assigned to attribute 6 (C1X). If this is the only fixed colour wheel it should be named "Col". If there is more than one fixed colour wheel label it "Col 1". This should locate to an open white range, default to this value, and highlight to this value. For the lowlight channel, the fixture should go blue. Set this as required in conjunction with other channels.

If there is a second fixed colour wheel, label this as "Col 2" and assign it to attribute 7 (C1Y). As with the first colour wheel it should locate, default, and highlight to open white, and the lowlight should be set as appropriate with other colour channels to make the fixture go blue.

Cyan, Magenta, Yellow:

If the fixture has CMY channels this should be defined in the fixtures colour mix type.

The labelling should be "Cyan", "Magenta" and "Yellow". Cyan should be assigned to attribute 16 (C1A). Magenta should be assigned to attribute 17 (C1B). Yellow should be assigned to attribute 18 (C1C). Normally these should locate to 0 unless the fixture uses inverse CMY, in which case treat these as RGB channels. The highlight values for each channel should also be 0. Lowlight values should be 255 for Cyan and Magenta, and 0 for Yellow.

Red, Green, Blue:

If the fixture has RGB channels this should be defined in the fixtures colour mix type.

The labelling should be "Red", "Green" and "Blue". Red should be assigned to attribute 16 (C1A). Green should be assigned to attribute 17 (C1B). Blue should be assigned to attribute 18 (C1C). Normally these should locate to 255 unless the fixture uses inverse RGB, in which case treat these as CMY channels. The highlight values for each channel should also be 255.

If the fixture has a separate dimmer, the default should be 255. If the fixture does not have a separate dimmer channel, then the default should be 0. Lowlight values should be 0 for red and green, and 255 for blue.

Amber, White, UV & other colour attributes:

If the fixture has amber, white and/or UV channels, then the colour mix type under View General > Options should be set to RGBA, RGBW, RGBAW or RGBAWUV as appropriate.

White should be assigned to attribute 19 (C1D), Amber to attribute 27 (C1E), and UV to attribute 60 (C1F). The default and locate values for these channels should be 255 unless in exceptional circumstances, such as when there is no separate dimmer channel, in which case default would be 0, but locate still 255. The highlight values should also be 255. The lowlight values should be 0.

If the fixture has a separate dimmer, defaults should be 255. If the fixture does not have a separate dimmer channel, then all colour channel defaults should be 0. Additionally, if the fixture has no dimmer channel, colour attributes should always start on attributes 16 and 17, to allow the use of virtual dimmers. This includes fixtures that only have, for example, warm white and cool white channels.

If a fixture also has CTO and CTO attributes, there are specific attributes for these, which will cause them to appear on page 2 of the Colour window.

If the fixture has a Lime channel, but not UV, this can be set to attribute 60. If the fixture has both Lime and UV, set UV to attribute 60 and Lime to the first available attribute.

For any other colour attributes (Royal Blue, etc), set these on the first available colour channels.

Colour macro:

If the fixture has a colour macro channel it should be assigned to attribute 27 (C1E). If this channel is already in use by a white channel, then you can normally assign it to attribute 7 (C1Y). This channel should be labelled "Col Macro". Do not use "Colour" or "Color" in the name.

This channel should locate, default, highlight and lowlight to a no macro range. It should also be referenced in the standard colour palettes at a no macro range.

Colour speed:

If the fixture has a colour speed channel this should be assigned to attribute 26 (C1F). This attribute should not be used for anything other than a speed channel except in exceptional circumstances. This channel should default to the fastest speed available but should not be referenced in colour palettes.

Label this channel as "Col Speed", "CMY Speed" or "RGB Speed" as appropriate. Do not use "Colour" or "Color" in the channel name.

Shutter or Strobe:

This should always be on attribute 2 (B1A). Ranges should be used to define its function. The channel should be called "Shutter" or "Strobe" as appropriate.

In the event of a mixed shutter and dimmer channel, assign this to IIX.

This channel should always locate and highlight to the first open value, preferably before a strobe range if this is possible. If the fixture has a separate dimmer channel the default value should also be the first open range, if the fixture does not have a separate dimmer the default value should be the closed range. No lowlight value should be specified for this channel.

Iris:

The iris channel should be assigned to B1B. The channel should locate, default, and highlight to a fully open range. No lowlight value should be specified.

The channel should be named "Iris".

Focus:

The focus channel should be assigned to B1C. The channel should locate and default to 128 or a mid-point on the focus range if this channel also has other functions. No highlight or lowlight values should be specified.

The channel should be named "Focus".

Zoom:

The zoom channel should be assigned to B1D. The channel should locate and default to 128 or a mid-point on the zoom range if this channel also has other functions. No highlight or lowlight values should be specified.

The channel should be named "Zoom".

Gobo:

If the fixture only has one gobo wheel this should be assigned to attribute 8 (B1X).

If the fixture has a static and a rotating gobo wheel, the static should be assigned to attribute 9 (B1Y) and the rotating to B1X. If the fixture has two rotating and one static assign rotating 1 to B1X, rotating 2 to B1Y and static to B2X.

Naming – static gobo wheels should be called "Static Gobo" if there is a rotating wheel, or "Gobo" if there is no rotating wheel. Rotating wheels should be called "Rot Gobo" or "Rot Gobo 1" and "Rot Gobo 2" if multiple wheels are used.

Open Gobo must be named "Open Gobo" not "Open" or "White"

This channel should locate, default, and highlight to and open gobo range. No lowlight value should be entered.

Gobo Rotate/Indexing:

If the fixture has a rotating gobo wheel it will normally have a gobo rotate channel. For the first rotating wheel assigned to B1X this channel should be assigned to B1F. For the second rotating wheel assigned to B1Y this channel should be assigned to B1E.

This channel should be named "Gobo Rot" or "Gobo Rot 1" and "Gobo Rot 2".

This channel should locate, default, and highlight to a stop range. No lowlight value should be entered.

Frost:

If the fixture has a frost wheel this should be assigned to B2A. The channel should locate, default, and highlight to a no frost range. No lowlight value should be specified.

This channel should be named "Frost".

Prism/FX:

The first prism/FX channel should be assigned to attribute 14 (B2C). The channel should locate, default, and highlight to a no prism/FX range. No lowlight value should be specified. A second prism/FX channel should be assigned to attribute 15 (B2D), and any others follow on subsequent FX attributes.

The channel should be called "Prism" or "FX Wheel" as appropriate.

Prism/FX Rotate:

The prism/FX rotate channel should be assigned to B2E. The channel should locate, default, and highlight to a no rotate range. No lowlight value should be specified.

The channel should be named "Prism Rot" or "FX Rot" as appropriate.

Macros:

If the fixture has a beam macro channel this should be assigned to B3A. Please note that colour macros or pan/tilt macros should still be assigned as previously described. This channel should default, locate, and highlight to a no macro range. No lowlight value should be specified.

The channel should be named "Macros".

Control:

If the fixture has a control channel it should be assigned to attribute 20 (B4A) and labelled as "Control". Some fixtures have separate channels for lamp and reset, in which case these should be assigned to B4B, B4C and B4D in this order. Use B4A for the lamp control and B4B for reset.

This channel should normally be set to instant.

This channel should be named "Control", "Reset" or "Lamp" as appropriate.

Beam speed channels should be on B4C, regardless of other channel assignments on beam page 4.

Framing/shuttering/keystone channels:

These should be assigned to beam page 5 and named as appropriate.

For framing and shuttering attributes use the prefix "Frame" on the channel name, e.g. "Frame Top", "Frame Left", etc.

For keystone attributes use the prefix "Key" on the channel name, e.g. "Key Left", "Key Right", etc.

Barn door, door, shutter, shut, fra, fr and edge channels should all be referred to as "Frame".

For rotation use "Frame Rot" and "Key Rot" as appropriate.

No Function/Reserved channels:

If the fixture has no function or reserved channels, these can all be assigned to attribute 63. These channels locate, default, highlight and lowlight values can just be left with no value set.

These channels should be named "No Function".

Range Parameter Guidelines

General:

Each word of the range name should be capitalised unless in exceptional circumstances. This is to improve the readability of the range names.

Spaces should be used between words and numbers. "Macro1" should read "Macro 1". This improves the readability of the range names. Do not use underscores (_) or full stops (.) between words.

If the channel only has one range (i.e. 0-255), do not define it. The channel name will be sufficient so no data should be entered in the ranges view.

"Rnd" should always be used in place of "Random".

"Col" should be used in place of "Colour" or "Color".

"Rot" should be used in place of "Rotate" or "Rotation".

"Speed" should be used in place of "Sp" or "Spd".

"Gobo" should be used in place of "Go" or "Gob".

"CW" should be used in place of "Clockwise", "Forward", "Fwd", ">>" or ">".

"CCW" should be used in place of "Counter-Clockwise", "Anticlockwise", "Reverse", "Rev", "Backward", "Bwd", "<<" or "<".

"Fig" should be used in place of "Figure" or "Figure Of".

"P/T" should be used in place of "Pan Tilt", "Pan/Tilt", "Movement", "Move".

P/T Speed channels

Label the speed as "Fast > Slow" or "Slow > Fast". This should have spaces in between the words and the < or > symbols.

For movement or wheel blackouts use:

"P/T B/O"

"Col B/O"

"Gobo B/O"

"Col Gobo B/O"

P/T Macro channels:

See the information given under macro channels.

Pan/Tilt channels:

Unless there is good reason to, do not specify ranges for these channels.

Colour channels:

"Colour" and "Color" should never be used. Always shorten to "Col".

For colour scrolling ranges, label these as "Col Scroll CW" or "Col Scroll CCW" as appropriate. Do not use arrows, fwd, bwd, or any other method of indicating direction other than CW and CCW. Do not indicate speed in the name; use the range type for this. For a stop range, label this is "No Rot Col".

Do not define ranges for CMY/RGBAW channels unless necessary.

For fixed colour wheels use the colour name for full colour, e.g. "White", "Red", and "Green". For light and dark colours prefix them with light and dark, e.g. "Dark Red", "Dark Blue", "Light Blue", and "Light Green".

For split colours use the two-colour names separated by >, e.g. "White > Red", "Red > Blue", "Green > UV". In this situation use L and D for light and dark, e.g. "White > DBlue", "DBlue > LGreen", "LBlue > Red". Ensure that the colour icons are correct. Do not use slashes between the colours e.g. "White/Red".

Set the range types as appropriate for a fixed or split colour.

If you are only supplied with the information Col1 > Col 2 > Col 3 then you can import the ranges already created by ChamSys in the CSV documents. For these documents please contact: support@chamsys.co.uk

For CTC/CTO ranges, these can be set with a single range named, for example, "2600>10000K" to automatically insert ranges between these two values.

Colour Macro channels:

See the information given under macro channels.

Strobe/Shutter channels:

If the fixture does not have an "Open" range (e.g. LED fixtures) the first "No Function" range should be defined as the open type.

Do not indicate speed in the range name. "Strobe S>F" should not be used, use the range type to indicate the speed. Just label the channel as "Strobe".

Random Strobe – use "Rnd Strobe" as the range name. Again, do not indicate speed in the range name; use the range type for this. "Rnd" should not be used, always define it as "Rnd Strobe".

Open ranges should be defined as "Open". For LED fixtures without an open range use "No Function" but define the range type as open.

Closed ranges should be defined as "Closed" where this is used on fixtures.

Pulse ranges – if there are no specifics given, label the range as "Pulse". Do not indicate speed in the range name; use the range type for this. For pulse open (ramp closed) ranges, label them "Pulse Open" and set Pulse Open as the range type. If speeds are indicated then use "Pulse Open S", "Pulse Open M" and "Pulse Open F" for slow, medium and fast. For pulse closed (ramp open) ranges, label them as "Pulse Closed" and set Pulse Closed as the range type. Use S, M and F suffixes as appropriate to indicate speed if required.

For random pulse ranges, use "Rnd Open" and "Rnd Closed", again suffixing with S, M and F if required.

For zap strobe ranges, use "Zap".

If the fixture has a low power open setting on the shutter channel, label this as "Open Low Power". Do not set this range type to open, this should be used for open and full power ranges.

If the fixture has a sound activated or music-controlled range, label this as "Sound Active".

Iris:

The iris is named in terms of wide and narrow. Use the following names:

"Wide"

"Wide > Narrow"

"Narrow > Wide"

"Narrow"

If the iris channel has other functions e.g. pulse, name these as described under the shutter ranges.

Set the iris ranges as appropriate in the type fields.

Focus:

Normally ranges are not defined for this channel unless it has other functions other than focus.

Zoom:

The zoom is named in terms of wide and narrow. Do not use open and closed in the ranges for this channel. Use the following names:

"Wide"

"Wide > Narrow"

"Narrow > Wide"

"Narrow"

If the zoom channel has other functions e.g. pulse, name these as described.

Set the zoom ranges as appropriate in the type fields.

Gobo channels:

For static gobos name these as per the gobo names or "Gobo 1", "Gobo 2", etc.

For rotating gobos, name these as per the gobo names or "Rot Gobo 1", "Rot Gobo 2", etc. If there are multiple rotating wheels use "Rot Gobo 1-1", "Rot Gobo 1-2", "Rot Gobo 2-1", "Rot Gobo 2-2", etc.

Use "Gobo Scroll" for the scroll range, or "Gobo Scroll CW" and "Gobo Scroll CCW" if the direction is given. Do not use "Fwd", "Bwd", "Rev" or arrows to indicate the direction.

You must set the Auto Pal to 1 for each gobo position. This is set in view ranges, see picture below.

Gobo Rotate/Indexing channels:

Use the following:

"Rot CW Gobo"

"Rot CCW Gobo"

"No Rot Gobo"

"Gobo Indexing"

Do not use "Stop" or indicate speed, the range types should be used for this. Do not use "Fwd", "Bwd" or "Rev". Forward should be taken as CW; backwards/reverse should be taken as CCW.

Prism channels:

The prism channel should contain ranges to indicate the prism type and if necessary, prism rotate. The prism rotate may be on another channel as well, in which case the same applies.

If there is only one type of prism in the fixture, just name it "Prism" otherwise use "3 Facet", "4 Facet", "5 Facet", "9 Facet", etc as required.

The off range should be named "Prism Off". The on range should be named "Prism On". Use "Prism Rot CW", "Prism No Rot", and "Prism Rot CCW" for any rotate ranges. Do not use any other method of indicating direction or indicate speeds. If there is an indexing range name this "Prism Indexing". Use the type to indicate speed and direction.

FX and FX Rotate channels:

If the fixture has an FX channel then name the FX as appropriate or use "FX 1", "FX 2", "FX 3", etc. For the no FX range always name it "No FX".

For FX Rotate use "FX Rot CW", "FX Rot CCW", and "FX No Rot". Do not use any other method of indication direction or speeds. If there is an indexing range name this "FX Indexing". Use the type to indicate speed and direction.

Beam Shape and Beam Shape Rotate channels:

If the fixture has a beam shape channel, then name it as "Beam Shape Off" and "Beam Shape On".

For rotating use "BS Rot CW", "BS Rot CCW" and "BS No Rot". Do not use any other method of indicating direction or speeds. If there is an indexing range, name this "BS Indexing". Use the type to indicate speed and direction.

Animation and animation rotate channels:

If the fixture has an animation wheel, then name it as "Anim Off" and "Anim On".

For rotating use "Anim Rot CW", "Anim Rot CCW" and "Anim No Rot". Do not use any other method of indicating direction or speeds. If there is an indexing range, name this "Anim Indexing". Use the type to indicate speed and direction.

Macro channels:

This applies to all macro channels including pan/tilt, colour, and beam macros.

The no macro range should be called "No Macro". Do not use "Off" or "No Function"; always define it as "No Macro".

If macro details are not given, then use "Macro 1", "Macro 2", "Macro 3" etc. If details are given then name as appropriate, e.g. "Fig 8", "Circle", "Red", "Yellow", "Light Blue", etc.

If there is macro rotate ranges use "Macro Rot CW", "Macro No Rot" and "Macro Rot CCW" as the range names.

Control channels:

These channels should normally contain the following ranges:

"Lamp On"
"Lamp Off"
"Reset"

For specific reset types use the type followed by reset, e.g. "P/T Reset", "Col Reset", "Focus Reset", "Gobo Reset", etc.

For other control attributes name them so they can be understood clearly by all users.

Closing Notes

If you require any further information on personality creation or would prefer to ask the ChamSys team to create the personality file for you, then please do not hesitate to get in contact via the details below, or submit a request on our Bugtracker website.

If you finish creating a new personality file that wasn't previously available in the ChamSys library, please also feel free to email this to the team, in order to have this included in the next library update and become available for the whole community.

Email: support@chamsys.co.uk

www.chamsys.co.uk/bugtracker

Tel: +44 (0)2380 238 666

A large, stylized, handwritten-style logo for ChamSys, rendered in black ink. The letters are thick and fluid, with a cursive feel. The 'C' is very large and loops around the 'h'. The 'S' at the end is also large and loops back towards the 'y'.