

# **MagicQ Installation Instructions**

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<b>REVISION HISTORY</b>
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NUMBER	DATE	DESCRIPTION	NAME
v1.7.3.6	07/02/2017		ChamSys

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## Chapter 1

# Installing MagicQ Software & Drivers

### 1.1 MagicQ software

MagicQ software runs on PCs and Macs and can be downloaded free from the ChamSys web site [www.chamsys.co.uk/download](http://www.chamsys.co.uk/download).

### 1.2 MagicDMX

MagicDMX devices do NOT need any additional drivers – they use HID drivers within the operating system. Simply plug in the device and start MagicQ.

To confirm that the MagicDMX is operating correctly go to Setup, View System, View status, Interfaces. The MagicDMX Status should say "Connected" and "DMX out".

MagicDMX is enabled as DMX output by default. It can be disabled/enabled from Setup, View Settings, Ports, MagicDMX.

When first plugged in the MagicDMX alternates green and orange LEDs every second. When MagicQ is started and connects to the device then the green LED is on permanently and the orange flashes faster as it receives data from MagicQ.

When using MagicDMX Basic and MagicDMX Full interfaces *demo mode* will continue to be shown at the top of the MagicQ window. This does not affect the programming of MagicQ or restrict the output if you have a MagicDMX Full interface. *Demo mode* does restrict some advanced MagicQ functions which are unlocked with MagicQ hardware (Not MagicDMX).

### 1.3 MagicQ Wings & Interfaces

MagicQ Wings (Mini wing, PC Wing, Maxi Wing, Extra Wing, Playback Wing, Execute Wing) and MagicQ DMX interfaces (Dual DMX, Audio, MIDI/SMPTE) use a USB chipset made by FTDI which requires the installation of the correct drivers.

After the drivers have been installed then MagicQ can be started and the Wing/Interface should be detected. Ensure the setting "Setup, View Settings, Ports, MagicQ Wings & Interfaces" is set to "Yes (auto DMX)"

Note that the drivers for MagicQ Wings and MagicQ DMX interfaces ARE NOT applicable to MagicDMX Basic or MagicDMX Full. Do not attempt to install drivers for MagicDMX.

### 1.4 MagicQ on Windows

MagicQ runs fine on Windows Vista, Windows 7, Windows 8 and Windows 10.

MagicDMX devices do not need any drivers - see Section [1.2](#).

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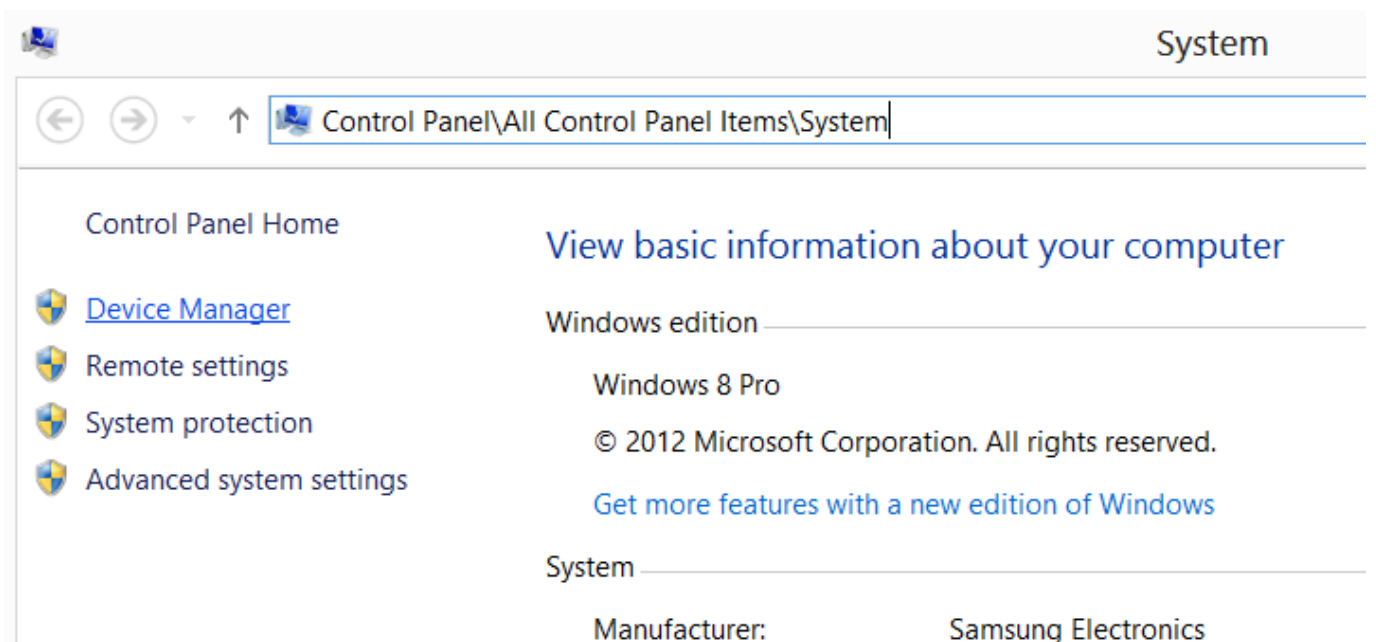
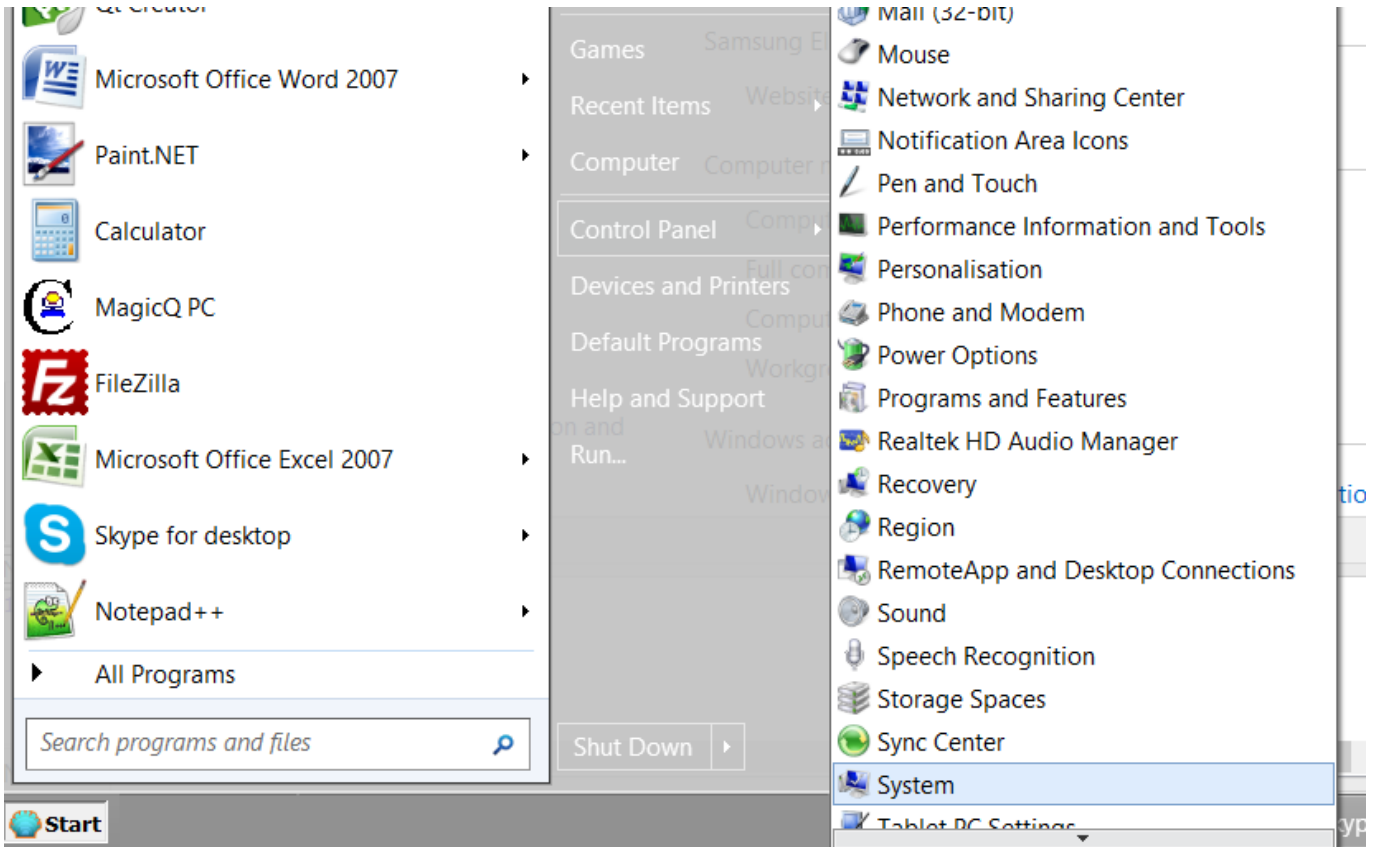


To use MagicQ Wings and MagicQ Interfaces on Windows the FTDI drivers must be installed manually as Windows is not able to detect the products correctly. The drivers are included in the MagicQ installation folder

C:\ProgramFiles\ChamSys Ltd\Magicq\MagicQ Wing Drivers. On 64 bit systems MagicQ is installed in Program Files (x86) instead of Program Files.

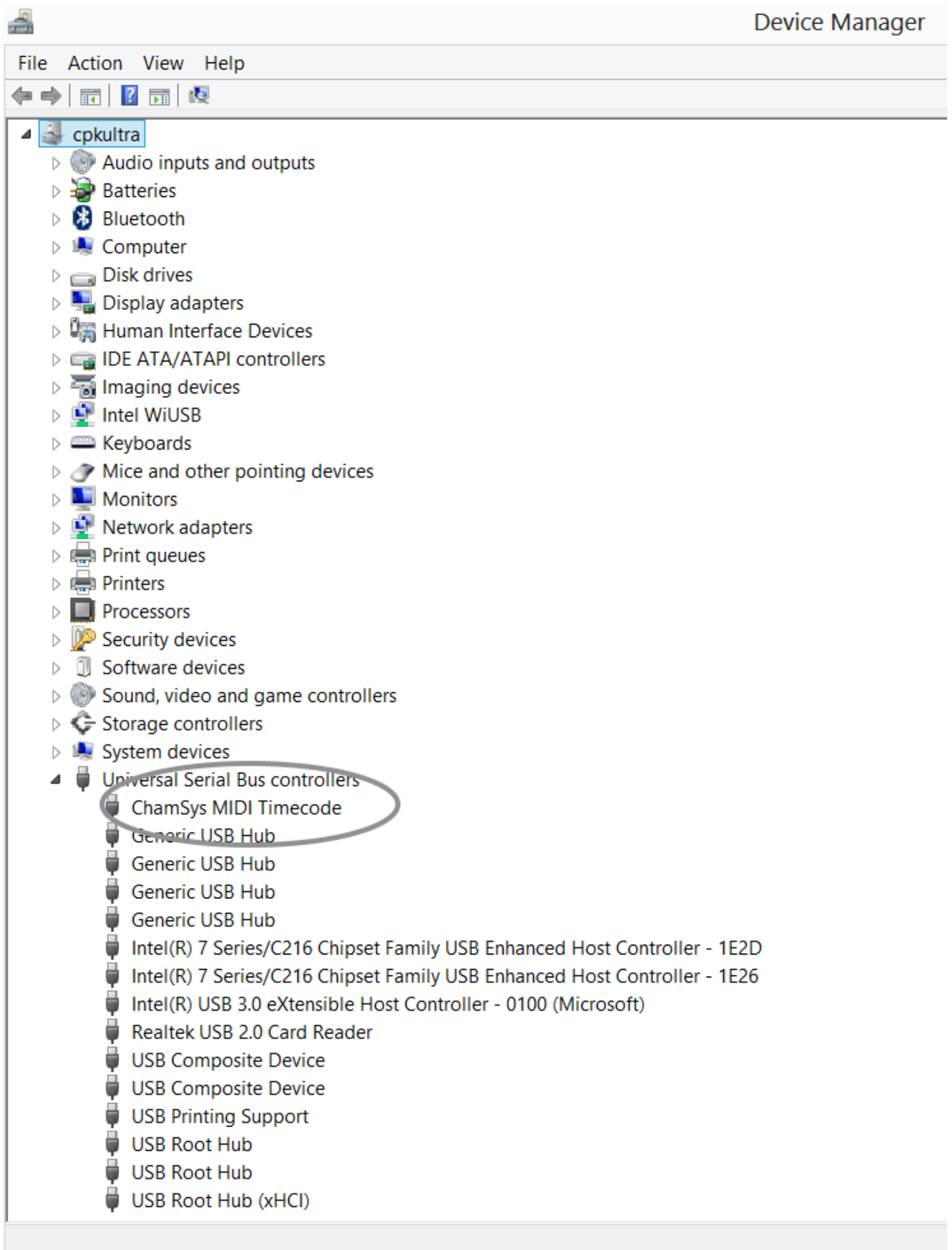
Disconnect all MagicQ Wings and Interfaces except the one you are trying to install the driver for.

Open Device Manager. This is found in different places depending on the version of Windows, but it can normally be accessed by opening Control Panel and then selecting System, and then selecting Device Manager.

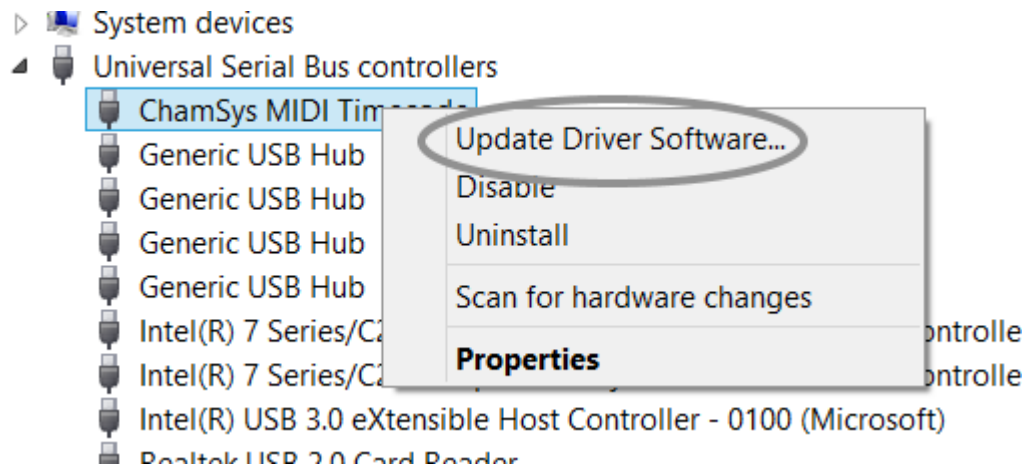


Device Manager lists all the devices on your system. The MagicQ device is normally listed at the bottom under Universal Serial Bus Controllers but it may be under any other section. It may be listed as a ChamSys or MagicQ device or just as a FTDI device. If you can not find it then try disconnecting and reconnecting the USB cable to the device - the listing should update and indicate to you which device is being plugged/unplugged.

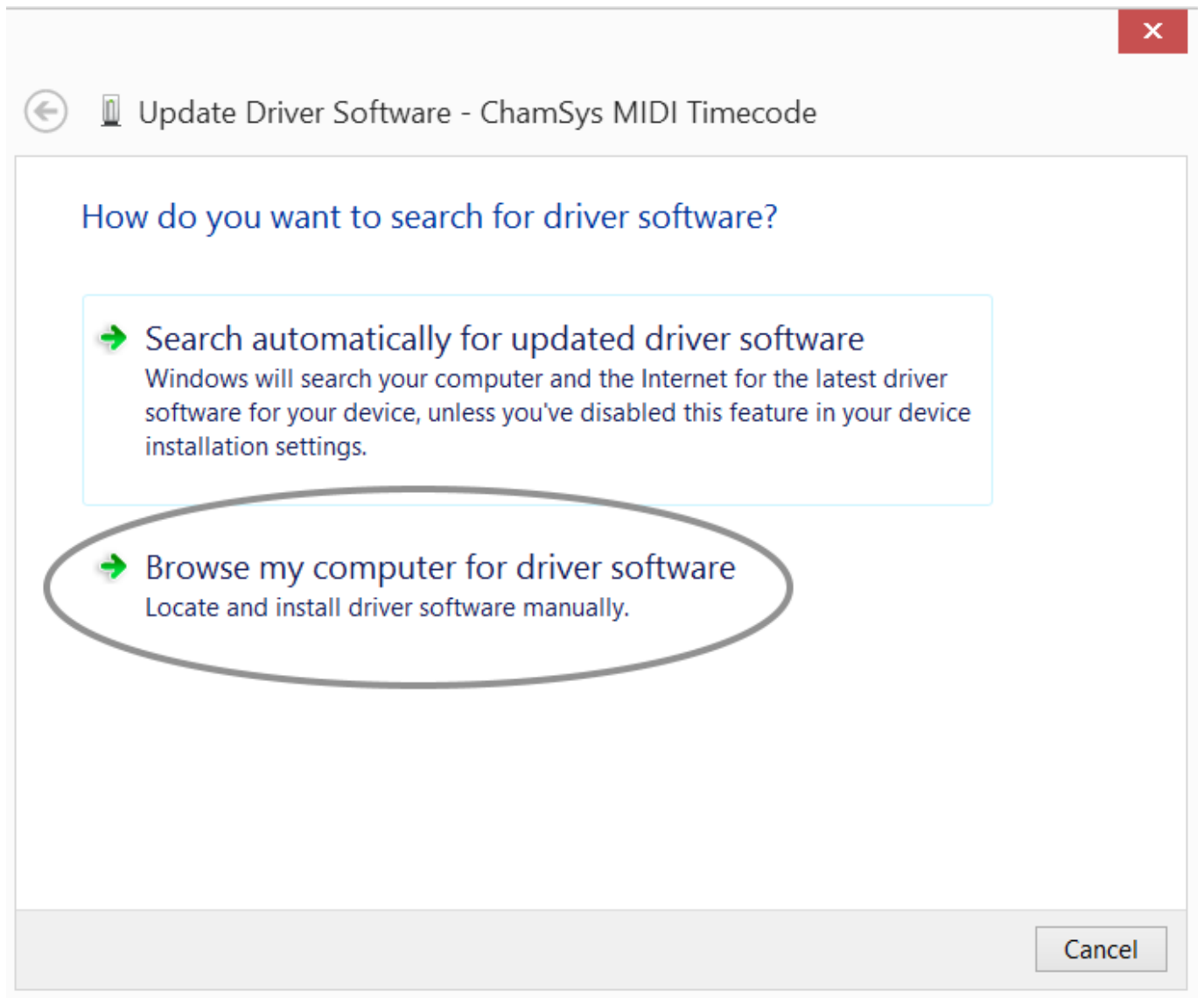
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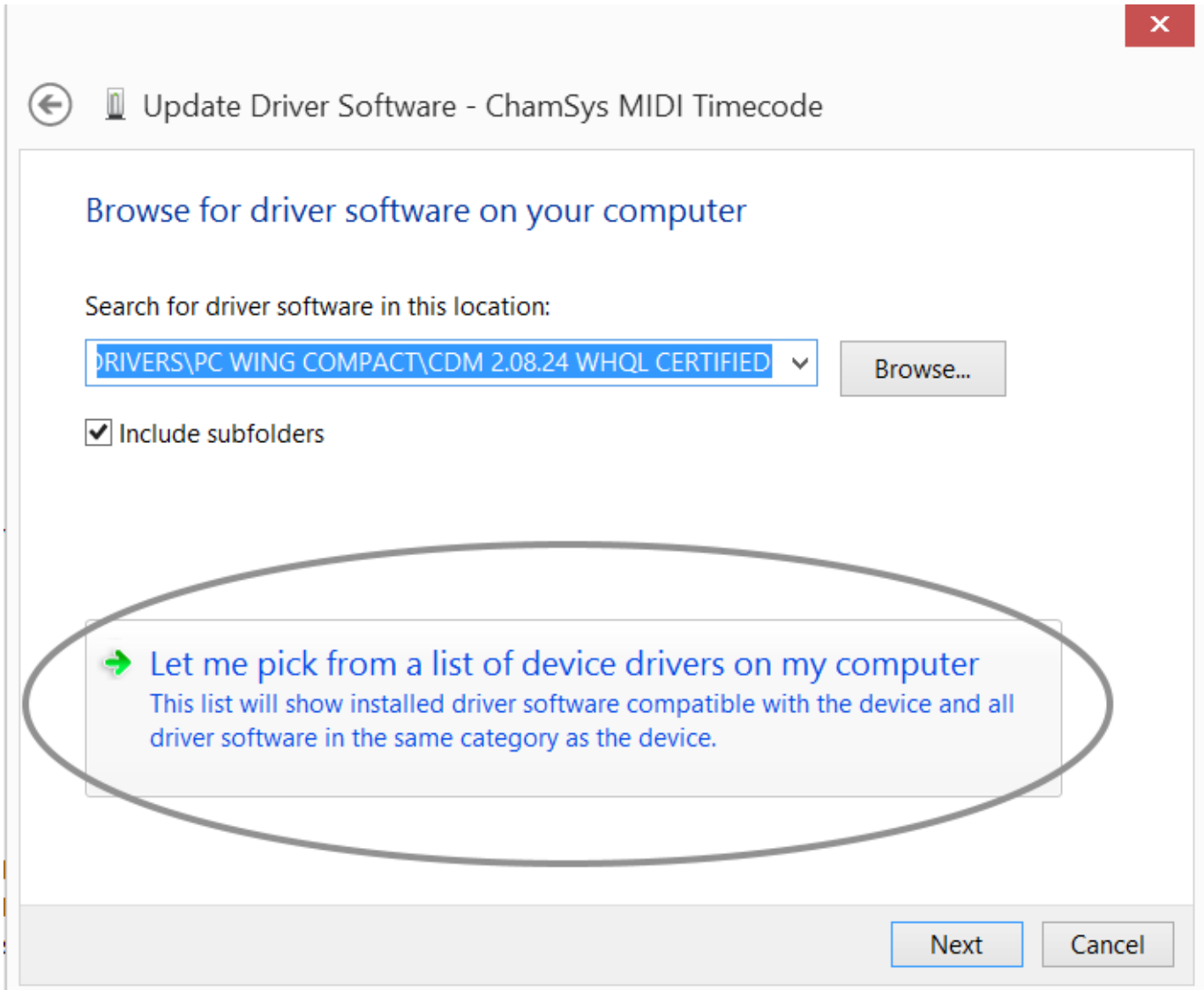
When you have identified the device then right click and press Update Driver.



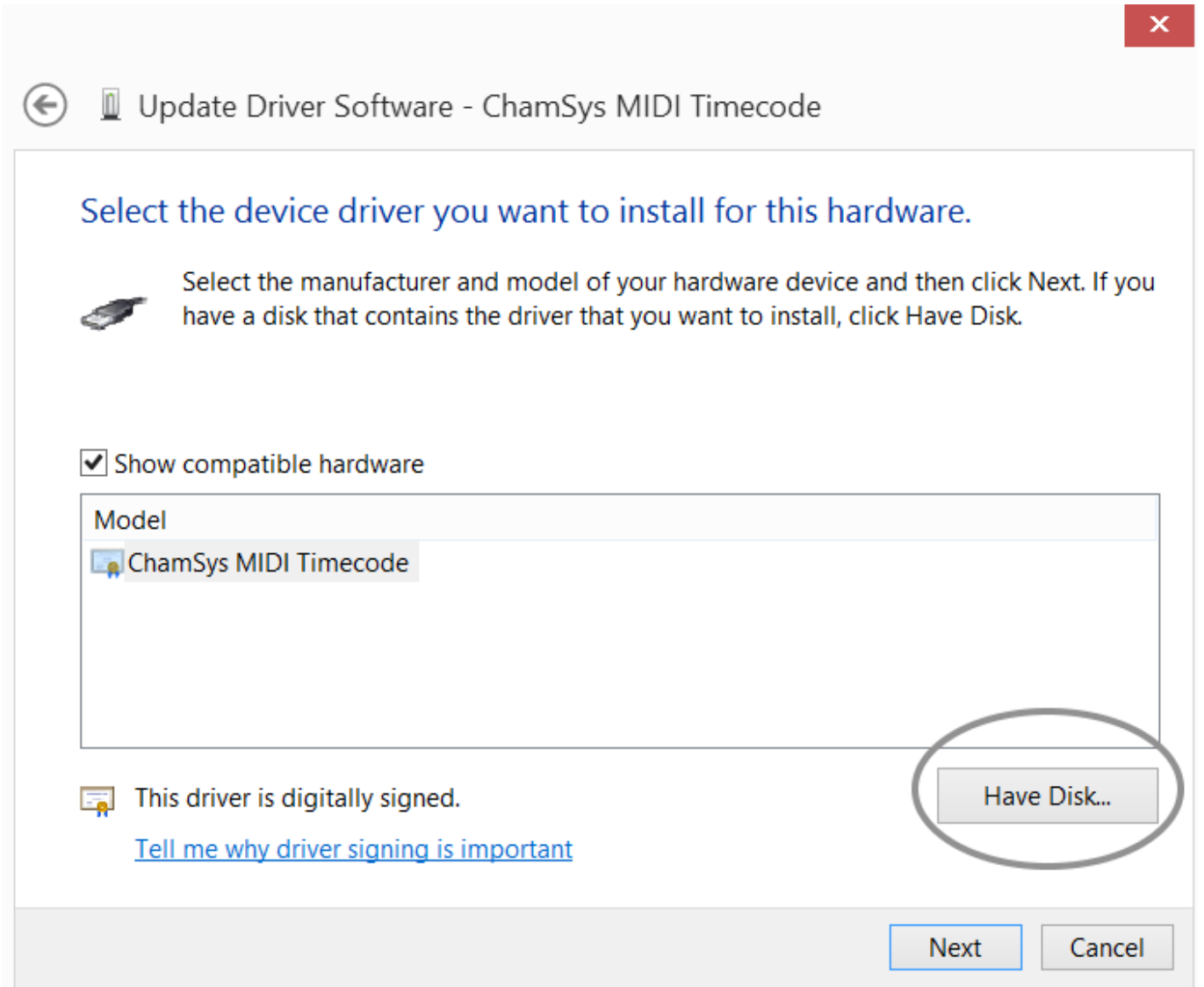
Select "Browse My Computer for Driver Software (Locate and Install Driver Software Manually)". Do not let Windows search for a driver.



Select the option "Let me pick from a list of device drivers on my computer".

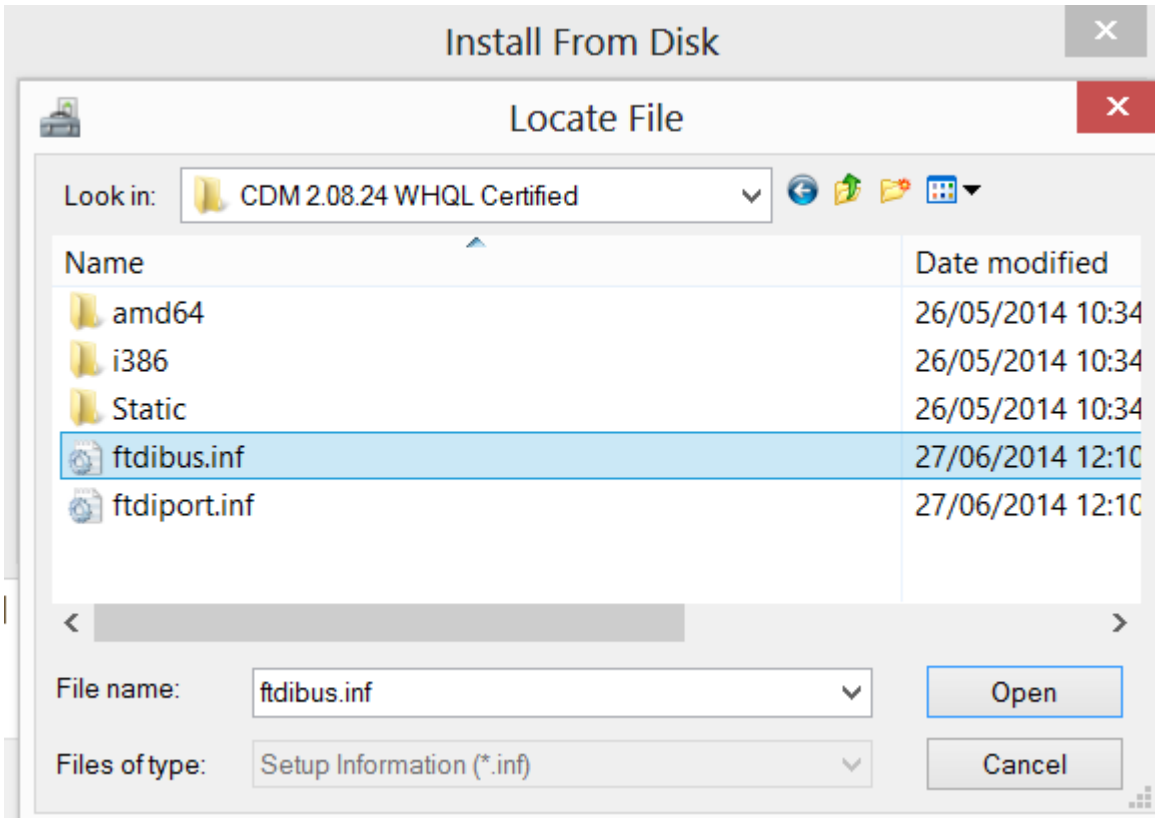


Select "Have Disk". If you cannot find "Have Disk" then click on items in the list until you get it.

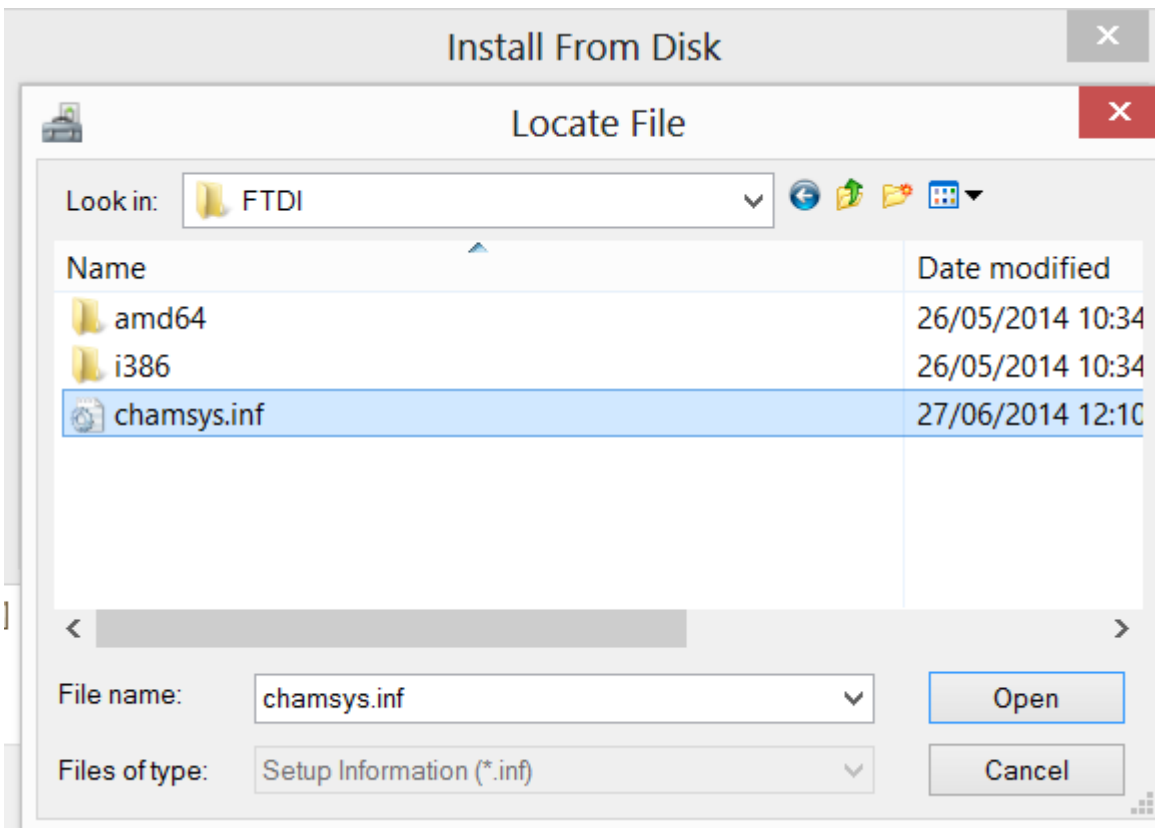


For PC Wing Compacts the drivers are in c:\Program Files\ChamSys Ltd\Magicq\MagicQ Wing Drivers\PC Wing Compact\CDM 2.08.24 WHQL Certified\ftdibus.inf

PC Wing Compacts require MagicQ software version 1.5.8.0 or above.



For all other products the drivers are in c:\Program Files\ChamSys Ltd\Magicq\MagicQ Wing Drivers\FTDI\chamsys.inf



If the MagicQ USB wing periodically disconnects and restarts then check the Windows settings for your USB ports - Windows may be shutting down the USB ports when it incorrectly thinks they are idle. Click on Control Panel, System, Device Manager

and scroll to the bottom to get a list of the USB devices. For each USB Root Hub click on Properties, Power Management and make sure that the option "Allow the computer to turn off this device to save power" is NOT selected.

On some Windows systems the Update Drivers dialog will not show the driver files even though they are correctly in the MagicQ Wing Drivers folder. In this case try copying the whole MagicQ Wing Drivers folder to the desktop (using Windows Explorer) and then try to update the drivers again.

### 1.4.1 User permissions on Windows

Note that Vista, Windows 7, 8 and 10 has User Authentication which may cause your show / head files to be stored in c:\users\username\AppData\Local\VirtualStore\Program Files\ChamSys Ltd\MagicQ PC\show instead of c:\Program Files\ChamSys Ltd\MagicQ PC\show.

If MagicQ does not store settings after a restart - it forgets the number of universes, IP address or DMX I/O settings - then this is likely caused by Windows restricting write access to the folders where MagicQ stores this data. Check permissions and try to run MagicQ as administrator. To Run MagicQ as an administrator on Windows, right click on the MagicQ desktop icon and select *run as administrator* from the options menu.

Windows controls the level of access to system folders through the User Account Control Settings. This can be found in Control Panel, User Accounts, Change User Account Control settings. Setting this to "Never Notify" will make Windows less restrictive. Note that for security reasons this is only recommended for stand alone systems dedicated to MagicQ which are not connected to the internet - please make sure you understand the implications for your computer, before changing this setting.

## 1.5 MagicQ on Mac

MagicQ on Mac includes all the required drivers and no action should be required to install them.

MagicQ Wings and Interfaces must be powered up and connected to the Mac before MagicQ is started.

### 1.5.1 OSX 10.11 El Capitan

In 10.11 El Capitan, Apple have forced the use of their Apple FTDI Driver rather than the manufacturer provided driver - the option to Disable the Apple FTDI Drivers in the MagicQ Tools Menu will not work as Apple have blocked it.

In MagicQ version 1.7.0.2 we have modified MagicQ to enable MagicQ PC Wing Compact and MagicQ Extra Wing Compact to use the Apple inbuilt FTDI (VCP) Drivers. If you are only trying to connect a MagicQ PC Wing Compact or a MagicQ Extra Wing Compact, then check that the option Setup, View Settings, Ports, MagicQ Wings & Interfaces is set to "Yes, auto DMX".

Due to problems with the Apple FTDI Driver, when MagicQ version 1.7.0.2 is run on OSX 10.11 then by default it does not have support enabled for older MagicQ Wings such as MagicQ Mini Wing, Maxi Wing, old PC Wing, old Extra Wing, Playback Wing, Extra Wing and 3rd party devices such as Enttec Pro.

To use these interfaces with v1.7.0.2 on OSX 10.11, set the option Setup, View Settings, Ports, MagicQ Wings & Interfaces to "FTDI + VCP driver, auto DMX". When this option is enabled, MagicQ will take about a minute to start up and look for wings even if there are none present - during this time the system will be blocked. We are working with FTDI to try to find a work around to this problem.

### 1.5.2 OSX 10.10 Yosemite

With OSX 10.10 Yosemite, Apple FTDI drivers are not compatible with MagicQ Wings and Hardware.

MagicQ version 1.6.7.1 onwards now includes a utility to disable the Apple FTDI Driver and use the correct drivers. To Disable the Apple FTDI drivers, run MagicQ and select the option to disable the Apple FTDI driver from the Tools menu at the top of the window. MagicQ will ask for your system password and then confirm the driver is disabled, so the correct drivers can then be used. Quit MagicQ and restart for the wing to be detected.

This operation only needs to be carried out after a clean install or OSX update.

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### 1.5.3 OSX 10.9 Mavericks

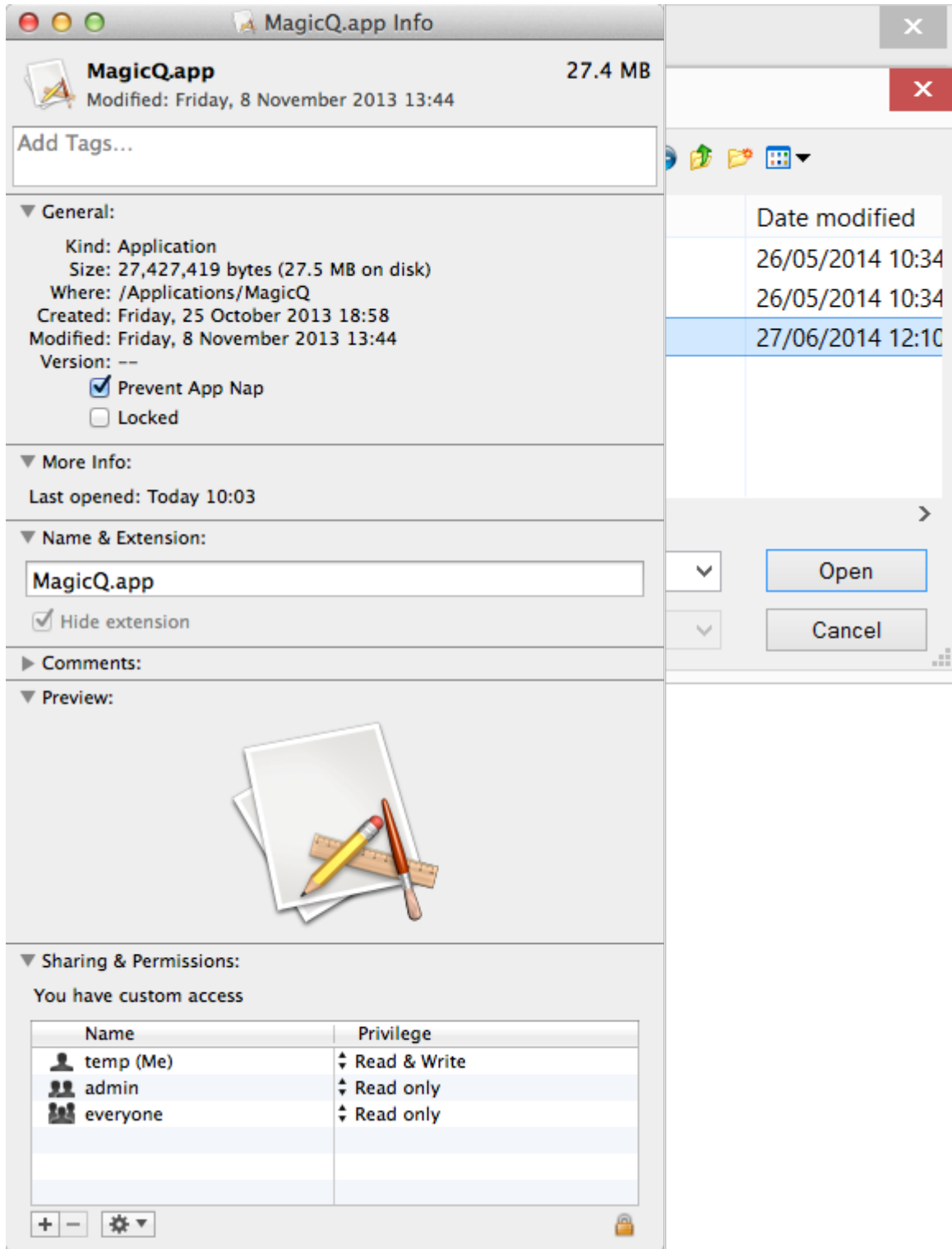
On OSX 10.9 Mavericks you may need to move the mouse pointer whilst MagicQ is starting to avoid a problem in OSX whereby the mouse/keyboard become unresponsive.

Due to Apple compatibility issues, MagicQ version 1.5.9.9 or higher is required when running on OSX 10.9 Mavericks.

### 1.5.4 Turning off App Nap

On all versions we recommend you disable Computer sleep and turn off App Nap to avoid MagicQ being shut down inadvertently.

- Quit MagicQ
  - From the OSX Finder, navigate to the /Applications/MagicQ folder
  - Select MagicQ.app, then go to the “File” menu and select “Get Info” (or select the app and hit Command+i)
  - Check the box for “Prevent App Nap”, found under the General section of Get Info
-



### 1.5.5 Making the MagicQ folder writeable

If you get the message "Cannot write file" when trying to save a show file, or your settings changes are not saved then check that the MagicQ folder and all its subfolders have both read and write permission.

If you get a message starting with "MagicQ needs to write to the install folder. . .", you will need to check the permissions of the "MagicQ" folder. There are [detailed steps](#) in the troubleshooting chapter.

## 1.6 MagicQ on Linux

We recommend that only users familiar with Linux based operating systems try to use MagicQ under Linux. We cannot provide generic support on how to set your system up, but there are many forums and communities online which will be able to.

To install MagicQ on Linux based systems, you will need a Debian based distribution; we recommend Ubuntu 16.04.

To use MagicQ Wings and MagicQ Interfaces Linux requires the `ftdi_sio` kernel driver which is included as part of most standard kernel installations.

There are two ways to install MagicQ, either through an apt repository, where you can get automatic updates, or by manually downloading the installer.

### 1.6.1 Installing the downloaded package

To install the downloaded `.deb` file, run the following command in a terminal:

```
sudo dpkg -i magicq_x.x.x.x_arch.deb
```

Replacing the filename above the the name of the downloaded file.

### 1.6.2 Installing from the repository

To install using the repository to your system, run the following command to add our public key to your apt keystore

```
wget http://repo.magicq.co.uk/magicq.co.uk.gpg -qO - | sudo apt-key add -
```

Then add the following line to the bottom of your `/etc/apt/sources.list` file:

```
deb http://repo.magicq.co.uk/magicq/magicq main
```

Update your package list in apt by running `apt-get update`, then you can install MagicQ by running `apt-get install magicq`. If you wish to follow our beta release channel, then use `apt-get install magicq-beta` instead.

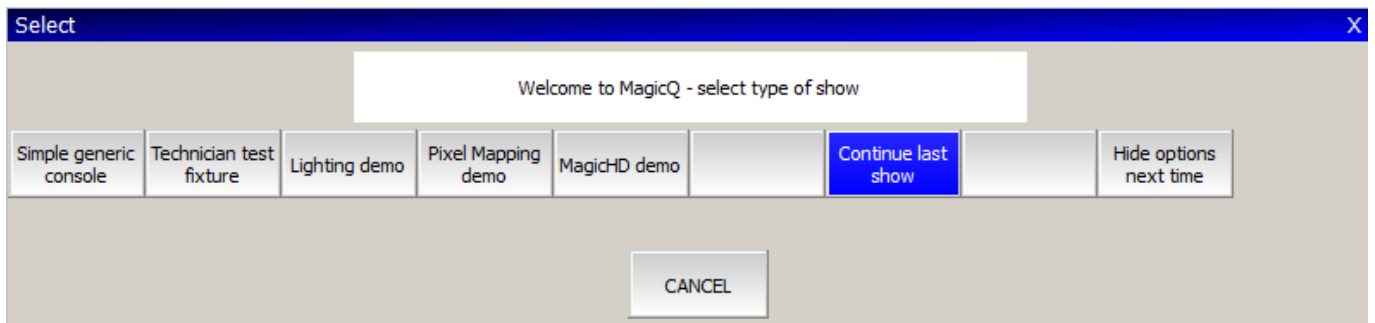
To run MagicQ, simply goto your launcher menu, and select "MagicQ". Currently MagicQ will need root permissions to run to be able to access any USB interfaces.

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## Chapter 2

# Using MagicQ on PCs and Macs

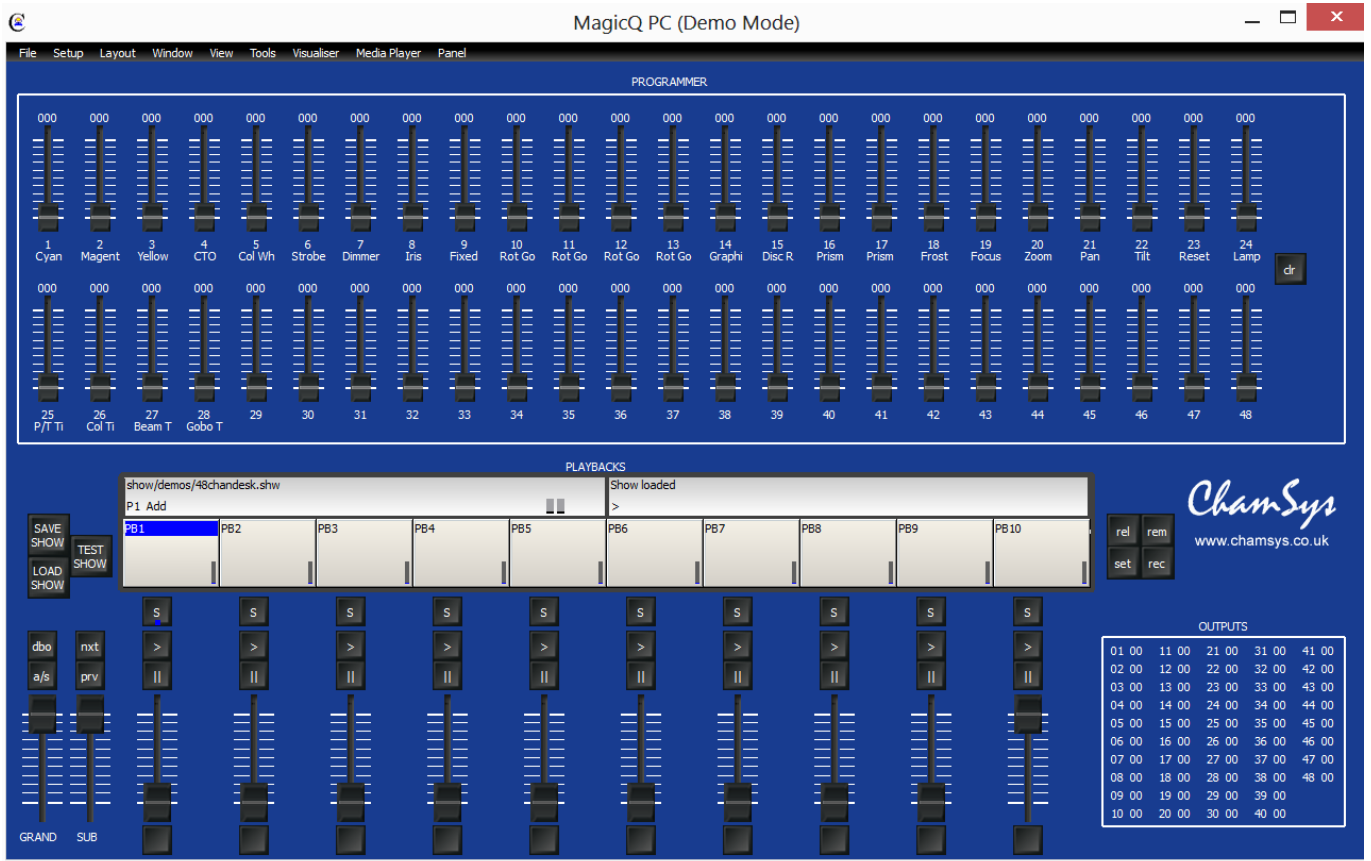
The MagicQ software for PCs and Macs has exactly the same features as the MagicQ console software with support for 64 Universes. All 64 Universes are enabled and can be used. A wide range of 3<sup>rd</sup> party USB interfaces are supported on Universe 1. When MagicQ PC or Mac is installed for the first time, it will show a window with choices of demo shows.



This window can be hidden on subsequent starts by pressing the "Hide Options Next Time" button. It can be reactivated by setting the Setup, View Settings, Windows, Start Mode option to "Choose Demo show".

### 2.1 Simple Generic Console

Choosing Simple Generic Console opens MagicQ in Simple View and loads a Simple 48 Channel Generic Console show file.



In this mode the console simply operates as a 48 channel traditional theatre console with 48 dimmers patched on Universe 1 at channels 1 through 48.

If a MagicQ Wing, MagicQ Dual DMX Interface or MagicDMX interface is connected to MagicQ then the 48 channels will be automatically output on the 1<sup>st</sup> output.

There are 10 Playback Faders labelled PB1 to PB10. Depending on your screen resolution you may have a S, > and || button for each fader. Pressing in the box labelled PB1 to PB10 is the same as pressing the appropriate S button.

To record a Cue set the faders as required. Then press REC and press the S button of the Playback fader you wish to record it to. Press CLEAR to clear the Programmer and rerun the faders to their defaults.

To record a chase, record multiple Cues to a Playback fader simply record more than one cue to a Playback fader.

To remove the Cues from a fader press REM and press the S button of the Playback fader you wish to remove Cues from.

To name a fader press SET and press the S button of the Playback fader you wish to name. You will be shown a text entry box. Type the name followed by RETURN.

Multiple pages of faders are supported through the Next Page / Previous Page buttons.

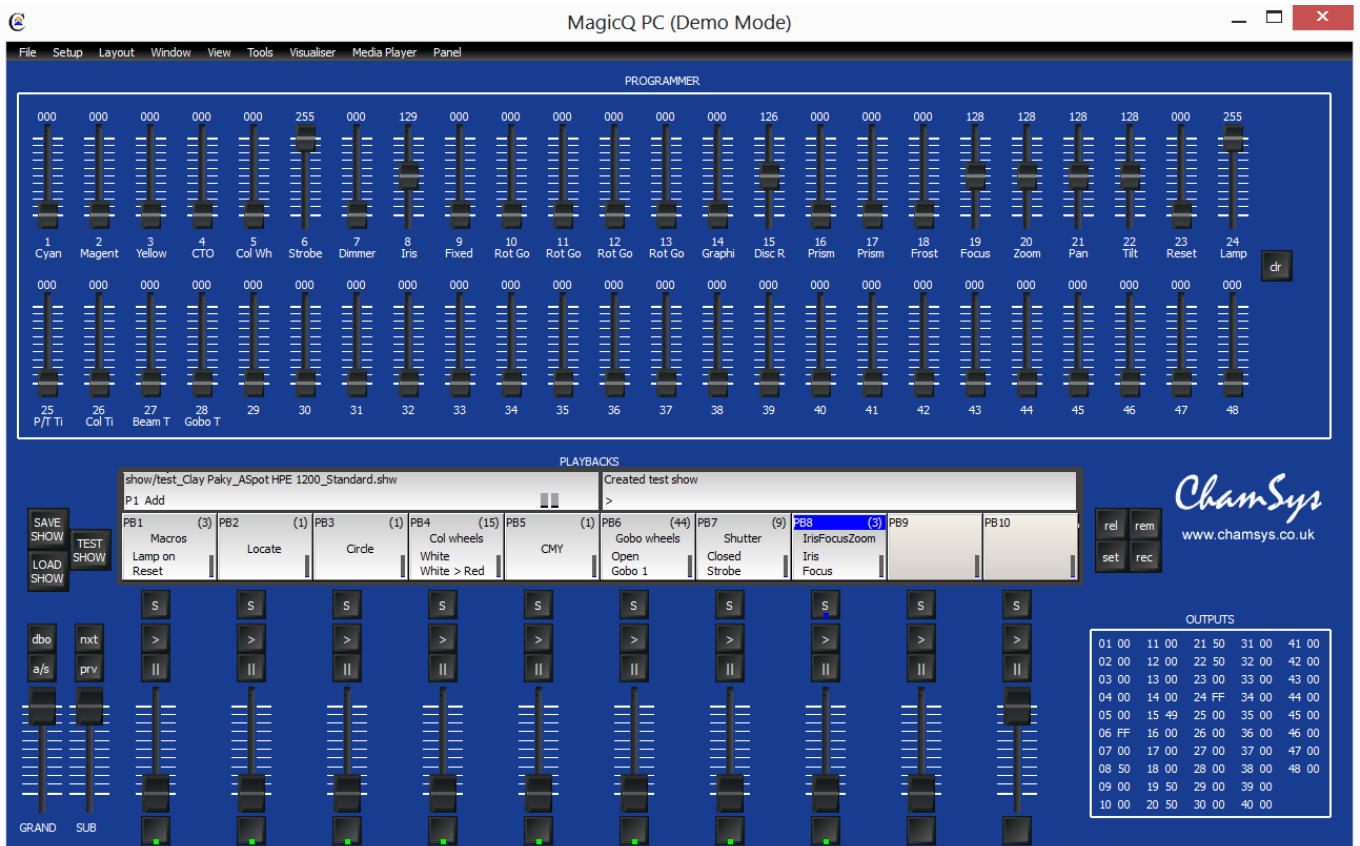
It is possible to interchange between the Normal and Simple views of the console by pressing the Norm and Simple buttons in the top right corner of the Application.

## 2.2 Technician Test Fixture

The Technician Test Fixture mode enables technicians to test a moving light or other fixture in a very simple way. Simply press the TEST SHOW soft button and select a fixture and a mode.

A new show will be created using that fixture patched at DMX address 1 on the first Universe. The 48 faders show up to 48 channels of the fixture. Each fader is named with the attribute name and the values are set to their default values.

The picture below shows a Clay Paky Alpha Spot HPE 1200 in Standard mode.



The Playback faders are automatically set up with some useful functions including Macros for Lamp On, Reset and Lamp Off, Locate and Movement, Colour, Gobo and Strobe tests.

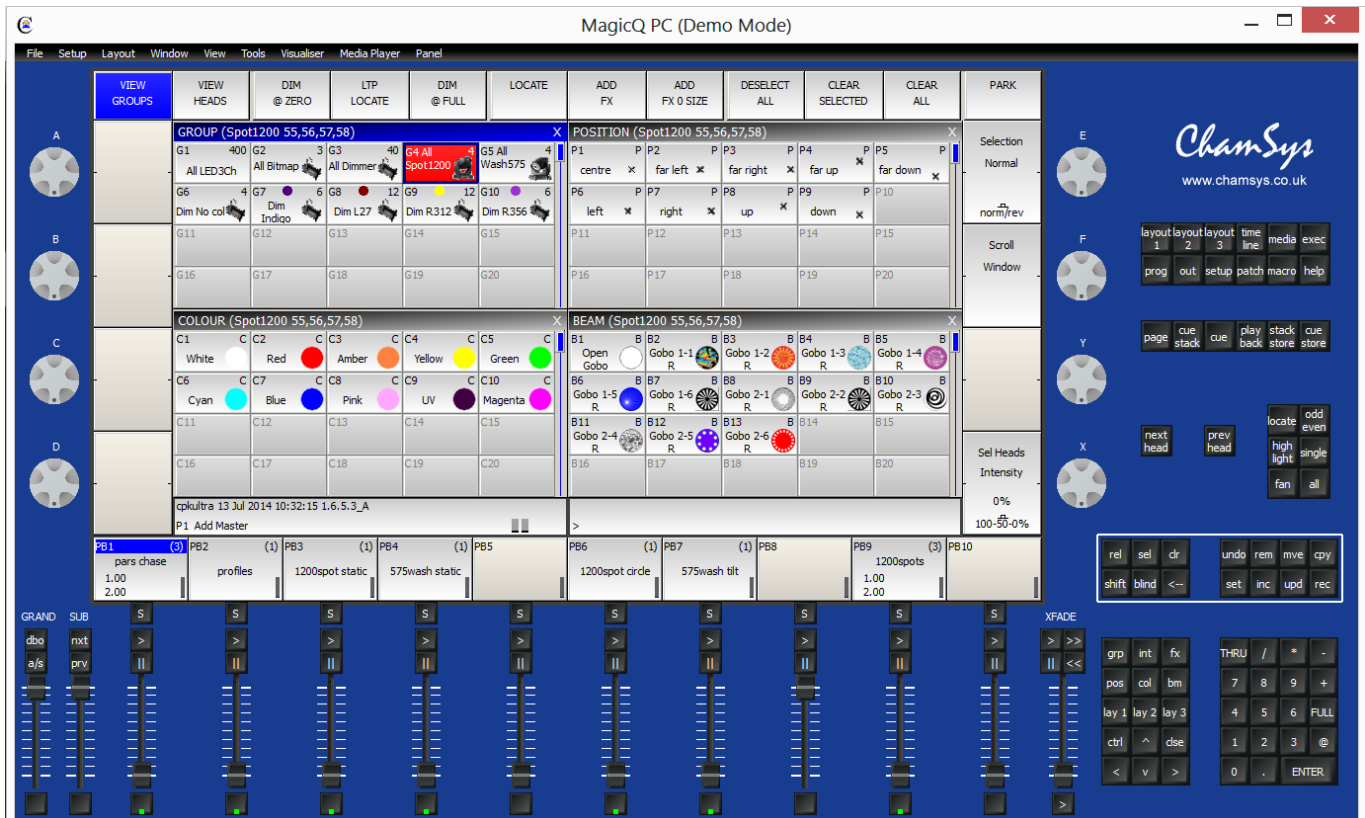
If a MagicQ Wing, MagicQ Twin DMX Interface or MagicDMX interface is connected to MagicQ then the fixture will be controlled on the 1<sup>st</sup> output.

The preset faders can be used to change the values of individual attributes. Use SHIFT and the faders to make a fine adjustment.

### 2.3 Demo Shows

The start up Window gives also gives a choice of a standard Lighting demo show or a PixelMapping demo show.

Additional demo shows for other fixture types, media servers and visualisers can be found by going to Setup, View Settings, Load Show and selecting the demo show folder.



## 2.4 Touch View

The Touch View is designed for use with touch screens with buttons that are sized bigger so that it is easier to select functions. Select Touch View by pressing Touch or Touch2 in the top right corner of the Application.

## 2.5 Playback mode

MagicQ PC supports a Playback Mode which enables MagicQ to be run in a pure “Playback” mode. This mode is selected by clicking on the new Playback mode Icon on the desktop or in the Programs, ChamSys MagicQ PC menu.

Playback mode is only supported when connected to a MagicQ Wing or MagicQ USB interface. The MagicQ interface must be connected and powered on before MagicQ is started in Playback mode. Note Playback mode is not supported with MagicDMX or 3rd Party interfaces.

In Playback mode MagicQ it is not possible to record or make changes to the show data. MagicQ will not save the show files / status files. Changes (e.g. change of chase speed) will be lost when the application is stopped and restarted.

Playback Mode shows a much reduced set of buttons on the screen – only buttons required for show playback are shown.

In Playback Mode only pages of playbacks that have been programmed are shown – pressing NEXT PAGE will automatically change to the next programmed page and will cycle around all programmed pages.

## 2.6 MagicQ PC / Mac Restrictions

When MagicQ PC (Windows, Linux or Mac) is not connected to a MagicQ USB interface, MagicQ USB Wing or SnakeSys network product, then a small number of remote and automation features are restricted and “Demo Mode” is shown in the title bar. This does not affect show programming or playback.

The restricted features that require a MagicQ USB interface, MagicQ Wing or SnakeSys node to be connected are:

- Execute Window full screen
- Scheduled Events
- iOS / Android Remote
- Remote Control Protocol (serial, or network)
- Web Server editing (viewing is supported)
- Auto starting Playbacks
- Playback Synchronisation
- Multi Programming including Net Sessions
- Triggering of playbacks using DMX input
- Mouse control of pan/tilt (only supported when connected to a MagicQ Wing with encoders)
- Audio control and playback synchronisation with Winamp
- Timecode receive from ArtNet
- Timecode from 3rd Party USB/Virtual interfaces.
- Audio input from PC/Mac sound card

Note that the MagicDMX interface (Basic or Full) does not lift these restrictions, as this is a low cost interface intended for learning how to program the system.

Support for receiving MIDI notes from the generic USB MIDI interface on PC is only enabled when the system has the special MagicQ Rack Mount Dongle connected - note this functionality is NOT supported when out of *demo mode*. You must use the special *MagicQ Rack Mount Dongle* for Midi notes from 3rd party/virtual interfaces

MagicQ PC/Mac running with the restricted features unlocked, supports control of the first 10 playbacks (PB1 to PB10) via ChamSys remote control protocol, MIDI and automations. This enables synchronisation with show control systems. Playbacks 11 to 202 can only be controlled by MagicQ Playback/Execute/Extra Wings. On MagicQ consoles all 202 playbacks can be controlled by these protocols.

## 2.7 MagicHD Stand Alone Restriction

MagicHD when run as part of MagicQ supports 8 layers.

MagicHD when run as a stand alone program (not as part of MagicQ) only supports 1 layer unless a MagicQ / MagicHD USB Dongle is fitted to the system, or is connected via network to a MagicQ console with encoders, or connected via network to a MagicQ PC/MAC system with a connected MagicQ USB Wing with encoders.

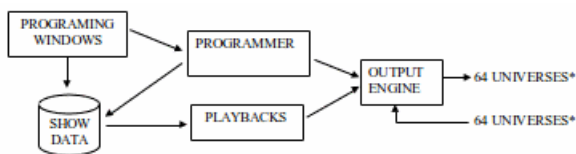
SnakeSys products do not unlock stand alone MagicHD.



## Chapter 3

# MagicQ Concepts

A system diagram of the console is shown in the diagram below



- 64 universes except MQ40 (4), MQ60 (12), MQ70 (12), and MQ100 Expert (12). Older consoles such as MQ Pro support 18 and MQ Pro 2010 supports 32.

### 3.1 Show Storage

MagicQ stores show data in a single show file stored on the hard drive of the MagicQ console, PC or Mac. The show file contains all the show settings, patch, palettes, cues and cue stack data. It also stores copies of all the personalities that are used within the show.

A MagicQ show can be transferred between MagicQ consoles and MagicQ PC or Mac systems simply by copying the show file. MagicQ show files are compatible across all MagicQ products. MagicQ maintains forward and backward compatibility for show files - enabling users to load shows created on any version of MagicQ software into any other version of MagicQ software.

Favourite shows, personalities, palettes and FX patterns can be imported into new shows to simplify and speed up show programming.

Show files can be copied using USB memory sticks or the network can be used to access the file system of MagicQ consoles.

When the user saves the show using the SAVE SHOW menu item or soft button MagicQ stores the show file with a .shw file extension. At all other times MagicQ automatically backs up the show data whenever changes are made to a (.sbk) file.

### 3.2 Output channels

MagicQ supports up to 64 DMX512 universes output over Ethernet. This allows up to 32,768 channels of lighting to be controlled. Ethernet to DMX Interfaces are used to convert from Ethernet to serial DMX512 as required.

Lighting consoles are often limited in the number of DMX channels or the number of intelligent heads they can control independently. MagicQ allows control of all DMX channels individually, whilst utilising grouping and programming functions to enable control of multiple heads or dimmers together.

MagicQ provides a library of over 10,000 personalities – data for each of the different types of intelligent head available. This data determines how the different attributes of an intelligent head are controlled by the console.

ChamSys adds new personalities for fixtures as the information for new fixtures becomes available. If a personality is not available then it can be requested from ChamSys. Users also have the ability to create the personality themselves in the inbuilt Head Editor.

### 3.2.1 HTP / LTP channels

The console supports two types of channels, highest takes precedence (HTP) and latest takes precedence (LTP). Generally HTP channels are used for channels controlling dimmers and for the dimmer channel of intelligent heads. LTP channels are used for the attributes of intelligent heads such as pan, tilt, colour, gobo etc. . .

For HTP channels the value that is output is the highest value of that channel on all of the active playbacks and the programmer. The console can be configured so that if a HTP channel is in the programmer it always overrides any active playbacks.

For LTP channels the value output is the value from the last active playback unless that channel is active in the programmer in which case the value output is the value stored in the programmer.

The last active playback is the last playback to be raised above zero, which is still above zero. Playbacks that are bumped in using ADD or SWAP buttons automatically become the last active playback until the button is released.

The type of channel used by the console is determined by the personality used to patch the dimmer or intelligent head.

Playbacks can be set so that all channels controlled by the Playback act in a LTP way, thus allowing Intensity channels to be overridden by a single Playback.

### 3.3 Cues

The console stores lighting states as Cues – each Cue stores

- Level information
- Timing information
- FX information

The Cue stores level information for each of the channels recorded into it. If the channel level was set using a Palette, then a reference to the Palette is also stored so that the Cue can keep track of changes to the Palette.

VIEW LEVELS	VIEW TIMES	VIEW FX	SIMPLE VIEW	ADV VIEW	VIEW TRACKING	CHOOSE CUE	PREV CUE	NEXT CUE	CLOSE WINDOW	CUE OPTIONS																				
CUE (Q5: profiles used in CS2 Cue id 1.00)																														
FX Spread no fx	<table border="1"> <thead> <tr> <th>Head name</th> <th>Head type</th> <th>No</th> <th>Dim</th> </tr> </thead> <tbody> <tr> <td>spots</td> <td>no col</td> <td>1</td> <td>100%</td> </tr> <tr> <td>spots</td> <td>no col</td> <td>2</td> <td>100%</td> </tr> <tr> <td>spots</td> <td>no col</td> <td>3</td> <td>100%</td> </tr> <tr> <td>spots</td> <td>no col</td> <td>4</td> <td>100%</td> </tr> </tbody> </table>									Head name	Head type	No	Dim	spots	no col	1	100%	spots	no col	2	100%	spots	no col	3	100%	spots	no col	4	100%	Spots
Head name	Head type	No	Dim																											
spots	no col	1	100%																											
spots	no col	2	100%																											
spots	no col	3	100%																											
spots	no col	4	100%																											
FX										FX																				

The Cue stores timing information for the channels that have been recorded into it. Two types of timing information are stored:

General Times:

Stored for each type of attribute (Int In, Int Out, Position, Colour, Beam)

Individual Times:

Stored on an individual channel basis

The Cue stores FX information for each of the FX that has been recorded into the Cue. The FX information includes the type of FX, the heads that the FX is applied to, and the FX parameters for each head.

Each Cue has a number (e.g. Q1) and an optional name.

### 3.4 Cue Stacks

Cue Stacks are used to manage sequences of Cues. Cue Stacks keep track of the order of the Cues and the options for how they are played back. A Cue Stack may have only one Cue associated with it or may have a whole list of Cues.

The Cue Stack stores a Cue Id and a textual field for each Cue so that the different steps in the stack can be labelled. The Cue Id and textual field are shown on the playback display when the stack is played back which enables operators to keep track of the current position in the show.

Cue Stacks can be configured to run as a chase rather than as a simple list of Cues. The difference is that as a chase each the timing of cue is determined by the chase speed and chase contrast rather than by the individual delay and fade times for each cue.

Each Cue Stack has a number (e.g. CS1) and an optional name.

### 3.5 Playbacks

The console enables playing of recorded show data through Playbacks. Playbacks are associated with physical faders and buttons – each Playback can have one cue stack assigned to it.

The console supports 202 Playback; 10 main Playbacks situated below the touch screen and up to 8 extension wings each with 24 Playbacks.

On models where less than 8 wings are fitted, the not fitted playbacks can be utilised through the touch screen and associated buttons.

### 3.6 Pages

The console supports multiple pages of Playbacks enabling Playback faders to have different functions depending on the current page. Typically one page is used for each song in a show.

The current page is selected through the NEXT PAGE and PREV PAGE buttons on the main playback section or by selecting a page in the Page Window.

The 24 Playbacks on each wing are divided up into two rows of 12 Playbacks. Each of the rows has separate NEXT PAGE and PREV PAGE buttons. This enables the Page used by these Playbacks to be set differently to the main Playbacks.

This provides significant flexibility to how shows are played back – for example one section of a wing can be used to control par lamps whilst another could be used to control intelligent heads. Changing the Page of the par lamps would not change the Page of the heads.

### 3.7 FX

The console contains a powerful engine for creating special effects (FX). FX can be applied to a group of heads at the touch of a button; there is no need to program lots of different Cues to create the effect. Special effects can be easily modified live, enabling, for example, the speed and size of the FX to be modified to match the mood of the show.

The console supports an extensive library of standard FX such as circles, squares, pan and tilt saws, lifts, zig zags, etc. In addition the console supports FX on colour, beam and intensity attributes. The console supports programming and storing of new custom FX, which can then be re-used in shows as required. The FX engine enables complete shows to be programmed within a matter of minutes.

### 3.8 Window Layouts

The console provides a means of storing the positions and sizes of Windows as a Window layout to enable easy recall of useful Windows. This allows, for example, a Window configuration consisting of the Group, Position, Colour and Beam Windows to be stored and recalled at a button press.

The system supports several standard views, including several oriented towards programming and several oriented towards playback.



Window layouts are recalled by pressing CTRL and selecting one of the top soft buttons.

The three spare buttons in the Windows section default to Layout 1 (Palettes), Layout 2 and Layout 3.

### 3.9 Shift Functions

The MagicQ lighting console uses SHIFT and CTRL buttons to enable access to advanced features. There is a SHIFT button and a CTRL button adjacent to the top corners of the touch screen in addition to the keys on the keyboard.

The SHIFT button is used with the cursor keys to enable selection of multiple items in Windows.

The ALT button is used on the Compact series (MQ40/60/70) to access alternative functions such as Page Up, Page Down and the window sizing options.

### 3.10 The Programmer

All recording of show data is carried out using the Programmer. The Programmer takes priority over all playbacks, and channels. It can also be used during live running to override the outputs – for example, for changing the colour or gobo of intelligent heads.

The Programmer can be considered to be a table of channel level and active flags for each of the channels patched onto the console. Initially (and after the Programmer has been cleared) all the channel levels are set to zero and all the channels are flagged as inactive. When a channel is changed to be non zero the channel level for that entry in the table is set to the new level and the channel is flagged as active.

The console outputs any channels that are marked as active in the Programmer at highest priority – i.e. they over-ride all other playbacks.

To clear the Programmer press CLEAR. All channels will be deactivated and all HTP channels will be set to zero. It is possible to force all LTP channels to zero by using CTRL CLEAR.

The programmer can be set into a Blind mode using the BLIND button so that the contents of the programmer do not affect the output of the console. This allows programming adjustments to be made during a live show and special effects to be “busked” in.

### 3.11 Help

The Help Window enables the operating manual to be viewed on-line. Press the HELP button at any time to open the Help Window. To close the window, press the CLOSE button.

Use the scroll encoder, the cursor keys, and the hyperlinks to navigate through the manual. You can go directly to a particular section using the top soft buttons, e.g. CONTENTS or QUICK START.

You can search through the manual by typing some text and pressing SEARCH. To search for the same words again, press SEARCH AGAIN.

## Chapter 4

# MagicQ Layout

### 4.1 Physical layout

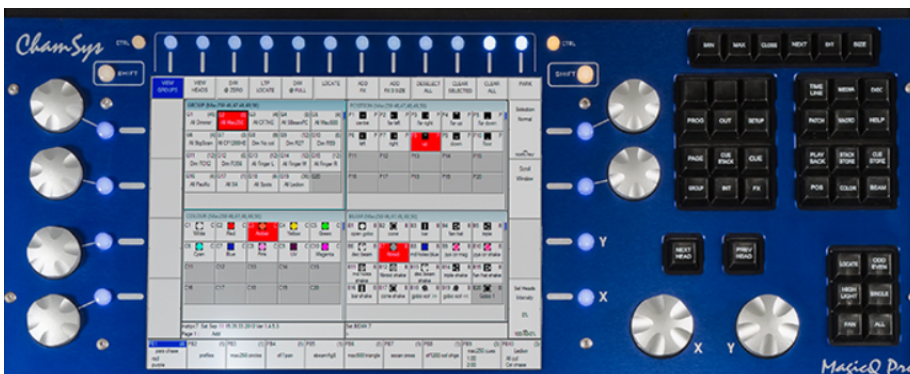
All MagicQ consoles are very similar - they differ mainly in the number of playback faders. The programming interface is consistent across the entire range of consoles. MagicQ software on PC and Mac mimics the layout of the physical buttons on the MagicQ Consoles - a choice of different Panels is available from the Panel Menu. The Full Panel mode mimics Pro and Compact whilst the Stadium Panem mode mimics the MQ1000. It is possible to change between different panel views at any time - it does not affect the programmed show - it just determines what buttons, faders and encoders are available for programming and playback.



#### 4.1.1 Touch Screen, Encoders & Soft Buttons

There are 24 buttons and 8 rotary encoders placed around the touch screen.

The buttons are referred to as soft buttons since their function changes according to the active window on the touch screen. The current function of a soft button is displayed on the touch screen adjacent to the button. To select the function you can either press the screen or the soft button itself.



The function of the rotary encoders also changes according to the active window with the current function being displayed adjacent to the encoder.



When a window button is pressed, that window becomes the active window. The active window is on the top of the screen and is easily identified as the window with the highlighted title bar at the top. It is also the window with the cursor in it.

An item in a window can be selected either

1. By pressing the touch screen over the appropriate part of the window
2. By moving the cursor to the appropriate position and pressing the ENTER button.
3. By moving the mouse to the position and pressing the left mouse button.

The cursor can be moved around the active window using the cursor keys in the Editor area of the console or via the cursor keys on the keyboard. PG UP, PG DN, PG LEFT and PG RIGHT can be used to scroll the window in the appropriate direction. HOME and END can be used to get to the start and end of the window respectively.

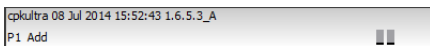
On Compact consoles some window buttons and cursor buttons are accessed using the ALT button. PG UP, PG DN, PG LEFT and PG RIGHT use ALT and the cursor keys. HOME and END use ALT and LAYOUT 1 and LAYOUT 3 respectively.

On PC/Mac the contents of a Window can be printed to a printer or pdf file by selecting File, Print Window from the toolbar.



Towards the bottom of the touch screen are two small windows, the Status Display and the Input Display. The Status Display shows the current date and time, the ADD / SWAP status of the console and other relevant status information.

If *INVALID NET* is seen here this indicates MagicQ has been setup to output via Network e.g. Artnet and that MagicQ's IP address has been set differently to the PC's network adapter. E.g. if your PC IP address is 2.0.0.10, then MagicQ should also have the IP 2.0.0.10 set as its IP address.



The Input Display shows the data that has been currently entered through the keypad and the keyboard. Note that text is not entered into the main Windows until ENTER is pressed. This allows the user to choose whether the keyboard data is SET into fields in the windows or onto Playbacks.



After a command has been entered it also confirms that the command has been accepted and shows any error messages when a command is not possible.

### 4.1.3 Head Control

The area around the two large rotary encoders is referred to as the head control area. It is used to alter the parameters of individual heads and apply effects such as fans over groups of heads.



The NEXT HEAD and PREV HEAD buttons are used to select an individual head to modify.

The other buttons control the selection mode; LOCATE, HIGHLIGHT, FAN, SINGLE, ODD/EVEN, and ALL.

#### 4.1.4 Editor Buttons



The Editor buttons are used to modify program data. The 8 buttons on the right hand side are the action buttons which are used to modify show data. The action buttons are UNDO, REMOVE, MOVE, COPY, SET, INCLUDE, UPDATE, and RECORD.

The buttons on the left:

BLIND and CLEAR affect the programmer

REL and SELECT affect playbacks

SHIFT selects alternate functions

←- undoes keyboard input and clears actions

#### 4.1.5 Playback

The Playback area is situated directly below the touch screen and consists of 10 playbacks each with a fader and four buttons (FLASH, GO, STOP, SELECT). The area above each of the playbacks on the touch screen is used to provide information about the status of the playback.



The playback area also contains a Grand Master, a Sub Master, Page Select buttons and a Manual Playback for taking control of Cue Stacks.

The cross fade section contains a GO, STOP, FWD, BCK buttons, a cross fader and a master GO button. The cross fade section controls the current playback selected with the S button.

## 4.2 Keyboard, Keypad, Select & Confirm Windows

MagicQ has a set of additional on-screen Windows that can be used to enter text, select items and confirm actions. You can choose whether you use the physical keyboard/keypad to navigate around these items or whether you use the mouse/touch.

To open the Keyboard Window at any time press SET SET. To open the icon selector press SHIFT + SET.

Confirm Windows are shown when you carry out important actions that may overwrite or delete show data. You can confirm an action by pressing 1 on the keypad. To cancel the action press 0 on the keypad.

## 4.3 Common Actions

MagicQ utilises many common actions for carrying out programming functions. All the actions use similar button presses. Once you understand the action in one Window, you will understand how it is done in another Window.

We strongly recommend you make yourself familiar with these actions – they will save you valuable programming time.



### 4.3.1 Items

Actions in a Window can be carried out on individual items or on multiple items. For actions on a single item, use the cursor keys to move around the Window so that the cursor is over the required item.

For multiple items in a Window, move the cursor to the first item. Then press and hold the SHIFT button whilst moving the cursor to the last item. All the items will be highlighted.

Alternatively hold the CTRL button and select multiple individual items.

In spreadsheet style Windows (e.g. Patch) pressing the touch screen or left clicking on the item with the mouse moves the cursor to the item. You can highlight multiple Window items by pressing the touch screen and moving the touch across multiple items.

In boxes style Windows (e.g. Group), pressing the touch screen or left clicking performs the function associated with the item (e.g. recalls that Group). In these Windows use SHIFT or CTRL and the cursor keys to highlight multiple boxes.

### 4.3.2 Setting the value of items

To set the value of one or more items in a spreadsheet style window:

- Move the cursor over the item (s)
- Enter a value on the keypad and press ENTER.

OR

- Type in the value on the keypad
- Press the touch screen / click / ENTER over the item.

For items that have a simple value of yes or no if you do not enter a value on the keypad then the value will toggle. For items that have multiple values double click on the field for a list of values. On the touch screen select the field and then press anywhere in the Input Display (right side area underneath the main window) to bring up the list of values.

Items that are coloured darker are read only and therefore cannot be set.

### 4.3.3 Naming items

- Press the SET button
- Press the touch screen / click / ENTER over the item to name.
- Enter the name on the external or on screen keyboards

When working in spreadsheets style windows with an external keyboard it is not necessary to press the SET button in the above sequence - you can edit the spreadsheet like any other, just by moving to the appropriate box and entering text on the keyboard.

To name multiple items highlight it is often easier to highlight the items before pressing SET. If you press SET immediately after highlighting multiple items then the console will assume that these are the items you wish to set.

You can also press SET instead of pressing ENTER in the above sequences.

### 4.3.4 Moving items

- Press the MOVE button.
- Press the touch screen / click / ENTER over the source item.
- Press the touch screen / click / ENTER over the destination item.

You can also press MOVE instead of pressing ENTER in the above sequences.

To move multiple items it is often easier to highlight the items before pressing MOVE. If you press MOVE immediately after highlighting multiple items then the console will assume that these are the source items and will only prompt for the destination. You can hold SHIFT or CTRL to highlight multiple items.

---

### 4.3.5 Copying items

- Press the COPY button.
- Press the touch screen / click / ENTER over the source item.
- Press the touch screen / click / ENTER over the destination item.

You can also press COPY instead of pressing ENTER in the above sequence.

To copy multiple items highlight it is often easier to highlight the items before pressing COPY. If you press COPY immediately after highlighting multiple items then the console will assume that these are the source items and will only prompt for the destination. You can hold SHIFT or CTRL to highlight multiple items.

When copying Cues, Cue Stacks or Pages the console by default does not make individual copies of the Cues - the Cue Stacks link to the same Cues. To copy unlinked (i.e. to create new Cues) then press SHIFT and COPY in the above sequence and select Unlinked.

### 4.3.6 Removing items

- Press the REMOVE button.
- Press the touch screen / click / ENTER over the item to remove.

To remove multiple items highlight it is often easier to highlight the items before pressing REMOVE. If you press REMOVE immediately after highlighting multiple items then the console will assume that you wish to remove the highlighted items.

You can also press REMOVE instead of pressing ENTER in the above sequence.

### 4.3.7 Recording items

In boxes style windows it is possible to record an item (e.g. in the Group Window, to record a group):

- Press the RECORD button.
- Press the touch screen / click / ENTER over the item to record.

You can also press RECORD instead of pressing ENTER in the above sequence.

## 4.4 Icons

MagicQ supports icons for all programmed items. The size of the icons can be set in the Window Settings in the Setup Window.

Icons can be used on Groups, Colours, Beams, Positions, Cues, Cue Stacks and in the Execute Window.

To set an icon for a Window item (e.g. a Palette Entry) press SHIFT SET. Press the touch screen / click / ENTER over the item to set an icon for. This will open the Icon library. The Icon library is split into different types of Icons for colours, positions and different types of gobos.

Select the icon from the icon library.

---

#### 4.4.1 Actions on Playbacks

Actions on playbacks are similar to window items except that the S buttons are used instead of window items.

To select a Playback, press the S button for the appropriate Playback.

To record a Playback, press RECORD, then press the S button for the appropriate Playback.

To name a Playback press SET, then press the S button for the Playback. Enter the name using the on screen keyboard or the external keyboard.

To move a Playback, press MOVE, then press the S button for the source Playback and then press the S button for the destination Playback.

To copy a Playback, press COPY, then press the S button for the source Playback and then press the S button for the destination Playback.

To include the contents of a Playback into the Programmer, press INCLUDE, then press the S button for the destination Playback.

To remove a Playback, press REMOVE, then press the S button for the Playback. Press the S button again to confirm the remove.

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# Chapter 5

## Quick Start

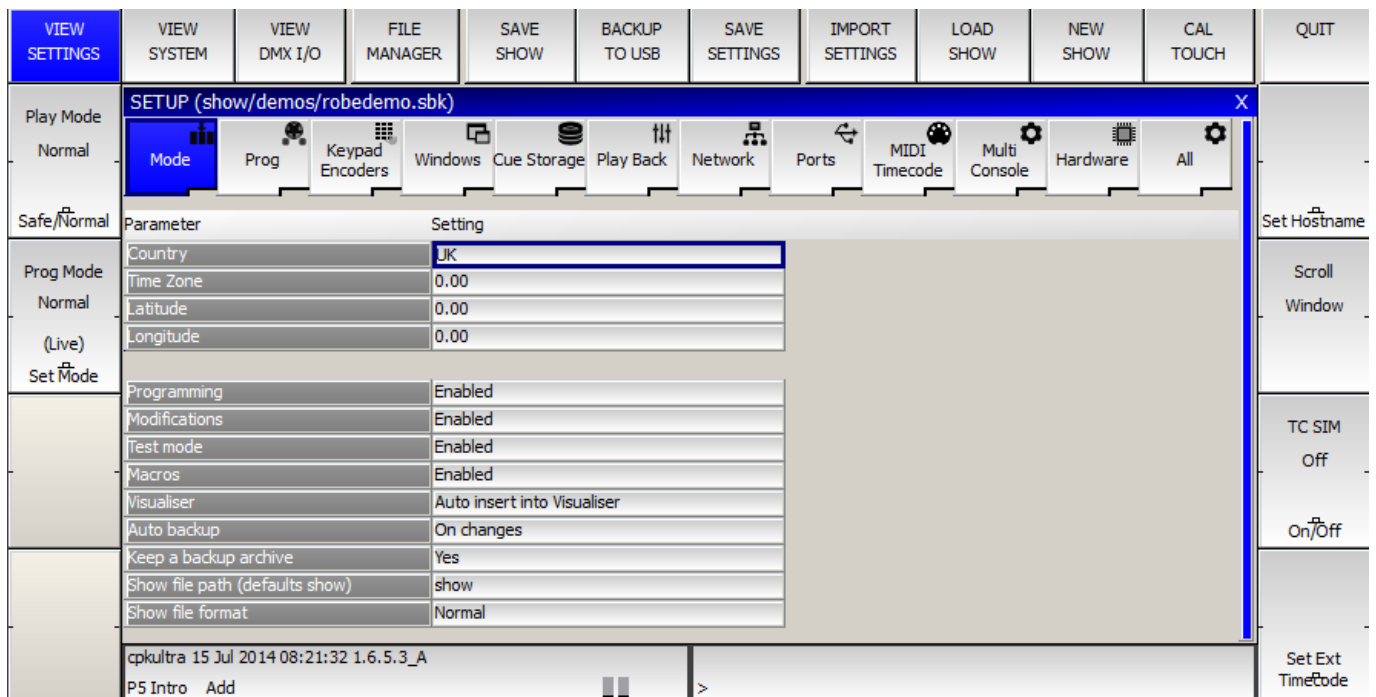
### 5.1 Starting up MagicQ

On MagicQ consoles hold the power button on the rear panel. On MagicQ PC and Mac click on the MagicQ application icon.

On start up you are presented with an option to load demo shows or to continue the last show. Selecting last show will load and run the last show used on the system. This option can be hidden for subsequent start ups.

The console remembers all windows that were open when the console was last used. To close all windows press SHIFT and CLOSE.

Press SETUP to open the Setup Window.



### 5.2 Calibrating the Touch Screen

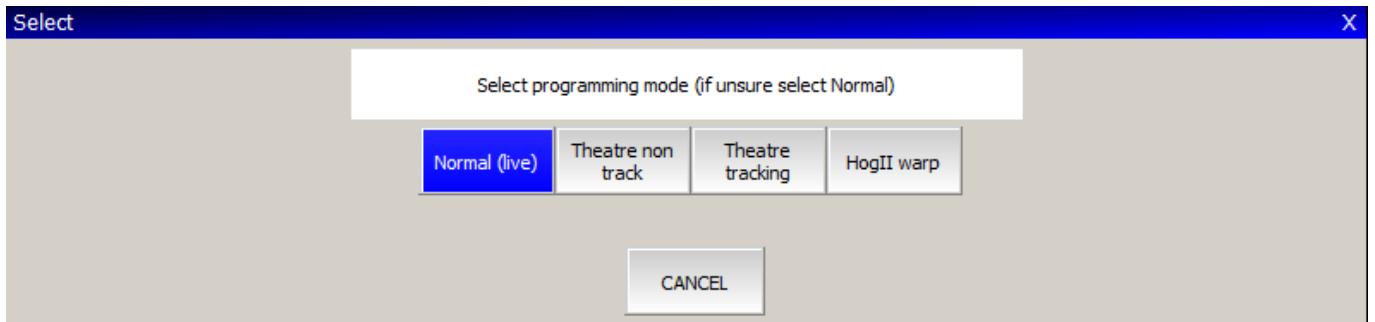
On MagicQ consoles if the touch screen does not seem to be responding to your touch correctly then you may need to calibrate the touch screen.

Press the SETUP button to open the Setup Window. Press the CAL TOUCH soft button. When asked for confirmation press 1 on the keypad or press the CAL TOUCH soft button again.

Calibration works by finding the bottom left and top right corners of the screen. First press the bottom left of the touch screen and then the top right. You may wish to use a fine but blunt object.

The shortcut CTRL + SET can be used to open the Calibrate window at any time.

### 5.3 Starting a New Show



To start a new show, go to the Setup Window and press the NEW SHOW soft button. This will clear the current show from memory – shows that have been previously saved to disc will not be affected. You will be asked to confirm by selecting YES.

There is a choice of four modes.

- Normal - faders activate Cue Stacks. When recording, all data in the programmer is stored in recorded cues
- Theatre non-track - faders operate levels only. When recording, all data in the programmer is stored in recorded cues
- Theatre tracking - faders operate levels only. When recording only data in the programmer that has changed since the last record is stored in recorded cues
- Hog II warp – like Theatre Tracking but with some extra features to make the programming more familiar to Hog II users.

In Theatre and Hog II modes, fixtures return to their default values when not under control of a playback or the programmer. The keypad is set up to enable selection of Palettes using Palette numbers, and Cue Stack timing defaults to being stepped timing rather than chase timing.

The mode can be changed at any time by using the Programming Mode soft button in the Setup Window. In addition each individual option / default value can be customised by the user and saved as their personal settings file.

Starting a show clears all patching, all programming and all palettes. It does not clear console specific options such as the configuration of the DMX outputs or the calibration of the touch screen.

See <\_programming\_mode,Programming Mode> for more details.

## 5.4 Enabling Outputs

VIEW SETTINGS	VIEW SYSTEM	VIEW DMX I/O	NET MANAGER	SET UNIVERSES		ZONE	TAKE CONTROL	RELEASE CONTROL	GRAB SHOW	INHIBIT ALL	QUIT		
SETUP (show/TueJul150823302014.sbk) Not saved yet													
Play Mode	Normal	1	Main Rack	Disabled	Art-Net	Art 0	Art-Net	Art 0	No	No	MagicVis	No	Broa
		2	Truss 1	Disabled	Art-Net	Art 1	Art-Net	Art 1	No	No	MagicVis	No	Broa
Safe/Normal		3	Truss 1	Disabled	Art-Net	Art 2	Art-Net	Art 2	No	No	MagicVis	No	Broa
		4	Truss 2	Disabled	Art-Net	Art 3	Art-Net	Art 3	No	No	MagicVis	No	Broa
Prog Mode	Normal	5		Disabled	Art-Net	Art 4	Art-Net	Art 4	No	No	MagicVis	No	Broa
		6		Disabled	Art-Net	Art 5	Art-Net	Art 5	No	No	MagicVis	No	Broa
(Live)		7		Disabled	Art-Net	Art 6	Art-Net	Art 6	No	No	MagicVis	No	Broa
Set Mode		8		Disabled	Art-Net	Art 7	Art-Net	Art 7	No	No	MagicVis	No	Broa
		9		Disabled	Art-Net	Art 8	Art-Net	Art 8	No	No	MagicVis	No	Broa
		10		Disabled	Art-Net	Art 9	Art-Net	Art 9	No	No	MagicVis	No	Broa
		11		Disabled	Art-Net	Art 10	Art-Net	Art 10	No	No	MagicVis	No	Broa
		12		Disabled	Art-Net	Art 11	Art-Net	Art 11	No	No	MagicVis	No	Broa
		13		Disabled	Art-Net	Art 12	Art-Net	Art 12	No	No	MagicVis	No	Broa
		14		Disabled	Art-Net	Art 13	Art-Net	Art 13	No	No	MagicVis	No	Broa
		15		Disabled	Art-Net	Art 14	Art-Net	Art 14	No	No	MagicVis	No	Broa
		16		Disabled	Art-Net	Art 15	Art-Net	Art 15	No	No	MagicVis	No	Broa
cpkultra 15 Jul 2014 08:25:59 1.6.5.3_A											TC SIM Off		
P1 Add											On/Off		
											Set Ext TimeCode		
PB1	PB2	PB3	PB4	PB5	PB6	PB7	PB8	PB9	PB10				

To enable output of channel data select the DMX IO VIEW in the Setup Window. This windows enables modification of the inputs and outputs for all the universes. MagicQ consoles support DMX directly from the console or via an external Ethernet to DMX convertor. On MagicQ PC or Mac you can output via USB to DMX interfaces (such as MagicDMX) or via DMX outputs from the Wings.

### 5.4.1 Using Direct DMX Outputs

All current MagicQ consoles have DMX output ports directly on the rear panel.

The four DMX outputs on the rear panel automatically output universes 1 to 4 unless they are configured otherwise. The DMX will be output regardless of the “Status” enabled or disabled in the Setup DMX I/O window. On Pro consoles there is a green LED on the rear panel that indicates when DMX is being output.

If you wish to choose alternative universes to be output to the four DMX outputs on the rear panel then you will need to configure the outputs manually. For each of the Universes you wish to output on the rear panel, select Out Type as “MagicQ Direct” and Port 1, Port 2, Port 3 and Port 4 and enable the universes.

The picture below shows the direct ports to output Universes 5 to 8.

Uni	Name	Status	Out Type	Out Uni	In Type	In Uni	Test	Copy	Visualiser	Hot takeover	Unica
1		Enabled	Art-Net	Art 0	Art-Net	Art 0	No	No	MagicVis	No	Broa
2		Enabled	Art-Net	Art 1	Art-Net	Art 1	No	No	MagicVis	No	Broa
3		Enabled	Art-Net	Art 2	Art-Net	Art 2	No	No	MagicVis	No	Broa
4		Enabled	Art-Net	Art 3	Art-Net	Art 3	No	No	MagicVis	No	Broa
5		Enabled	MQ Direct	Port 1	Art-Net	Art 4	No	No	MagicVis	No	Broa
6		Enabled	MQ Direct	Port 2	Art-Net	Art 5	No	No	MagicVis	No	Broa
7		Enabled	MQ Direct	Port 3	Art-Net	Art 6	No	No	MagicVis	No	Broa
8		Enabled	MQ Direct	Port 4	Art-Net	Art 7	No	No	MagicVis	No	Broa
9		Disabled	Art-Net	Art 8	Art-Net	Art 8	No	No	MagicVis	No	Broa
10		Disabled	Art-Net	Art 9	Art-Net	Art 9	No	No	MagicVis	No	Broa
11		Disabled	Art-Net	Art 10	Art-Net	Art 10	No	No	MagicVis	No	Broa

### 5.4.2 Using Outputs via network

MagicQ supports output via the network ports using Art-Net, Pathport or ACN Streaming DMX.

To output Art-Net on a Universe enable it and ensure that the output type is set to Art-Net. Choose which Art-Net Universe you wish to Output the MagicQ Universe on. MagicQ defaults to outputting MagicQ universe 1 on the first Art-Net Universe (Art 0-0).

If you are using Ethernet to DMX512 conversion boxes then you will need to configure the boxes to respond to the correct Art-Net sub-net and Art-Net universe.

With ChamSys SnakeSys B4 or R4 you need to set up the two rotary switches to the correct values – the left one for Art-Net sub-net and the right one for Art-Net universe. The interface will then decode the four Art-Net universes starting from that Art-Net subnet and universe.

In most networks the Art-Net sub-net is set to 0. If you are using only one Ethernet to DMX512 interface then you can normally use subnet 0 universe 0.

If you are using multiple Ethernet Interfaces then you will need to set each Ethernet Interface to a different Art-Net Universe – for example when using two ChamSys SnakeSys B4 Interfaces set the first Interface to Art-Net Universe 0 and the second one to Art-Net Universe 4.

MagicQ includes a DMX viewer for monitoring Art-Net on the Network – select Tools, DMX View.

## 5.5 Connecting a MagicQ Playback Wing

To connect a MagicQ Playback or Extra Wing simply connect the Wing to the MagicQ console via USB. In the Setup Window, View System, View Wings set the first Wing to be type USB Wing.

By default the Playback Wings are set so that the Wings change page when the Next Page / Prev Page button are pressed on the MagicQ console. It is possible to make the Wings operate completely independently of the main MagicQ console by changing the “Lower Bank Tie” and “Upper Bank Tie”.

To use multiple Playback Wings simply connect them and change the type to USB wing.

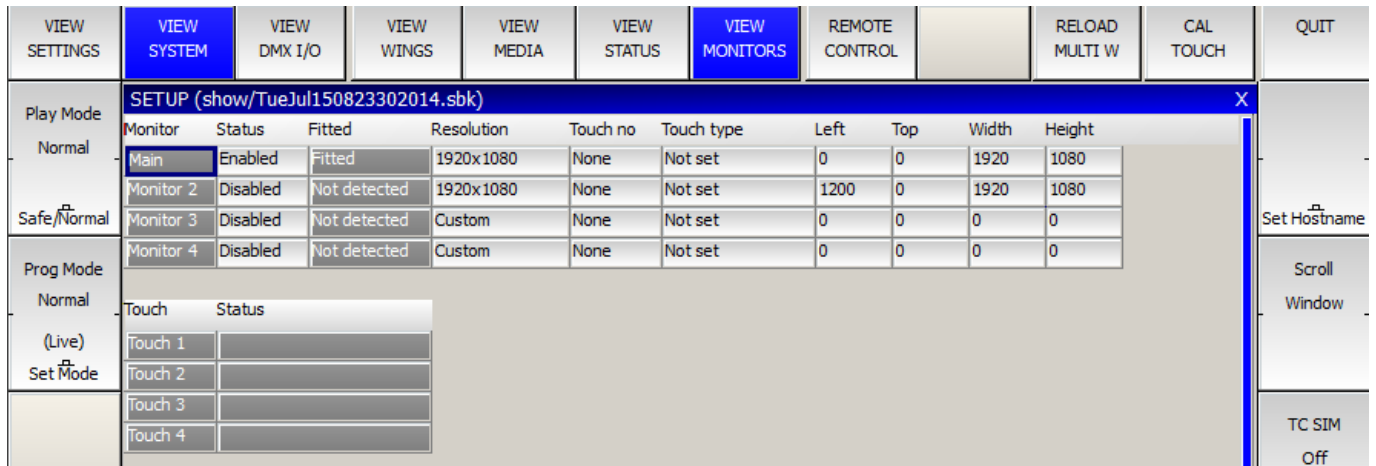
### 5.5.1 Setting Playback Wing IDs

When using MagicQ consoles with multiple Playback / Extra Wings (or multiple Execute Wings) it is now possible to set a Wing ID for each Wing. The required wing ID can then be set in Setup, View Wings to ensure that the Wings are identified correctly and control the correct Playbacks. Previously Wings could swap over if one was reset or they were powered on in a different sequence.

Note that the Wing ID is only supported on new Wings with blue LCDs and the most recent Wing firmware). The Wing ID is set by holding the reset button under the armrest of the Wing whilst holding the lower most Page UP and Page Down buttons.

## 5.6 Connecting External Monitors

MagicQ consoles have either VGA or DVI connectors depending on the console model for connecting external monitors. On Pro2014, MQ60/70 and MQ80 consoles these monitors can be touch screen monitors. The MQ40N does not support touch screen monitors. The MQ40N external monitor is always fully enabled without the need for any configuration.



### 5.6.1 Pro 2010 and Pro 2014 Operating System

On MagicQ consoles running the Pro 2010 there is support for two external monitors with resolution up to 1440x900. The Pro 2014 supports one external monitors up to 1920x1080 resolution.

Monitors can be touch screens (only External 1 on Pro 2010/14). MagicQ supports a number of [touch screen protocols](#)

External monitors must be powered and connected when the console powers up in order to be detected correctly.

Set the required resolution in the Resolution column and enable it.

When using USB touch screens, go to Setup, View System, View Monitors to see the status of the connected touch screens.

### 5.6.2 Pro Operating System

From MagicQ version 1.5.9.4 there is no longer support for an external monitor on the original Pro systems since the graphics card is not capable of handling the resolutions of modern monitors. Full external monitor support can be obtained by upgrading the hardware to Pro 2014.

## 5.7 Patching

Open the Patch Window by pressing the PATCH button. The Patch Window has three views, VIEW HEADS, VIEW CHANS and VIEW DMX. In this section we describe patching in VIEW HEADS.



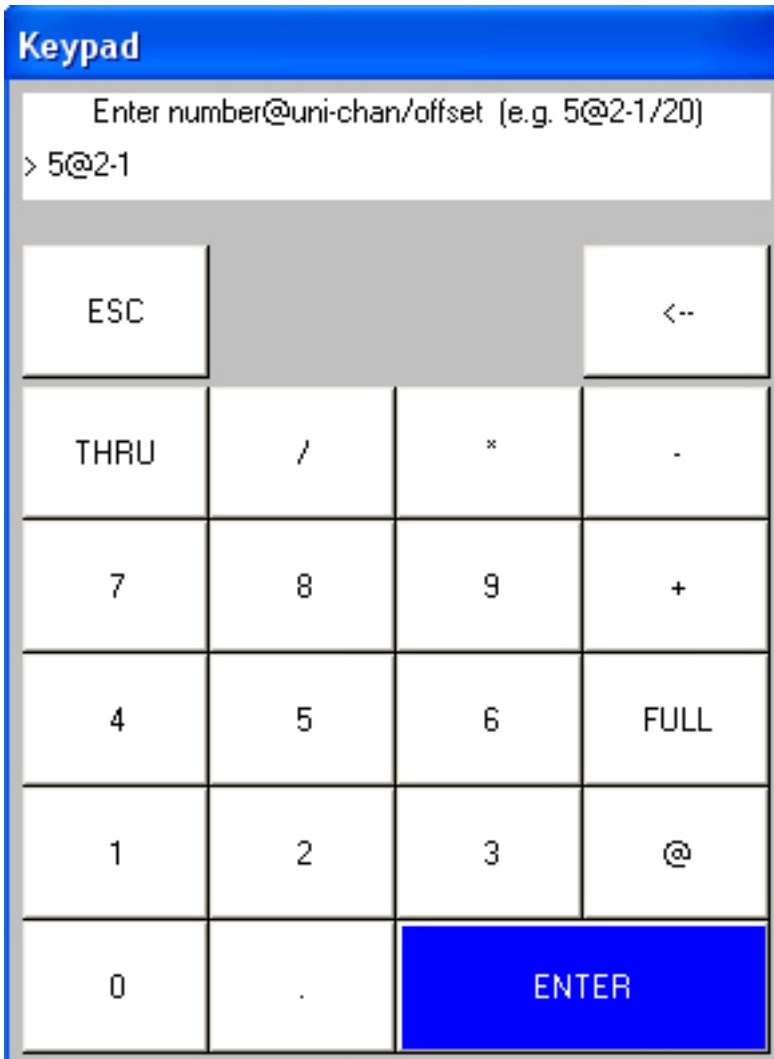
Choose the head you wish to patch by pressing the CHOOSE HEAD soft button. The Window will change to give you a list of manufacturers and heads. Select a head by pressing the touch screen. Alternatively scroll around the Window using the cursor keys, and press ENTER when the cursor is over the correct head.



**FILE MANAGER (hard drive: show/heads)**

5star	abstract	ac lighting	Acme	Airstar	alkalite	Alpha One	American DJ	Amptown	apollo
ariane	arkaos	avr	ayrton	borealis	cameleon	canvix	capture	chameleon	Chauvet
chroma q	Chromlech	cirro	city theat	Clay Paky	cls	coef	coemar	colours	columbus
compulite	constella	coolux	cxi	d-tek dmx	desisti	dha	discotech	diversitronic	DTS
eee	effect co+c34	elation	elite	ETC	eurocolour2	eurolite	eurotech euro	eurotech	evl
expolite	fal	fly	futurelight	G-Lites	generic	geni	glp	griven	high end
hippo	hq power	hubbell	hungaroflash	ipix	irideon	jb systems	JB	jem	jt eng
labscan	lampo	lanzini	laserage	le maitre	led	licht technik	light curtain	light sky	lighting inov

Once you have chosen a head you will be returned to the Patch Window. Press the PATCH IT soft button to patch the head. You will be prompted for the number you wish to prompt and the address where you wish to patch the heads. Use @ to patch at a specific address.



For example to patch 5 Mac250 mode 4 to Universe 2 channel 1 enter

5 @ 2 - 1

If you wish to patch multiple channels at fixed offsets e.g. five Martin Mac250s at DMX channels 1,21,41,61,81 then enter

5 @ 2 - 1 / 20

PATCH (Martin Mac250m4)										
Head type	DMX	Hd no	Name	Gel	P Inv	T Inv	Swap	Merge	From	
Martin Mac250m4	2-001 (000000001)	001	Mac250	○wheel	no	no	no	Norm		
Martin Mac250m4	2-014 (000001110)	002	Mac250	○wheel	no	no	no	Norm		
Martin Mac250m4	2-027 (000011011)	003	Mac250	○wheel	no	no	no	Norm		
Martin Mac250m4	2-040 (000101000)	004	Mac250	○wheel	no	no	no	Norm		
Martin Mac250m4	2-053 (000110101)	005	Mac250	○wheel	no	no	no	Norm		

To patch a dimmer, simply press CHOOSE DIM/MEDIA, select Generic Dimmerer and then patch one or more dimmers as above.

In the Patch Window all the lighter coloured fields can be configured. To modify a field, first move the cursor to the field, then input the new value using the keypad and keyboard, and finally press ENTER.

In this way you can modify DMX address, head number, head name and gel for each of your patched heads.

### 5.7.1 Naming and Numbering Heads

Once you have patched all the heads you can then name and number them as you wish. It is recommended that you name the dimmer or the head based on its location (e.g. front wash / back truss SL). For dimmers you may wish to configure the gel. This makes programming easier – enabling the console to auto program cues for you.

PATCH									
Head type	DMX	Hd no	Name	Gel	P Inv	T Inv	Swap	Merge	From
Generic Dimmer	1-001 (000000001)	001	Spots	○ No col				Norm	
Generic Dimmer	1-002 (000000010)	002	Spots	○ No col				Norm	
Generic Dimmer	1-003 (000000011)	003	Spots	○ No col				Norm	
Generic Dimmer	1-004 (000000100)	004	Spots	○ No col				Norm	
Generic Dimmer	1-005 (000000101)	005	Finger L	● R59 Indigo				Norm	
Generic Dimmer	1-006 (000000110)	006	Finger L	● R312 Canary				Norm	
Generic Dimmer	1-007 (000000111)	007	Finger L	● R356 Middle Lavendk				Norm	
Generic Dimmer	1-008 (000001000)	008	Finger L	● R27 Medium Red				Norm	
Generic Dimmer	1-009 (000001001)	009	Finger L	● R312 Canary				Norm	
Generic Dimmer	1-010 (000001010)	010	Finger L	● R27 Medium Red				Norm	
Generic Dimmer	1-011 (000001011)	011	Finger L	● R59 Indigo				Norm	
Generic Dimmer	1-012 (000001100)	012	Finger L	● R312 Canary				Norm	
Generic Dimmer	1-013 (000001101)	013	Finger L	● R356 Middle Lavendk				Norm	
Generic Dimmer	1-014 (000001110)	014	Finger L	● R27 Medium Red				Norm	
Generic Dimmer	1-015 (000001111)	015	Finger L	● R312 Canary				Norm	
Generic Dimmer	1-016 (000010000)	016	Finger L	● R27 Medium Red				Norm	
Generic Dimmer	1-017 (000010001)	017	Finger M	● R59 Indigo				Norm	
Generic Dimmer	1-018 (000010010)	018	Finger M	● R312 Canary				Norm	
Generic Dimmer	1-019 (000010011)	019	Finger M	● R356 Middle Lavendk				Norm	
Generic Dimmer	1-020 (000010100)	020	Finger M	● R27 Medium Red				Norm	

The gel field uses gel numbers. For Lee colours enter the gel number directly (e.g. 181 for Lee 181). For Rosco colours enter the gel number preceded by dot (e.g. .14 for Rosco 14). For no colour enter 0. If you would prefer to use colour names rather than gel numbers then simply enter the colour name.

To test a patched head or dimmer, simply press the TEST MODE soft button (soft button encode C) and the head which the cursor is over will be tested. For heads it locates the fixture; for dimmers it sets the dimmer to 100%. Press the TEST MODE soft button again to turn test mode off.

## 5.8 Controlling Heads

### 5.8.1 Selecting Heads

In order to control intelligent heads it is necessary to be able to select which heads to use. The MagicQ console keeps track of the currently selected heads to enable it to determine which heads to apply changes to. The operator can select head individually or can use groups to recall configurations of heads that are used frequently.

In “Hog Warp” mode or when the Setup option “Keypad always selects head is set” you can select heads from the keypad – for instance to select heads 1 through 4.

1 THRU 4 ENTER

In other modes, you can select the heads using

1 THRU 4 @@

## 5.8.2 Selecting heads from the Group/Heads Window

The console automatically generates a group for all the heads of a particular head type. In addition new groups can easily be recorded.

The Group Window has two views. VIEW GROUPS enables selection of heads using groups whilst VIEW HEADS enables individual selection of heads.

In VIEW GROUPS, pressing the touch screen for a particular group selects all the heads associated with that group. All other heads are deselected. To select multiple groups, press SHIFT and a group to toggle the group in and out of selection.

In VIEW HEADS, individual heads are selected / deselected by pressing the touch screen. Use PG UP and PG DN to scroll through the heads.

## 5.8.3 Recording a Group

Select the heads you want in a group using keypad selection or in the VIEW HEADS view of the Group Window.

Change to the VIEW GROUPS view.

Press RECORD and then select the group you wish to record either by pressing the touch screen or by using the cursor keys and then pressing ENTER.

## 5.9 Naming a Group

When recording a group, if you key in a name before pressing the touch screen (or pressing ENTER) then the group will be named at the same time as it is recorded.

You can name a group at any time by keying in the name, pressing SET, and pressing the touch screen.

If you do not have a keyboard then press SET and select the group to name by pressing the touch screen (or using cursor keys and ENTER). A keyboard window will be displayed for you to enter the name on screen.

## 5.10 Recalling a Group

Once a group has been recorded then pressing the touch screen for the group will make all the heads in the group selected. All other heads will be deselected. Use SHIFT to select multiple groups. There is a Setup option to allow the user to default to selecting multiple groups.

## 5.11 Setting Levels for Dimmers

From the keypad you can enter commands such as

1 @ 50 ENTER

1 THRU 4 @ FULL ENTER

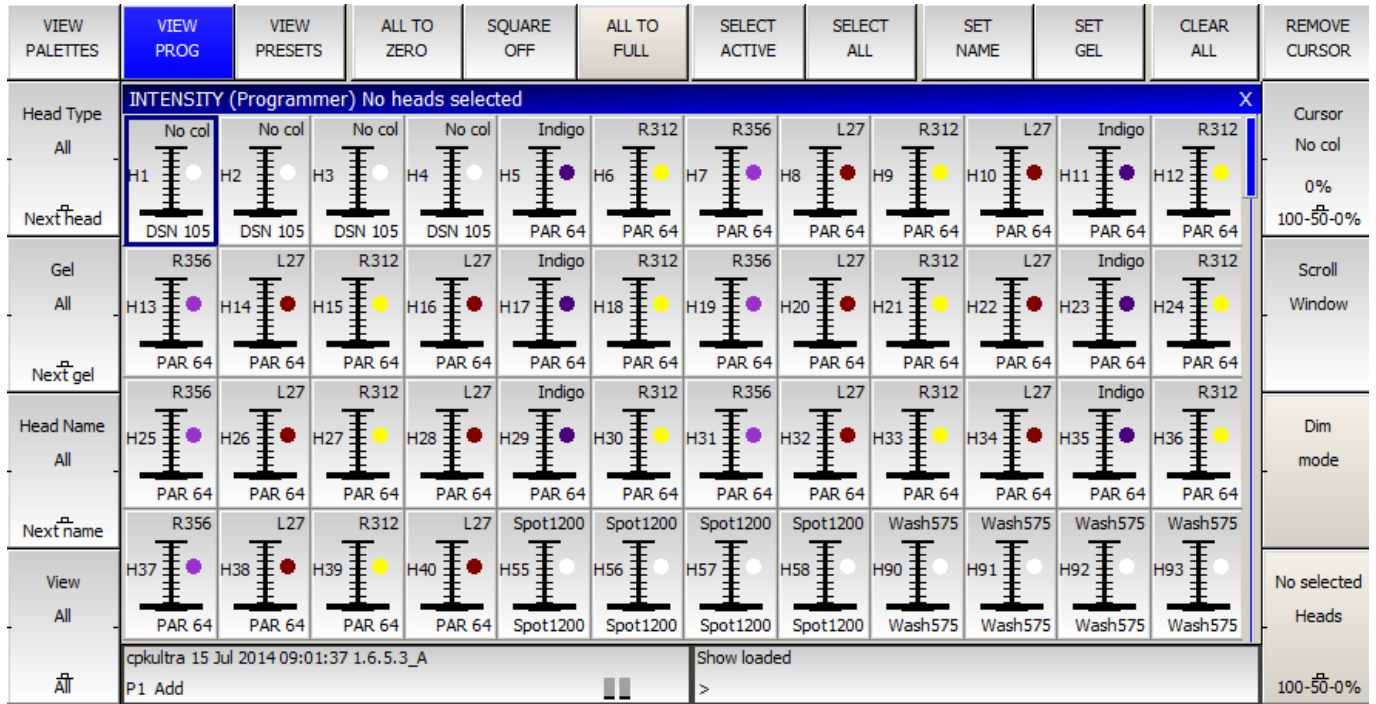
It is also possible to use the Intensity Window by pressing the INT button. This window displays a fader for each dimmer and head patched onto the console. Pressing the slider part of the fader sets the appropriate level. When a fader is moved from 0 the channel in the programmer is activated – and the fader will turn red.

The Window has two views, View Prog and View Preset – faders changed in the Prog View affect the intensity levels in the programmer and are recorded into Cues. Faders changed in the Preset View are like traditional “one per channel” preset faders on older lighting consoles – this enables levels on channels to be set without affecting programming. This is equivalent to “Parking” on other consoles.

The SQUARE OFF soft button enables fast programming of intensities. Using the touch panel select the channels you wish to have at full and at zero – but don't bother being exactly accurate with the level of the selection. Pressing SQUARE OFF finishes the job by setting all channels that are less than 50% to 0 whilst setting channels above 50% to full.

Use the ALL TO FULL and ALL TO ZERO buttons to change the level of all the channels.

Press the CLEAR soft button to clear the programmer.



## 5.12 Locating Heads

The first action you are likely to want to do is to locate the heads – i.e. to put them into a starting position. Select the required heads and then press the LOCATE button. Locating a head brings all the attributes for that head into the programmer.

If the heads enable DMX control of the striking of the lamp then you may need to “Lamp On” the head in order to see the beam. Select the heads and then press SHIFT LOCATE. This runs the "Lamp On" macro.

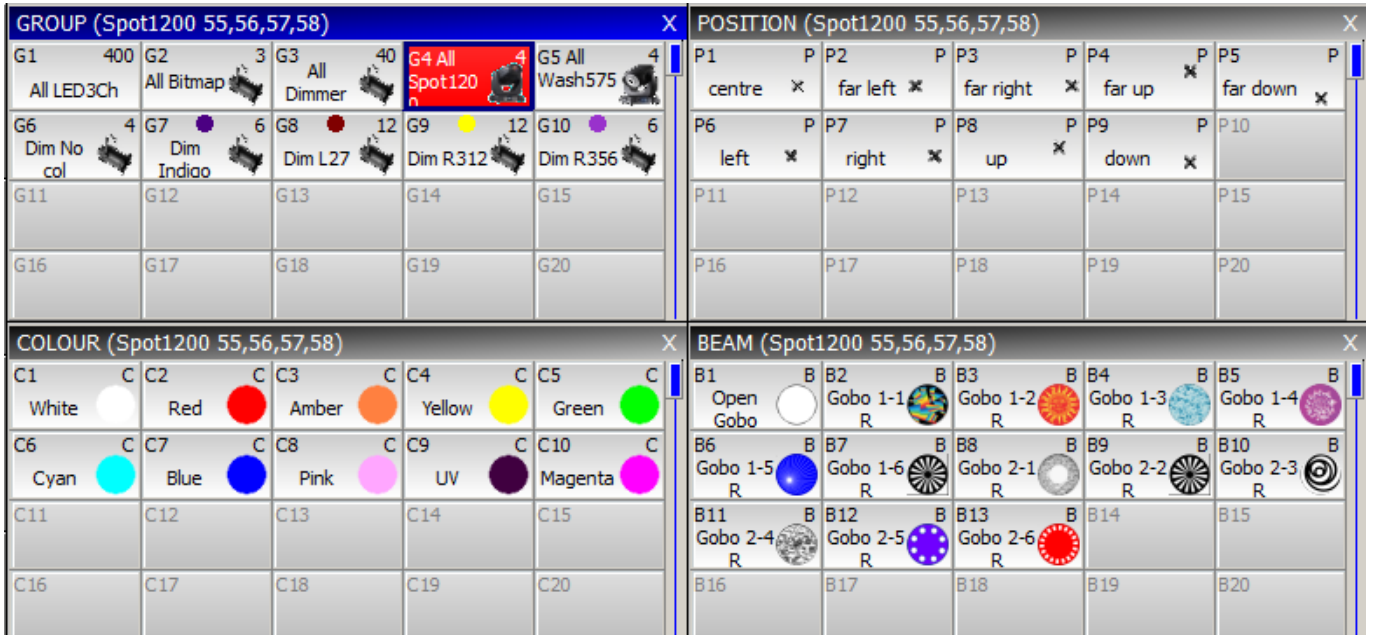
## 5.13 Modifying Attributes

Intelligent heads have several different attributes typically including pan and tilt, colour, gobo and iris. When the MagicQ lighting console patches an intelligent head it maps the head parameters to standard attributes to enable easy access of the features of the head.

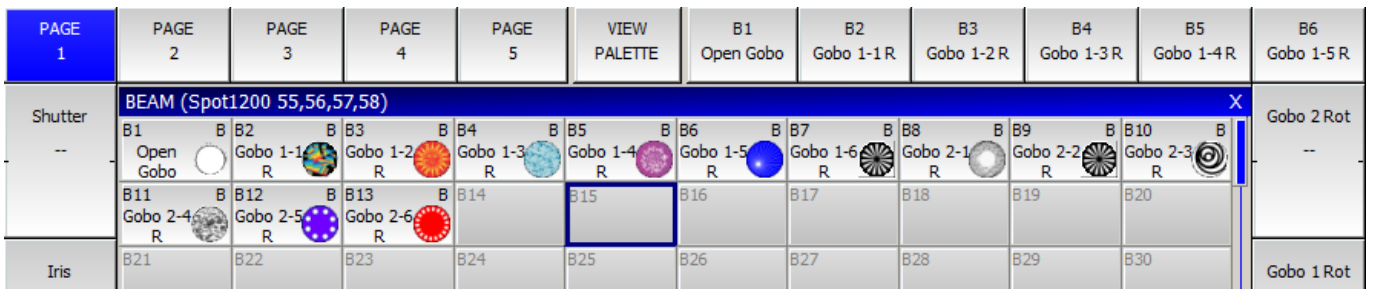
Attributes are categorised into four types – Intensity, Position, Colour and Beam. On MagicQ there is a window for each of these attribute types. Select the required heads, then open the required window.



You can quickly open all the Palette Windows by pressing Layout 1 or holding CTRL and pressing the top soft button marked Palettes – this opens the windows in the layout below.

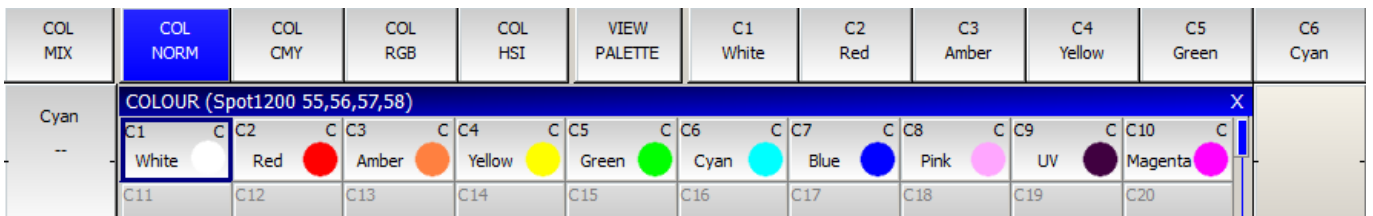


The highlighted window enables controls the soft buttons and rotary encoders. In each of the Windows the X and Y encoders control the most important attributes – Pan and Tilt in Position Window, Col Wheel 1 and Col Wheel 2 in the Colour Window and Gobo Wheel 1 and Gobo Wheel 2 in the Beam Window. In the Beam Window there are more than eight attributes to be controlled – these are accessed using multiple pages of encoders – by pressing the NEXT PAGE soft button.



For indexed attributes such as colour wheels and gobo wheels, the button associated with each encoder can be used to bump the attribute value to the next range. Pressing SHIFT and the button bumps back to the previous range.

In addition the window enables selection of palette values for the attribute type using the touch screen. When heads are recorded the system automatically generates palettes for each attribute type. You can record new palette entries, or modify existing ones as you see fit.



In the Colour Window pressing the COL MIX / COL ATTRIBS button changes to the colour picker. Press COL TYPE to select standard colours, Lee colours, Rosco colours or HIS model.

COL MIX	COL NORM	COL CMY	COL RGB	COL HSI	COL TYPE	Lee 2 Rose Pink	Lee 3 Lavender Tint	Lee 4 Medium Bastard Amber	Lee 7 Pale Yellow	Lee 8 Dark Salmon	Lee 9 Pale Amber Gold	Lee 10 Medium Yellow	Lee 13 Straw Tint	Lee 15 Deep Straw	Lee 17 Surprise Peach
Cyan	COLOUR MIXS LEE (Spot1200 55,56,57,58)														
Magenta	Lee 2	Lee 3	Lee 4	Lee 7	Lee 8	Lee 9	Lee 10	Lee 13	Lee 15	Lee 17					
	Rose Pink	Lavender Tint	Medium Bastard Amber	Pale Yellow	Dark Salmon	Pale Amber Gold	Medium Yellow	Straw Tint	Deep Straw	Surprise Peach					
Yellow	Lee 19	Lee 20	Lee 21	Lee 22	Lee 24	Lee 25	Lee 26	Lee 27	Lee 29	Lee 35					
	Fire	Medium Amber	Gold Amber	Dark Amber	Scarlet	Sunset Red	Bright Red	Medium Red	PLASA Red	Light Pink					
Yellow	Lee 36	Lee 39	Lee 46	Lee 48	Lee 52	Lee 53	Lee 58	Lee 61	Lee 63	Lee 68					
	Medium Pink	Pink Carnation	Dark Magenta	Rose Purple	Light Lavender	Paler Lavender	Lavender	Mist Blue	Pale Blue	Sky Blue					
Yellow	Lee 71	Lee 75	Lee 79	Lee 83	Lee 88	Lee 89	Lee 90	Lee 100	Lee 101	Lee 102					
	Tokyo Blue	Evening Blue	Just Blue	Deeper Blue	Lime Green	Moss Green	Dark Yellow Green	Spring Yellow	Yellow	Light Amber					
Yellow	Lee 103	Lee 104	Lee 105	Lee 106	Lee 107	Lee 108	Lee 109	Lee 110	Lee 111	Lee 113					
	Straw	Deep Amber	Orange	Primary Red	Light Rose	English Rose	Light Salmon	Middle Rose	Dark Pink	Magenta					
Yellow	Lee 115	Lee 116	Lee 117	Lee 118	Lee 119	Lee 120	Lee 121	Lee 122	Lee 124	Lee 126					
	Peacock Blue	Medium Blue-Green	Steel Blue	Light Blue	Dark Blue	Deep Blue	Lee Green	Fern Green	Dark Green	Mauve					
Col mix	Lee 127	Lee 128	Lee 130	Lee 131	Lee 132	Lee 134	Lee 135	Lee 136	Lee 137	Lee 138					
	Smokey Pink	Bright Pink	Clear	Marine Blue	Medium Blue	Golden Amber	Deep Golden Amber	Pale Lavender	Special Lavender	Pale Green					

### 5.14 Recording a Palette

To record a favourite combination of attributes into a palette (e.g. a rotating triangle with a prism on a MAC500), first modify the attributes to the values you wish to record. Then press RECORD and select the palette entry you wish to record. By default only selected heads get recorded into a palette (this can be changed by pressing SHIFT + RECORD and choosing Record options).

REC NORMAL	REC MERGE	REC REMOVE	SELECTED ONLY	ENTIRE STATE	MULTI STEP	REC TYPE	REC INT	REC POS	REC COL	REC BEAM	CLOSE OPTIONS
------------	-----------	------------	---------------	--------------	------------	----------	---------	---------	---------	----------	---------------

To name the palette, key in the name on the external keyboard, then press SET and select the palette entry you wish to name. To use the on screen keyboard, first move the cursor over the palette entry, then press SET and key in the name followed by ENTER.

### 5.15 Adding in FX

To add a FX to some heads, select the heads then from the Group Window or the Prog Window press the ADD FX soft button. Choose the FX to add.

Once you have chosen a FX you are returned to the Prog Window. Use the encoders to modify the parameters of the FX such as the speed, size and spread between heads.

You can add multiple FX to a head, provided that the FX uses different attributes - e.g. you can mix a Pan Sine with a Tilt Sine.

### 5.16 Recording a Cue

To record a look onto a Cue, first set up the look, then press RECORD and press the S button of the Playback to record the Cue onto.

To test the Cue, first clear the programmer by pressing CLEAR then raise the Playback fader or press the Playback flash button.

Note that recording a Cue onto a Playback, generates a Cue Stack with a single Cue. However, as there is only one step, it behaves as though it is just the Cue on the Playback.

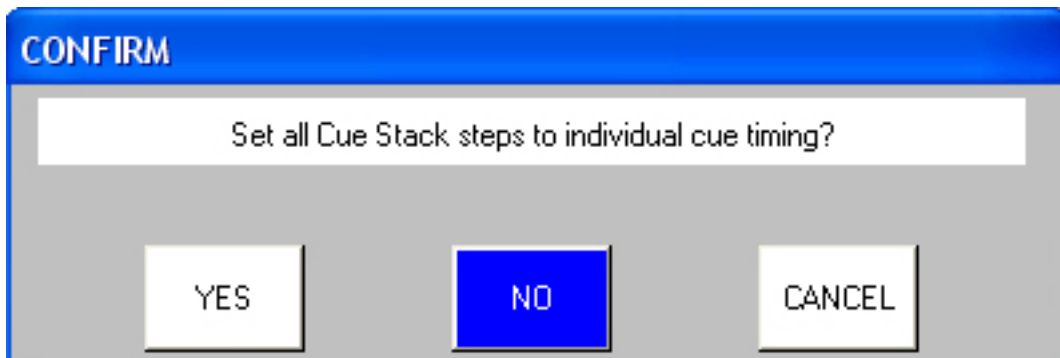
To view a recorded Cue, press the S button for the Playback, and then press CUE to open the Cue Window.

To configure options when recording, press SHIFT + RECORD and a toolbar of record options will be displayed. Choose the options you require then press the S button of the Playback as above.





The timing mode can be changed, so that the Cues play back in a theatre style using the GO / STOP buttons. Select the VIEW OPTIONS view and press the CUE TIMING and CHASE TIMING soft buttons to modify the timing mode.



## 5.18 Selecting and recording complete window layouts

The console enables complete window layouts to be recorded and selected. The console incorporates several standard window layouts including Palettes and Cue Stacks.

There are physical buttons for Layout 1, 2 and 3. Layouts 1 to 12 can also be accessed by holding CTRL and selecting one of the top soft buttons.

To select a Window layout press one of the Layout buttons, or hold down CTRL and select one of the top soft buttons.

To record a Window layout first close all windows (SHIFT + CLOSE). Then open the required Windows and size them appropriately. Press RECORD and then press a Layout button or hold down CTRL and select one of the top soft buttons.

To name the Window layout, press SET and then press a Layout button or hold down CTRL and select one of the top soft buttons. Enter a name for the layout.

## 5.19 Saving the Show

When programming a show the show is stored in memory. In order to store your show on the disk you need to press the SAVE SHOW soft button in the Setup Window.

Whilst programming, you should regularly save your show, so that if the power fails your show data is not lost. You can chose any filename - MagicQ will automatically set the file extension to .shw.

By default, MagicQ periodically saves a backup of your show to disk. It uses the same show name but with the file extension .sbk.

It is a good idea to save your show to different file names so that you have various points you can back-track to if things go wrong. For example, save the show as myshow-patch.shw after you have patched and then as myshow-final.shw after you have finished programming.

When you shut down MagicQ through the QUIT soft button in the Setup Window, MagicQ automatically saves a backup copy of your show with a .sbk extension. When you subsequently restart MagicQ this file will be re-loaded. This ensures that MagicQ starts up as it was when the QUIT soft button was pressed.

MagicQ show files are typically only a few megabytes in size so many different shows or versions of a show can be saved without problem.

## 5.20 Playback

Now you have Cues and Cue Stacks recorded you can play back your show using the Playback faders and buttons. You can control how each Cue Stack is played back using the Cue Stack options – for example you can set the fader to control LTP fades or FX size and speed.

Make sure the master faders are raised!

Note that if you have a large show file you may wish to turn auto backups off during playback. Remember to turn them back on when you are programming.

If you get stuck at any point, just press the HELP button!

---

## Chapter 6

# Handy Hints

- Use the “Lamp On All” and “Lamp Off All” soft buttons in the Macro Window to make turning on/off an entire lighting rig easier.
  - Use a pan offset and/or tilt offset in Patch to adjust all the programming for some heads.
  - Use SHIFT or CTRL and the cursor keys to carry out actions on multiple items in a Window.
  - When recording items, type in a name for the item on the external keyboard before pressing the REC button.
  - To force a minimum look on stage (e.g. during a changeover) whilst allowing full programming capability got to Intensity, View Preset and set up a minium look.
  - When using encoders, to bump to the next range value (e.g. next colour), press the button associated with the encoder. To bump back, hold SHIFT and press the button.
  - To modify a playback, press and hold the SELECT button associated with the playback and then use the encoders or key in new values.
  - If your CMY colours are coming out inverted – i.e. red is cyan, green is purple, blue is yellow, then you need to set the CMY Invert option for that personality in the Head Editor.
  - To restart the look in the programmer press BLIND twice.
  - If you find yourself constantly changing Windows to perform an action, try sizing the required Windows and recording it as a Layout.
  - After you have cleared the programmer you can reselect the heads that were selected when you pressed CLEAR by pressing the ALL button.
  - To remove attributes from an entire Cue Stack (e.g. position information) activate those attributes in the programmer and use the RECORD REMOVE option.
  - To add attributes into an entire Cue Stack (e.g. position information) activate those attributes in the programmer and use the RECORD MERGE option.
  - To Record Merge the current contents of the programmer into the current Cue on a Cue Stack, press and hold the Select button of the playback and press RECORD.
  - Copy palettes to Playbacks to make Cue Stacks of palettes.
-

## Chapter 7

# MagicQ Short Cuts

Table 7.1: Saving / Loading

New show	SETUP <View Settings> <New Show>
Save show	SETUP <View Settings> <Save Show>
Load show	SETUP <View Settings> <Load Show>
Save settings	SETUP <View Settings> <Save Setting>
Load settings	SETUP <View Settings> <Import Settings>
Save partial show	SETUP <View Settings> <SHIFT + Export Show>
Merge in show	SETUP <View Settings> <SHIFT + Import Show>
Load archived backup	SETUP <View Settings> <SHIFT + Load Backup>
Export patch list	PATCH <View Chans> <Export Patch>
Import patch list	PATCH <View Chans> <Import Head>
Import ASCII file	PATCH <View Chans> <Import USITT>
Reset console	SETUP, <SHIFT + QUIT>

Table 7.2: Patching

Select head for patching	PATCH <Choose Head>
Patch 1 head, next free address	1 <Patch It>
Patch 5 heads, next free address	5 <Patch It>
Patch 1 head at uni 1 address 1	1@1-1 <Patch It>
Patch 5 heads at uni 2 address 1	5@2-1 <Patch It>
Patch 5 heads at uni 2 address 1, head 100	5@2-1*100 <Patch It>
Patch 5 heads with offset 20	5/20 <Patch It>
Patch after uni 3 address 50	5@+3-50 <Patch It>
Reselect head Cursor to head	<SHIFT + Choose Head>
Edit patched head Cursor to head	<SHIFT + Edit Head>
Repatch selected heads without changing offset	3-1 / ENTER

Table 7.3: Select Heads

Select head 1	1 @@
Sub Select element 2	.2 NEXT HEAD
Select heads 1 to 4	1 THRU 4 @@
Select heads 1 to 10, not 5	1 THRU 10 - 5 @@

Table 7.3: (continued)

Deselect all heads	0 @@
Select all heads	NEXT HEAD + PREV HEAD
Reselect last heads after CLEAR	ALL
Select Group 1	1 * *
Select Groups 1 to 4	1 THRU 4 * *
Sub select 1st head	1 NEXT HEAD
Sub select 1st and 2nd head in selection	1 + 2 NEXT HEAD
Sub select 3rd, 4th and 5th head	3 THRU 5 NEXT HEAD
Sub select element 2	. 2 NEXT HEAD
Sub select pair	SHIFT + SINGLE
Sub select heads using palette above 0%	NEXT HEAD + Palette
Select all heads using palette	ALL + <Palette entry>
Select heads active in Playback	ALL + <S>
Select heads above 20% intensity	20 ALL + INT
Select all heads active in prog	CTRL + ALL
Reselect last heads after CLEAR	ALL
Change selection order	Press and hold ALL
Pair Selection	SHIFT + SINGLE
Invert current sub selection of heads	0 + NEXT HEAD

Table 7.4: Lamp On / Lamp Off / Reset

Lamp On entire rig	MACRO <Lamp on all>
Lamp Off entire rig	MACRO <Lamp off all>
Lamp On selected heads	SHIFT + LOCATE
Lamp Off selected heads	CTRL + SHIFT + LOCATE
Reset selected heads	CTRL + LOCATE
Lamp on selected heads	<select head> * + +
Lamp off selected heads	<select head> * - -
Reset selected heads	<select head> * //

Table 7.5: Setting Intensities

Set head 1 to 100%	1 @ FULL (Also 1 FULL)
Set head 1 to 50%	1 @ 50 ENTER
Set heads 1 to 4 to 100%	1 THRU 4 @ FULL
Set head 1 +10%	1 @ + 10 ENTER
Set head 1 -1%	1 @ - 01 ENTER
Set head 1 at 50, all others at 0%	1 @ 50 - -
Set head 1 to 50% time 3 secs	1 @ 50 / 3 ENTER
Set 2nd element from head 1 to 50%	1 . 2 @ 50
Set 2nd element from head 1 to 10 to 50%	1 THRU 10 . 2 @ 50
Set element 2 and 3 from head 1 to 50%	1 . 2 THRU 3 @ 50
Heads 1 to 10, 100% split delays 4s to 1s, 1s fade	1 THRU 10 @ FULL / 4 THRU 0 / 1

PC Keyboard THRU = '>' FULL = '#'

Table 7.6: FX

Add FX	Select heads, FX <ADD FX>
Convert chase to FX	CUE STACK <SHIFT + Make FX>
Force Cue to have no FX	Select heads <Add FX 0 Size>

Table 7.7: Playback

Step through Cue Stack	>
Step back up Cue Stack	II or also SHIFT + >
Go to next step without time	>>
Go back a step without time	<<
Reassert Playback	S + FLASH button
Take manual control of Playback	S + move manual fader
Change chase / FX speed live	S + turn encoder X
Go to Cue ID 2	S 2 ENTER
Release Playback with 3 sec time	S 3 REL
Release all Playbacks	SHIFT + RELEASE
Release all test Playbacks/Cues/Cue Stacks	CTRL + RELEASE
Enter/exit Blind with 3 sec time	3 BLIND
Make Cue Stack default all pages	Change to Page 1, PLAYBACK, <Default Cue Stack>
Transfer a Cue Stack to other playback	SHIFT + SEL select source > select target

Table 7.8: Loading Values into the Programmer

Default all attribs	Select heads, LOCATE
Default position attribs	Select heads <POS + LOCATE>
Default colour attribs	Select heads <COLOR + LOCATE>
Default beam attribs	Select heads <BEAM + LOCATE>
Default intensity attribs	Select heads <INT + LOCATE>
Make active all attribs	Select heads, <* + SET>
Make active pos attribs	Select heads, <POS + SET>
Make active colour attribs	Select heads, <COLOR + SET>
Make active beam attribs	Select heads, <BEAM + SET>
Make active int attribs	Select heads, <INT + SET>
Make hard all attribs	Select heads, <* + MOVE>
Make hard pos attribs	Select heads, <POS + MOVE>
Make hard colour attribs	Select heads, <COLOR + MOVE>
Make hard beam attribs	Select heads, <BEAM + MOVE>
Make hard int attribs	Select heads, <INT + MOVE>
Load Cue from Playback	INC <S>
Load Cue ID 2	2 INC <S>
Load Cue at 40%	@ 40 INC <S>
Load Cue at current level	@ INC <S>
Load entire state of Cue Stack	ALL + INCLUDE
Load selected heads from Cue	<* + INC> <S>
Load selected heads pos from Cue	<POS + INC> <S>
Load selected heads colour from Cue	<COLOR + INC> <S>
Load selected heads beam from Cue	<BEAM + INC> <S>
Load selected heads int from Cue	<INT + INC> <S>
Load from DMX	Select heads, <CTRL + INC> ENTER
Snapshot output cues	PROG, <Snapshot>

Table 7.8: (continued)

Snapshot active values	THRU RECORD
Snapshot selected heads	* + SET

Table 7.9: Removing Values from the Programmer

Clear all values	CLEAR
Clear with 3 sec time	3 CLEAR
Clear selected heads	Select heads, SHIFT + CLEAR
Clear to default vals	CTRL + CLEAR
Clear to 0 vals	SHIFT + CTRL + CLEAR
Remove attrib	<REM + turn encoder>
Remove attrib	<soft button + REM>
Remove position attribs	<POS + REM>
Remove colour attribs	<COLOR + REM>
Remove beam attribs	<BEAM + REM>
Remove intensity attribs	<INT + REM>
Remove all attribs	<* + REM>

Table 7.10: Recording Cues

Record Cue on Playback	REC S
Record Cue ID 2.5	2.5 REC S
Record Cue to current Playback	REC ENTER
Record to Playback 2	REC 2 ENTER
Record to Cue ID 2.5 Playback 2	REC 2 / 2.5 ENTER
Record sel heads only	<SHIFT + REC> <Sel Only> S
Record sel heads only	* + REC
Record sel attribs	<SHIFT + REC>, select attribs, S
Record entire state of programmer	ALL + REC
Record Cue Only	/ + REC
Record Snapshot	THRU + REC

Table 7.11: Record Merging / Removing

Record Merge	<+ + REC> S
Record Merge current Cue	S + REC
Record Merge current Cue	REC UPD
Record Merge selected head only	Hold * and + and press REC
Record Merge all Cue Stack	<SHIFT + REC> <Record Merge> S
Record Merge Cue Id 2 to 4	<+ + REC> 2 THRU 4 S
Record Remove	← + REC> S
Record Remove selected head only	Hold * and - and press REC
Record Remove all Cue Stack	<SHIFT + REC> <Record Remove> S
Record Remove Cue Id 2 to 4	← - REC> 2 THRU 4 S
Record Select Heads	* + REC
Record into current cue	REC 0 ENTER
Set Head 2 at 50% into current cue	S + <2 @ 50>
Set Head 2 at +10% into current cue	S + <2 @ + 10>

Table 7.11: (continued)

Set Head 2 at 50% all cues	S + <2 @ 50 THRU>
Set Head 2 at +10% all cues	S + <2 @ + 10>

Table 7.12: Editing Cues

Edit in Programmer	INC S, make change, UPDATE
Record merge current cue	Change vals in Prog, <S> + REC>
Record Merge all cues in Stack	<+ + REC><S>
Record Merge all cues in Stack	<SHIFT + REC> <Rec Merge> <S>
Remove Cue Stack	REM S
Remove Cue ID 2.5	REM 2.5 S
Remove Intensity from Cue	Hold S + Enter Level e.g <S> 1@20ENTER
Move Cues	Move <Cue ID> @ <Cue ID>
Copy Playback	COPY <source S> <dest S>
Copy Playback unlinked	<SHIFT + COPY> <Unlinked> <source S> <dest S>
Copy Cue to end of Cue Stack	Copy <Cue ID> @
Copy Multiple Cues	Copy <Cue ID> THRU <Cue ID> @ <Cue ID>
Copy Heads in Cues	Hold + and Copy or SHIFT COPY select COPY HEADS
Copy Heads	<from Head No> COPY <To Head No> ENTER

Table 7.13: Palettes

Record Palette	Select heads, REC, select item
Re-record Palette	Select heads, REC, select item
Name Palette	Type name, SET
Name Palette (no keyboard)	SET SET, type name, sel item
Edit Palette	Select heads, INC, select item, make changes, UPD
Play Palette with 3 secs	3 select item
Play Palette with 3 secs fanned	3 * select item
Play Palette with 3 secs reverse fan	3 * / select item
Play Palette with 3 secs into centre fan	3 * + select item
Play Palette with 3 secs centre out fan	3 * - select item
Play Palette with 3 secs Random fan	3 * . select item
Use last fan timing	*
Play Palette fan fade 0 to 3s	0 THRU 3 select item
Play fan delay 0 to 3s, 1s fade	0 THRU 3 / 1 select item
Copy Palettes to Playback	<SHIFT + cursor> to select Palettes, COPY S
Set icon for a palette	SHIFT + SET

Table 7.14: Information Windows

Additional Output Windows	2 OUT 3 OUT 4 OUT
Programmer Info Window	CTRL + PROG or 2 PROG
Cue Stack Info Window	CTRL + CUE STACK or 2 CUE STACK
Send text message	! delay , duration , ! message
Send text display 5 seconds	! 0 , 5 ! message
Send text stay visible	! message
Multiple exec windows	1 + Exec, 2 + Exec



Table 7.15: Net Session

Resync SLAVE console	Hold Cursor Left Right Down + SET
----------------------	-----------------------------------

Table 7.16: Wing / Keypad short cuts

Select position palette	<POS + S>
Select colour palette <COLOR + S>	Select beam palette <BEAM + S>
Select position palette 4	POS 4 ENTER
Select colour palette 5	COLOR 5 ENTER
Select position 4 time 5 secs	POS 4 / 5 ENTER
Select position 4 time 5 secs fan	POS 4 / 5 * ENTER
Default intensity attribs	<ALL + LOCATE>
Make active intensity attribs	<ALL + SET>
Remove intensity attribs	<ALL + REMOVE>

Table 7.17: Console

Start up	Start button on rear
Shut down	SETUP, <QUIT>
Soft reset	SETUP, <SHIFT + QUIT>
Calibrate touch screen	SETUP, <View Settings> <Cal Touch> or CTRL + SET
Hard reset	Hold rear reset button 5 seconds
Hard power off MQ100 MQ40 MQ60 MQ70	Hold rear reset button 15 seconds
Hard power off MQ80	Unplug powercon + Hold reset button 10 seconds
Reset graphics	SHIFT + DBO
Shut down console	CTRL + DBO
Lock/unlock console	<CTRL + SOFT button Encoder A>
Console lights on/off	<CTRL + SOFT button Encoder B>
Console screen save, stealth mode	SHIFT + BLIND
Enter/exit test mode MQ100	SHIFT + SHIFT
Enter/exit test mode MQ40/60/70/80	ATL + CTRL + SHIFT
Enter/exit test mode PC/Mac	Type test and press CTRL + SHIFT
Home on Compact consoles	ALT + Lay 1
End on Compact consoles	ALT + Lay 3

Table 7.18: Cue Stack Macros

Activate Playback	A <Playback no>
Run Keyboard Macro	B <Macro no>
Release Playback	R <Playback no>
Activate Playback 100%	T <Playback no>
Release Playback 0%	U <Playback no>
Go Playback	G <Playback no>
Stop Playback	S <Playback no>
Choose Playback	C <Playback no>
Set level last Cue Stack activated	K <Level>
Set level current Playback	L <Level>

Table 7.18: (continued)

Set level of this Playback	M <Level>
Jump to Cue id current Playback	J <Cue Id>
Activates Cue Stack (Stack Store)	E <Qid from Stack Store>
Releases Cue Stack (Stack Store)	F <Qid from Stack Store>
Change Page	P <Page no> (0 is next)
Open view (window layout)	V <View no>
Set decoded time code	O <Time code>
Enable/disable external time code gen	W <Enable> (1 enable, 0 dis)
Set current time code (gen only)	Q <Time code> e.g Q100
Set current time code (internal)	I <Time Code> e.g. I100
Activate Playback 18 on wing 1	A1-18
Go on Playbacks 3 to 5	G3THRU5
Set the level of Playback 6 to 60%	C6L60

Table 7.19: Window Control

Cue window positioned on attribute	<S> + Pos Beam Col Int or FX button
Open Playback Cue Stack Window	Double click S button playback
Open Playback Cue Stack Options	Triple click S button playback
Open Cue Window current playback	SHIFT + Double click S button playback
Close all Windows	SHIFT + CLOSE
All Windows to internal screen	SHIFT + EXT

## Chapter 8

# MagicQ Consoles

### 8.1 MagicQ Pro Series



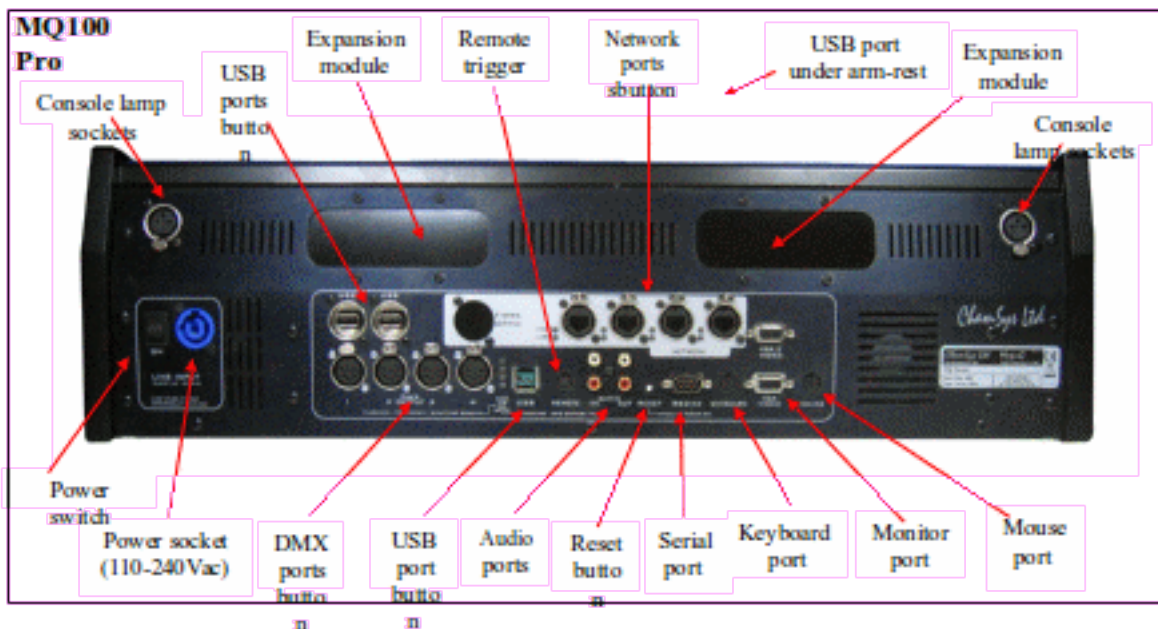
MagicQ Pro series is built on the MagicQ MQ100 console and the MagicQ Playback Wing and MagicQ Execute Wing. The MagicQ MQ200 is a MQ100 with a Playback Wing physically connected whilst the MQ300 has two Playback Wings connected. The MQ200 Execute and MQ300 Execute have a Playback Wing replaced with an Execute Wing.

The MagicQ Playback Wing provides 24 additional fader playbacks split into two banks of 12.

The MagicQ Execute Wing provides 48 additional playbacks - one bank of 12 fader playbacks and three banks of 12 button playbacks.



The picture below shows the connections on a MQ100 Pro 2010 console. The MQ200 Pro 2010 and MQ300 Pro 2010 have the same connectors with the addition of extra console lamp sockets.



Pro 2014 consoles are the same except that they have a MIDI/SMPTE interface fitted in one of the expansion modules.

The MagicQ MQ100 Pro-E (originally Expert) was an entry level version of the MQ100 Pro console with reduced universes and connectivity. MagicQ MQ100 Pro-E consoles had a similar rear panel but with only one network port and two (non locking) USB ports. MQ100 Pro-E consoles do not have VGA ports for additional monitors.

## 8.2 MagicQ Compact Series



MagicQ Compact series comprises the MagicQ MQ40, MagicQ MQ60, MagicQ MQ70 and MagicQ MQ80 consoles together with the MagicQ Extra Wing for more faders and buttons.



## 8.3 MagicQ Wings for use with PC/Mac

The MagicQ Mini Wing, MagicQ PC Wing and MagicQ Maxi Wing connect directly to a PC or Mac. The PC or Mac runs the MagicQ software and processes the Cues whilst the wing acts as a physical surface with faders, buttons and encoders and outputs DMX.

## 8.4 Plugging Up

All MagicQ consoles and SnakeSys interfaces have auto ranging power supplies and can accept 110V to 240V AC on the blue powercon socket.

- Connect the power lead to the power socket labelled LINE INPUT.
- Put the console lamp(s) into the console lamp socket(s)
- Connect the keyboard to the socket on the back panel marked KEYBOARD

MagicQ Pro 2010, Pro 2014 and Compact consoles support USB keyboards and mice. It is not necessary to connect the mouse. The mouse is only required if the touch screen becomes damaged.

Note that the power cable lead should be connected before other connectors and should remain connected at all time that other connections such as DMX, network, serial, USB or video are connected to the console. This ensures that the console is correctly grounded.

## 8.5 DMX Connections

The MagicQ Pro, Pro 2010 and Pro 2014 series of consoles have 4 direct DMX outputs on the rear of the panel so you can connect your DMX cables direct to the console.

Alternatively you can connect to an Ethernet network using the Art-Net, Pathport or ACN Streaming DMX protocols and use external Ethernet to DMX converters to output the DMX.

The network ports on the Pro 2010, Pro 2014 and Compact series all have auto MDI/MDIX detection so a normal or inverted network cable can be used to connect to other network devices. Most modern laptops and computers also have auto MDI/MDIX detection.

ChamSys offer a range of Ethernet to DMX convertors including the SnakeSys T2, B4, R4 and R8 Ethernet to DMX interfaces. These can be used to convert any of the 64 Art-Net or ACN Streaming DMX universes to be output on DMX512 serial. For systems requiring all 64 universes on DMX512, multiple interfaces may be used connected via network switches.

## 8.6 Powering Up

To power up the console press the power switch on the rear panel. The blue LEDs on the ten S buttons will light up in turn. After a few seconds the screen will come to life and you will see the operating system quickly performing self tests. Once the self tests are completed the MagicQ application is started.

## 8.7 Powering Down

To power down the console it is necessary to quit the MagicQ application. The console operating system then performs an automatic shutdown and turns itself off when complete. To quit the MagicQ application, press the SETUP button and then the QUIT soft button. When asked for confirmation, press the YES.



Note that just removing the power cord to the console will not have the desired effect since the internal UPS continues to provide power.

If for some reason you are unable to power off the console then you may need to reset it as below.

Note that the power cable should remain connected at all time that other connections such as DMX, network, serial, USB or video are connected to the console. This ensures that the console is correctly grounded. The power cable should be the last connection removed.

## 8.8 Resetting the Console

Under rare circumstance it may be necessary to reset the console.

To reset the console, press **SETUP** to go to the Setup Window and press **SHIFT** and **QUIT**. This performs an immediate soft reset of the console - the MagicQ application will be running the show again within about 2-3 seconds.

If for some reason the console does not respond to button presses then try pressing **CTRL BREAK** on the external keyboard (hold **CTRL** whilst pressing **BREAK**).

## 8.9 Hard Reset

If s software reset has no effect then a hard reset may be required. Hard resets should be avoided as they bypass the operating system shutdown procedures and may cause problems with the file system.

To perform a hard reset, press and hold the reset button on the back panel for 5 seconds. On MQ40, MQ40N, MQ60, MQ70, MQ80 the reset button is inset, so a thin object like a pen is needed to operate the button.

To force the console to power off completely, press and hold the reset button on the back panel until it powers off (approximately 10 seconds.)

To force a MQ80 to power off, remove all the cables from the rear panel except the powercon connector. Then remove the powercon connector and then hold the reset button for 10 seconds. For safety reasons the powercon cable should be the last cable removed.

## 8.10 Power Supply Protection

MagicQ MQ60, MQ70, MQ80, MQ100, MQ200 and MQ300 have an internal battery designed to protect the system against short term power losses on troublesome power supplies. The internal battery is not designed to support the running of the console for long periods of time. If the power is lost then the console will prompt the user to fix the problem or to shut down the console. The battery when fully charged will support the console for between 5 and 15 minutes.

If your version of the console does not have an internal battery then we recommend the use of a UPS (Un-interruptible Power Supply).

## 8.11 Care of your MagicQ console

- To keep your MagicQ console in best condition please observe the following recommendations:
- Keep liquids away from the MagicQ. Drinks split over your console may cause irreparable damage.
- Keep the console out of direct sunlight – place the console in the shade.
- Do not use the console outside its operating temperature range.
- Handle the console with care when moving or transporting it. The console contains components that may be damaged by shock. Always use a padded flight case or padded bag wherever possible.
- Do not use solvents or cleansers to clean the console. Do not rub firmly on the metal or plastic surfaces – this may cause the paint or lettering to be removed. Gently use a damp cloth to clean the panels.

## 8.12 Safety Information

- Do not open the front, rear or lower panels of the console unless you have electrical expertise. The console contains components with voltages that may shock.
- Always disconnect the power cable before opening any panels.
- Do not use the console if the power cables are damaged in any way.
- Repairs should only be undertaken by authorised service representatives.
- If liquids are spilt over the console then remove power immediately, and seek advice from your authorised service representative.

## 8.13 Disposal Information

Please be aware that ChamSys products must be disposed of in accordance with the WEEE disposal and recycling regulations. ChamSys products must not be disposed of through normal household waste. For non UK customers please contact your local distributor. For UK customers, please contact us on +44 (0)23 8023 8666, or email [support@chamsys.co.uk](mailto:support@chamsys.co.uk).

WEEE Producer registration number WEE/FF5605UX.

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## Chapter 9

# Software Upgrade

MagicQ software versions are fully compatible and show files can be created and loaded into any software version.

### 9.1 Changing MagicQ Console Software

MagicQ consoles store all versions of software that have been loaded onto the console allowing easy changing between different versions. To change software version go to Setup, View System, View Status, Change Software. It is also possible to enter the software utility by pressing ENTER during boot up when prompted to enter the software upgrade utility.

To upgrade to a new version of software, download the software file from ChamSys web site and store it onto a USB stick.

MQ40, MQ40N, MQ60, MQ70, MQ80, Pro 2014, Expert 2014	.cdc
Pro 2010	.cdx
pre Pro, Expert, rack mount	.cde (versions 1.5.6.0 and above not supported)

If you are downloading using a Mac then you need to be aware that OSX often creates additional files with an underscore "\_" at the end when it attempts to copy files to USB drives. For example, if you are copying magicq\_v1\_6\_7\_0.cdc to a USB drive it may also make a file magicq\_v1\_6\_7\_0\_.cdc. At first glance this file looks the same, but it contains file information only and can not be loaded into a MagicQ console. It is easy to tell the files apart as the real MagicQ software file is around 100MB whereas the underscore file is only a few bytes. Make sure to use the file without the underscore at the end.

Ensure you have saved your current show file to a USB memory stick or to an external computer via network before you change software version. Also, ensure any personalities that you have customised have been saved to a different file name of your choice - the new software will install the latest version of the standard personalities. We recommend you only upgrade to new versions of software when you have plenty of time to recover the system - we don't recommend you change it two minutes before doors!

On the MagicQ console select Setup, File Manager and change to USB DRIVE. Click on the software version and it will automatically upgrade the console.

It is also possible to copy the software directly via networking to the magicq folder on the MagicQ console and then to click on the file in File Manager, HARD DRIVE.

In case of a problem where MagicQ can not be started or where it resets then the software upgrade utility can be entered on start up, by pressing a key when prompted on the screen.

#### 9.1.1 Pro series (MQ100, MQ200, MQ300, MQ200 Execute, MQ300 Execute)

Table 9.1: Pro upgrades

Product name	Date	OS	S/W	Proc	O/S disc upgrade to 1.6.5.0?	Pro 2014 h/w upgrade possible?
MQ100 (pre Pro)	Oct 2004 to Oct 2007	Non-X	.cde	6310	Y	Y
MQ100 Pro	Oct 2007 to Nov 2008	Non-X	.cde	6310	Y	Y
MQ100 Pro	Nov 2008 to Oct 2009	Non-X	.cde	8310	Y	Y
MQ100 Pro 2010	Oct 2009 to Mar 2013	Pro2010	.cdx	8310	N	Y
MQ100 Pro 2014	Mar 2013 onwards	Pro2014	.cdc	A50	N	n/a

Table 9.2: Expert upgrades

Product name	Date	OS	S/W	Proc	O/S disc upgrade to 1.6.5.0?	Pro 2014 h/w upgrade possible?
MQ100 Expert	Oct 2007 to Nov 2008	Non-X	.cde	6310	Y	N
MQ100 Expert	Nov 2008 to Oct 2009	Non-X	.cde	8310	Y	N
MQ100 Expert	Oct 2009 to Mar 2013	Non-X	.cde	8310	Y	N
MQ100 Pro-E	Mar 2013 onwards	Pro2014	.cdc	A50	N	N

MQ200, MQ300, MQ200 Execute, MQ300 Execute as per MQ100

Note Pro 2014 h/w upgrades do not include illuminated soft buttons

Pro 2010 consoles continue to use the .cdx software, but this now includes the new graphical toolkit.

Software 1.6.5.0 is not supported on older products such as MQ50, Architectural controller, rack mount PC.

## 9.2 Upgrading Console Kernel

The latest version of the Linux kernel available for Pro 2014 systems is currently 3.2.9+ (4th June)

This kernel update brings in a few updates for support of the Edimax USB wifi adapter. Installation

### 9.2.1 Kernel Install

Before installing the kernel, you must first disable the WiFi adapter from within MagicQ. Failure to do so could cause the system to not fully reboot

- In Setup, View Settings, Network, set Wireless Mode to "Disabled".

- Reboot the console fully with the WiFi disabled.
- Confirm that the WiFi adapter is still disabled by checking the Wireless Mode setting is still configured as Disabled
- Download the kernel update file from [http://download.magicq.co.uk/download\\_file.php?type=doc&file\\_id=94](http://download.magicq.co.uk/download_file.php?type=doc&file_id=94)
- Copy it to a USB stick keeping the same file name
- Insert the USB stick into the console
- In Setup open the File Manager and select View USB
- Locate the kernel installer file and press the COPY button, then click on the file. The command window should then say "Select Destination"
- Select View HDD softbutton, then click on the box with a single dot in it. This will copy the file to your hard drive.
- Once the file has copied, stay in the file manager window, and click on the installer file.
- A prompt will appear asking you if you want to upgrade the kernel. Select yes.
- MagicQ will then install the new kernel upgrade to the console then will load MagicQ up again.
- To complete the installation of the kernel, you will have to shut down and restart the console.
- Once restarted, go to Setup, View Status, View System, System tab, and check the status of "Kernel Version" is the latest version
- Once the new version of the kernel has been installed, you can go back to the WiFi adapter settings and configure this as usual.

### 9.3 Kernel Recovery

If the console gets stuck at "Waiting for nfsd" when booting, then there was an issue with the network configuration script.

- Turn the power off on the console, and start up with an external keyboard attached to the system.
- If you have a USB keyboard, you may need to enable USB keyboard support in the BIOS. Press the delete key repeatedly when the system is starting up to enter the BIOS setup. Use the arrow keys and enter key to select Integrated Peripherals, Onboard. Select Device, USB Keyboard Support and set it to Enabled. Press F10 to save and exit
- As soon as you power the console on, press the ESC key on the keyboard repeatedly. Instead of MagicQ booting, a new screen should show up saying GNU GRUB with a list of different kernel versions.
- Use the arrow keys to select the top option "MagicQ Recovery" and then press Enter.
- The console should then start to boot again, and ask a password. Contact ChamSys support to get the password for your system here.
- You should see some more console output on the screen and then stop with a message of "Give Root Password for maintenance" near the end of the output.
- Enter the second password given to you by ChamSys Support here, then you should then get a prompt which looks like:

```
Chamsys176:~#recovering network configuration
```

If the network configuration is invalid and is stopping the console from starting then you will need to edit the network interface configuration file. Type:

```
nano /etc/network/interfaces
```

You should see several lines at the bottom with things like "Help" "Writeout" "Read file" and a bar at the top starting with "GNU nano". This file is likely to be blank if the console isn't starting up correctly or will have some lines at the end which mention wireless configuration

---

If the file is blank, then you can just type in here now to enter the default configuration into the file. Copy the following lines into the file:

```
auto lo iface lo inet loopback auto eth0 iface eth0 inet static address 2.9.200.197 netmask 255.0.0.0
```

If the file already has the above text in it, but with wireless configuration at the bottom, use the arrow keys to go to the first line which says "auto wlan0", then press F9 on the keyboard to delete each line after and including that, so the content of the file should be left with just the lines above. Press control then X to close the program, then press Y to confirm you want to save the changes, and then hit enter to confirm the filename you want to write them to. To restart the console safely, and let it boot normally type:

```
init 6
```

### 9.3.1 Recovering "No more processes left in this runlevel"

If MagicQ fails to boot with the message "No More processes left in this runlevel" then it is likely that the upgrade has not completed correctly. This may occur if the power has been removed before the hard drive has had time to write all the data.

Connect an external keyboard to the console over USB or PS2.

Enter the recovery mode on the console by pressing the up arrow key repeatedly on the external keyboard, just after powering on the console.

After a while, you should see a blue screen with "GRUB" written at the top. If not, use the white button on the back to reset the console and try again. It sometimes takes a couple of times to get into this mode if you accidentally miss it the first time around. Once in this prompt, use the arrow keys to select the top item called "Recovery" and hit enter. It should continue to boot and then ask you for a password. Contact ChamSys support for the password.

Then enter the following commands (NOTE: spacing and capitalisation are very important here so double check every command before you run it!):

```
mount /dev/sda1 /mnt
```

```
mount /dev/sda7 /mnt/home
```

```
chroot /mnt
```

```
cd /opt/magicq/
```

**/tigstartprun** This will then ask you to hit any key on the numerical keypad to enter the software update utility, and you can just press the enter key when this prompt comes up. This will allow you to manually reinstall/reselect the software version. You have about a second gap in which to do this before it will time out.

Once the software has been reinstalled, press control + d, and then type "init 6" and hit enter. This should then restart the console into MagicQ.

## 9.4 Disc Repair

MagicQ consoles periodically carry out a disk check to check the integrity of the disc. Normally it will repair errors, but if it is unable to repair errors then it may halt and request the root password. It will stop in the boot sequence with the black screen with white text and will say "run fsck manually" followed by a request to enter the root password.

MagicQ Expert and Pro consoles have 2 partitions - /dev/hda1 and /dev/hda3 - the problem may be with one or both of these partitions. MagicQ Pro 2010 and Pro 2014 consoles only have one partition /dev/hda1 for Pro2010 and /dev/sda1 for Pro2014. Note which partition is requested to check before entering the root password.

Contact support for the root password. After entering the password you will see the command prompt - this is the username of the console followed by :~#, e.g.

```
chamsys176:~#
```

The command prompt allows commands to be entered manually by typing the operating system command followed by the enter key. Enter one of the two commands below depending on which partition has errors

```
fsck /dev/hda1
```

or

```
fsck /dev/hda3
```

or

```
fsck /dev/sda1 - for Pro2014 consoles
```

The above commands start a disc check on the relevant partition. This may take a few minutes. When errors are found you will be prompted whether to fix items. Enter "y" to all questions.

On completion, then enter

```
reboot
```

and the console will shut down and restart.

If for any reason the console does not restart, then hold the white reset button on the rear for 15 seconds until the console powers off completely.

On Expert and Pro consoles it may be necessary to follow the above procedure on both /dev/hda1 and /dev/hda3.

Contact your dealer to supply you with the password for your console and to guide you through fixing the disk.

First check whichAfter entering the password, you will need to check which partition was causing the problem (either /dev/hda1 or /dev/hda3) and enter the command:

```
fsck /dev/hda1
```

or

```
fsck /dev/hda3
```

When prompted to fix items enter "y".

On completion enter "halt" and the console will shut down. Press and hold the white reset button on the rear, and the console should restart normally. It may be necessary to follow the above procedure on both /dev/hda1 and /dev/hda3.

### 9.4.1 Console Command Entry

Occasionally ChamSys support may request you to use the console command entry to fix a problem. The procedure is different on Pro 2010 consoles from Pro/Expert consoles. Start by connecting a keyboard to the console.

On Pro/Expert consoles hold the CTRL key on start-up. You should be presented with a red box on a black screen with the title "LILO". On the keyboard type the text linux 2 followed by the ENTER key. Linux should start to run and after about 5 seconds it should ask you to enter a username and password. The username is root. ChamSys support will give you the password.

On Pro 2010 consoles hold the ESC key on start-up. You should be presented with a list of options, where the top option is "MagicQ Recovery". Select this option using the up/down cursor keys, and ENTER. It will ask you for a password after a few seconds; type misspacman, and hit ENTER. It will then try loading Linux and will ask you to enter a root password for maintenance. ChamSys support will give you the password.

## 9.5 Resetting a MagicQ console to factory defaults

The console software upgrade utility has two other functions - reset to factory defaults and erase console.

"Reset to factory defaults" changes settings back to factory settings but does not erase any user data. It is recommended that the current show is saved to a known file name before carrying out a factory reset. As a consequence of the reset to factory defaults, the console will reload the default show.

"Erase console" erases all user data and reloads the newest software on the system. All show data, custom personalities, and settings will be erased. Ensure all user data is saved before carrying out this action.

To carry out the above functions on MagicQ consoles enter the software upgrade utility by going to: -Setup, View System, View Status, Change software. -Select yes to enter the software utility. -Once in the software utility follow on screen instructions for "Factory Reset" or "Erase All"

For "Factory reset" enter \*999 followed by Enter For "Erase All" enter \*777 followed by Enter and 1 followed by Enter to confirm. Note once the Erase all is carried out user data e.g. show files cannot be recovered later. You must back these up if needed before carrying out the "Erase all".

## 9.6 Upgrading MQ40/40N/60/70 firmware

To upgrade the MQ40/40N/60/70 front panel firmware you must first be running a software version higher than v1.5.9.9 MagicQ software on the console. Do NOT use versions v1.7.0.1 to v1.7.0.4. Upgrade software to v1.7.1.0 or higher first.

Some consoles have front panel firmware have a file version 2.0 in the firmware folder. Do NOT use this version. Only use version 1.0, 1.1 or 1.2.

Failure to update to a valid version before performing the firmware upgrade could result in the console needing to be returned to ChamSys for repair. The latest MQ40/40N/60/70 firmware is included with each release in the firmware folder under the name CH331\_xxx.hex

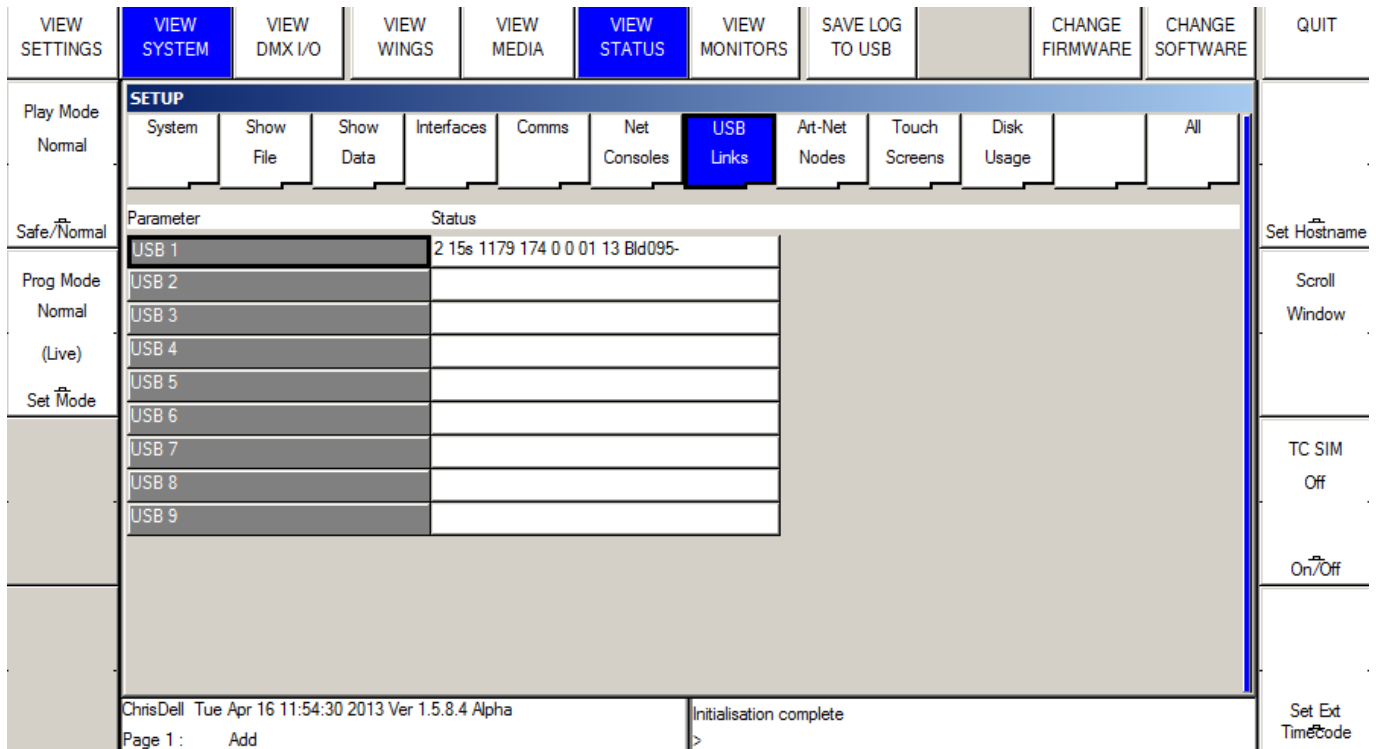
To check the version of firmware in use go to Setup, View System, View Status and select the USB Links tab. The software version is shown as the 7th number in the list of parameters. The complete list of parameters is:

<link drops> <time link has been up> <tx packets> <rx packets> <tx errors> <tx retries> <sw version> <hw version> <build number>

CH331_V0	Original firmware
CH331_V1.0	Added audio support
CH331_V1.1	Added MIDI and LTC timecode support (MQ70 only - not for MQ40/60)
CH331_V1.2	Fixed RS232 serial port communications

Disconnect any Wings and network devices and remove any USB drives from the console.

Press Setup, View System, View Status and change to the USB Links tab. If more than one USB device is shown then disconnect all other MagicQ Wings and interfaces.



Put the cursor on the line for USB 1 as above. Press CHANGE FIRMWARE and select the new firmware file - e.g. CH331\_V1.0.hex. MagicQ should then say "Starting firmware upgrade" and then a few seconds later "Sent start upgrade".

```
Sent start upgrade
>
```

Do not touch anything or power off whilst the update is in progress – interrupting the upgrade will leave the Console in an unusable state and it will have to be returned to ChamSys for repair.

MagicQ will then wait between 5 and 10 seconds and then display messages "Sent firmware 1000", "Sent firmware 2000" and so on up to about "Sent firmware 76000".

```
Sent firmware 3000
>
```

It will then briefly say "Sent all firmware" and "Programmed Ok".

```
Programmed ok
>
```

If all is ok then it will say "Programmed OK" and you are ok to power off the Console and restart it. Note that the console front panel is sometimes unresponsive at this point, so you may need to shut down from the touch screen using Setup, View Settings, Quit. If there is no response at all then you will need to hold the reset button to power off the console.

If it gets stuck on "Fails to Load Firmware" and the console continues to loop in the Load firmware screen the console should be powered off and will need to be returned to ChamSys UK for re-programming.

## 9.7 Upgrading MQ80 firmware

We recommend to upgrade to MagicQ software v1.7.1.0 before upgrading MQ80 front panel firmware.

The latest MQ80 firmware is included with each release in the firmware folder under the name CH346\_xxx.hex

To check the version of firmware in use go to Setup, View System, View Status and select the USB Links tab. The software version is shown as the 7th number in the list of parameters. The complete list of parameters is:

<link drops> <time link has been up> <tx packets> <rx packets> <tx errors> <tx retries> <sw version> <hw version> <build number>

CH346_V0.25	Original Production firmware
CH346_V0.32	Improvements to DMX, MIDI, LTC and faders. Upgrade to this version if you are seeing periodic DMX flicks with some fixtures such as SGM P5. Upgrade to this version if you wish to use MIDI or LTC inputs.
CH336_V0.33	Fix for display not recovering from screen save

Disconnect any Wings and network devices and remove any USB drives from the console.

Press Setup, View System, View Status and change to the USB Links tab. If more than one USB device is shown then disconnect all other MagicQ Wings and interfaces.

Put the cursor on the line for USB 1. Press CHANGE FIRMWARE and select the new firmware file - e.g. CH346\_V0.32.hex.

Some early MQ80s had pre-production firmware versions left in the firmware folder. These can be identified as versions prior to CH324\_V0.25.hex or with a name such as CH342\_V80.69. Do not select these versions - these were pre-production firmware versions and are not compatible with the MagicQ software. They should be deleted from the firmware folder.

MagicQ should then say "Starting firmware upgrade" and then a few seconds later "Sent start upgrade".

Do not touch anything or power off whilst the update is in progress – interrupting the upgrade could leave the Console in an unusable state and it will have to be returned to ChamSys for repair.

MagicQ will then wait between 5 and 10 seconds and then display messages "Sent firmware 1000", "Sent firmware 2000" and so on up to about "Sent firmware 76000".

It will then briefly say "Sent all firmware" and "Programmed Ok".

If all is ok then it will say "Programmed OK" and you are ok to power off the Console and restart it.

## 9.8 Upgrading Pro 2014 DMX card firmware

To upgrade the Pro 2014 DMX card firmware you must first be running a software version higher than v1.5.9.9 MagicQ software on the console. Failure to update to this version before performing the firmware upgrade could result in the console needing to be returned to ChamSys for repair.

To check the version of firmware in use go to Setup, View System, View Status and select the USB Links tab. Note that a Pro 2014 has two USB links by default - the DMX card hw09 and the MIDI card hw41. The software version is shown as the 7th number in the list of parameters. The complete list of parameters is:

<link drops> <time link has been up> <tx packets> <rx packets> <tx errors> <tx retries> <sw version> <hw version> <build number>

CH315C_V1.0	Original firmware
CH315C_V2.0_24-03-2015.hex	Fix for maintaining DMX over power on/off.

Disconnect any Wings and network devices and remove any USB drives from the console.

Press Setup, View System, View Status and change to the USB Links tab. Move the cursor down to the link with status of Hw09 device.

Press CHANGE FIRMWARE and select the new firmware file - e.g. CH315C\_v2.0\_24-03-2015.hex.

MagicQ should then say "Starting firmware upgrade" and then a few seconds later "Sent start upgrade".

Do not touch anything or power off whilst the update is in progress – interrupting the upgrade will leave the DMX card in an unusable state and it will have to be returned to ChamSys for repair.

MagicQ will then wait between 5 and 10 seconds and then display messages "Sent firmware 1000", "Sent firmware 2000" and so on up to about "Sent firmware 76000".



It will then briefly say "Sent all firmware" and "Programmed Ok".

If all is ok then it will say "Programmed OK" and you are ok to power off the Console and restart it.

If it gets stuck on "Fails to Load Firmware" and the console continues to loop in the Load firmware screen the console should be powered off and will need to be returned to ChamSys UK for re-programming.

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## Chapter 10

# Troubleshooting

### 10.1 No outputs

Check whether MagicQ is operating correctly by opening the Outputs Window and looking at the data in View Heads. If the intensity or other attributes are not at their correct levels then check:

- Are the Grand Master and Playback Master faders up?
- Are Playback faders raised?
- Is there channel data recorded in the Cues on the playbacks?
- Is BLIND mode on?
- Heads and dimmers are patched to the correct universe?

If the Outputs Window shows correct values then check the Outputs are configured and enabled correctly in the View DMX I/O view of the Setup Window. If you are using an Ethernet convertor box check that it is receiving data correctly. Check:

- Outputs are configured correctly
- Outputs are enabled
- Is test mode active in DMX/IO?
- If using network outputs check the IP address and subnet address are configured correctly

Try putting a test pattern on the entire DMX output - in DMX I/O set the test field to Ramp. The Outputs, View Chans, View DMX shows exactly what is being output on each universe.

### 10.2 MagicQ not responding

Is the time changing in the Status Display? If so then MagicQ is running o.k. Check

- Master faders up
- Correct playback pages selected
- Playback has a Cue stored on it
- MagicQ is not locked (CTRL top left soft button)
- Is button test mode on (hold top left SHIFT button and press top right SHIFT button)

If the time is not changing then you will have to perform a hard reset on the console.

---

### 10.3 MagicQ responding slowly

Check memory usage in Setup, View System, View Status. Try

- Closing all windows (SHIFT + CLOSE)
- Ensure you have saved your show to hard disk not to a USB stick
- Remove any USB devices especially USB Sticks
- Disable network connections to media servers

### 10.4 Strange key presses, unexpected window changes

Enter board test mode to determine the cause of the fault (hold top left SHIFT button and press top right SHIFT button. On a Compact console press CTRL + ALT + SHIFT.)

- Check a button has not become stuck down
- Check nothing / no-one is leaning on the keyboard or other buttons
- Check a keyboard macro has not been accidentally recorded / played back

### 10.5 MagicQ console not booting

There are quite a few different reasons for the console not to boot - it could be a problem with the system operating system software or a hardware problem.

If the console is cycling the boot sequence continually or showing "kernel panic" then this normally indicates a hardware problem. Get a qualified service technician to remove the rear panel and reseat cables and processor daughter card (transition card).

On a Pro 2014 console if the console is showing "lynxfb" then get a qualified service technician to remove the rear panel and remove the graphics card from underneath the processor module.

Check out the [Software Upgrade](#) section for repair of the operating system.

### 10.6 MQ80 console blank screen and not booting

When the BIOS settings are lost on the MQ80 console the internal display will not function, this can also cause MagicQ to not start correctly. To reset BIOS settings on the MQ80 console an external DVI monitor connected to the DVI port on the rear of the console and a USB keyboard connected to the lower Neutrik USB port are required.

Once connected:

-Start up the console and Enter the BIOS using the 'Delete' key on the external keyboard. -Go to Advanced, Chipset Configuration  
-Select the primary output to be the LVDS output -Select the "1440x900 24bit 2ch LED" option for the resolution (should be one above the 1280x900 option near the middle. -Select the secondary output to be HDMI Press F10 to save and reboot the console

Note these settings are for the MQ80 console only and should not be used on ANY other MagicQ console.

## 10.7 MagicQ console blank screen

If the screen is blank then this may be because of the screen saver. Try pressing SHIFT.

If the screen remains blank even after pressing buttons then try holding CTRL and pressing the bottom right soft button (soft button closest to the large encoder wheels) twice. This attempts to restart the screen backlight.

The screen may have been turned off and locked by a user. Press CTRL and the second soft button down on the left (soft button B). If this does not help then press CTRL and the second soft button a second time.

If the screen still remains blank then try connecting an external monitor.

Avoid using the white reset button to shut down the console - hold down the three cursor keys (< V >) and press DBO to shut down the console.

## 10.8 MagicQ console white screen

MagicQ console white screen indicates that the display has power but no data signal. This could be because the main processor has halted or because the display signal cable is broken/disconnected.

Try pressing S buttons. If the blue LED follows the S button then the main processor is running correctly - check display cable. Get a qualified service technician to remove the rear panel and reseal the display cable.

If the S buttons are not responding then it is likely there is a bad connection in the rear panel. Get a qualified service technician to remove the rear panel and reseal the power and disc cables and ensure processor daughter card (transition card) is firmly pressed onto the processor card.

Avoid using the white reset button to shut down the console - use the three cursor keys (< V >) and press DBO to shut down the console.

## 10.9 MagicQ console distorted screen

If the screen image is distorted, has multiple lines through it or has incorrect colours then this indicates that the graphics hardware has not started correctly.

Hold the three cursor keys (< V >) and press DBO to shut down the console.

## 10.10 MagicQ console internal touch screen not working

- Try to calibrate the touch screen (CTRL + SET)
- Check it is giving correct values in board test mode (SHIFT + SHIFT)
- Check there is no dirt around the edges of the screen
- Check that liquid has not been spilt into the touch screen
- Check the metalwork is not catching on the screen

## 10.11 All 10 S buttons flashing blue

If all 10 S buttons are flashing blue this indicates that the console front panel is not communicating with the console main processor.

This could be caused by a problem with the console main processor or the cable/connection between the console main processor and the console front panel. If the main processor is running and showing MagicQ on the screen then the problem is with the cable/connection.

It is possible to check whether the main processor is running:

- Is there any output on the main screen? Do you see the boot procedure?
- Connect an external monitor. Do you see anything on the external monitor during boot?
- Connect a keyboard. If you press CAPS LOCK does the LED on the CAPS LOCK key come on?
- Is the console fan running?

Note that on a MQ100/200/300 the touch screen is controlled through the front panel so the touch will not work in this situation. Connect an external mouse to click items on the screen.

To shut down the console use a mouse, or if there is no output on the screen using the reset button.

As the front panel is not communicating with the main processor it will not be able to shut down using buttons on the front panel.

## 10.12 Fader, Encoder or Button not working correctly

- Go into board test mode (SHIFT + SHIFT) to test the hardware.

If none of the buttons and faders are working then check that the front panel is running ok. If there are no LEDs lit on the front panel then it is possible that the front panel is not running correctly.

On MQ100/200/300 and Playback and Execute Wings there are 4 LEDs underneath the arm-rest. The red LED indicates power whilst the green LED should flash to indicate that the front panel CPU is running. The two yellow LEDs show messages from/to the front panel. One of them should turn on when you move faders, the other should flash periodically when it receives messages from the console main processor.

## 10.13 Unable to save shows or patch fixtures after performing a \*777 erase all on the console

This is caused by using the \*777 Erase all function on MagicQ console in versions prior to v1.5.9.2.

To fix:

Go to Setup, file manager and press the *up dir* soft button a number of times. This will then take you into the root folder (folders will appear on screen). Find the folder called *home* go into it Create a folder called *magicq*. Using the Create Dir soft button. Restart the console.

## 10.14 "MagicQ needs to write to the install folder..." message on Mac

If you get a message on Mac about incorrect permissions, please try the following steps:

1. Open the "Applications" folder in finder
2. Right click on the "MagicQ" folder and select "Get Info"
3. Click on the padlock in the bottom right corner and enter your password
4. If your username isn't in the list of permissions, add it with the + button
5. Set the permissions of your username to "Read & Write"
6. Click on the settings icon underneath the permissions list, select "Apply to enclosed items...", and accept the warning message
7. Restart the Mac

If you still see this error message, perform a clean install of MagicQ:

1. Open the "Applications" folder
  2. Delete the "MagicQ" folder
  3. Open Finder, choose "Go" > "Go to folder" from the toolbar
  4. Type in "~/Library/Application Support/"
  5. If a "MagicQ" folder exists, delete it
  6. Restart the Mac
  7. Download the latest version from <https://secure.chamsys.co.uk/download>
  8. Open the .dmg file. Hold down shift, right click on the MagicQ package, select "Open" and click "Open".
  9. Follow the installer steps
-

## Chapter 11

# Licensing

MagicQ consoles use the Debian and Ubuntu Operating Systems. Details and links to sources can be found at <https://www.debian.org/> and <https://www.ubuntu.com/>. The following are distributed alongside the MagicQ application.

Versions prior to v1.5.6.0 of MagicQ the software also used the MicroWindows library, details can be found at <http://www.microwindows.com/>.

### 11.1 Qt

<https://qt.io/>

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# -----
```

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#
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#
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# -----
```

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5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

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- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

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7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library

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```

```
<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice
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That's all there is to it!

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## 11.8 LibArchive

<http://www.libarchive.org/>

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## 11.9 Zlib

<http://www.zlib.net/>

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Jean-loup Gailly  
jloup@gzip.org

Mark Adler  
madler@alumni.caltech.edu

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://tools.ietf.org/html/rfc1950>

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(zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).

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