ChamSys MQ70 / MQ50 Service Document

This manual covers the MQ70 and MQ50 Compact consoles.

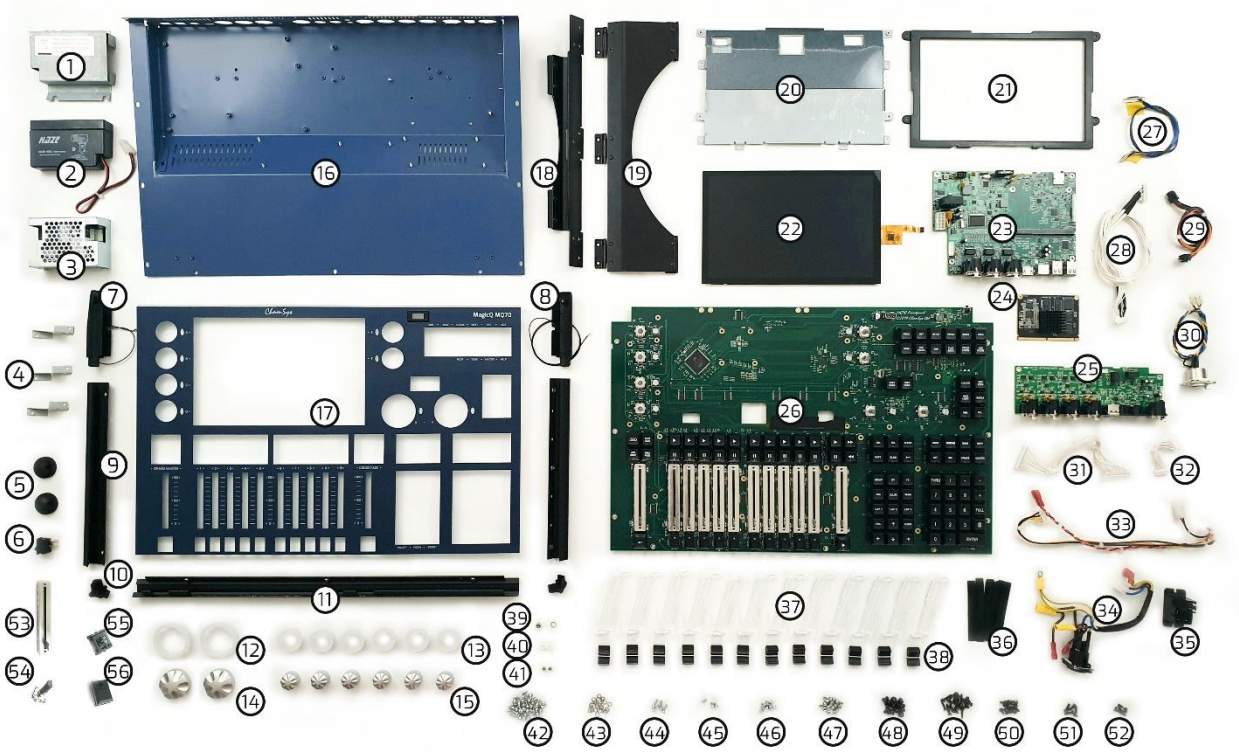
MAINTENANCE SHOULD BE CARRIED OUT BY EXPERIENCED AND QUALIFIED PERSONNEL ONLY

WARNING – LIVE 240V AC. DISCONNECT MAINS BEFORE PERFORMING ANY MAINTENANCE

Section 1: An overview of the console and all components.

Below is an exploded picture of an MQ70 console, showing all components. Underneath is a list of all parts and ChamSys part numbers, where applicable.

Note that these parts are for an MQ70 console, as an example. Parts for the MQ50 console are in most cases the same, but the few differences there will be highlighted with asterisks (*) and alternate part numbers for the MQ50 parts will be listed.



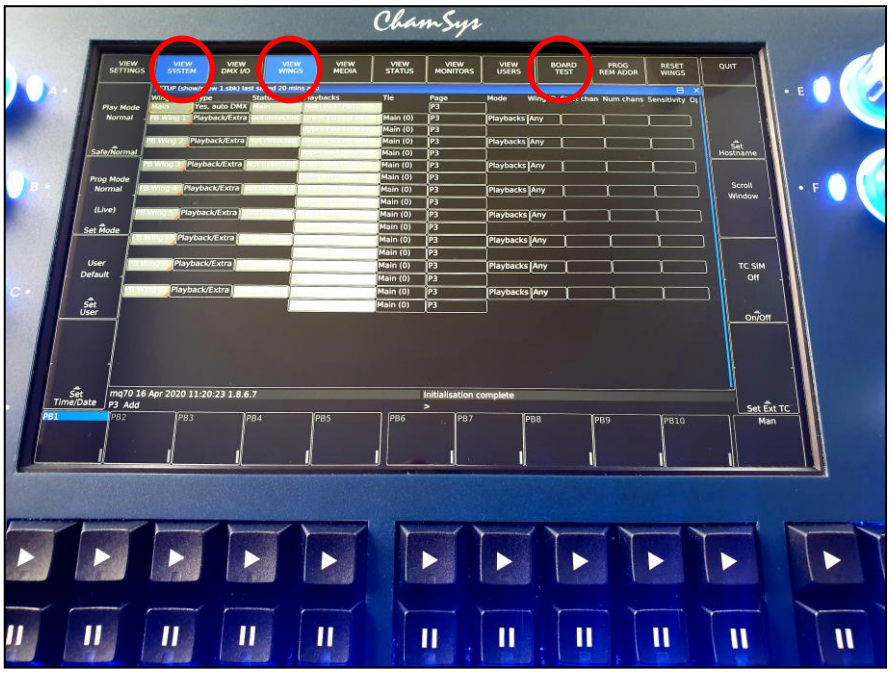
1. Metalwork Battery Cover (301-237)
2. UPS Battery 12V 0.8Ah Lead Acid (416-005)
3. Power Supply 15V 60W Enclosed (415-018)
4. Metalwork Baffle (301-236)
5. Rubber Foot (303-105)
6. Switch Rocker SPST Momentary (307-012)
7. Rear Corner Left (303-098) +230mm Antenna (305-022)
8. Rear Corner Right (303-099) +600mm Antenna (305-023)
9. Metalwork side extrusion (301-243)
10. Front corner moulding (303-097)
11. Metalwork Front Extrusion (301-244)
12. Encoder LED Lightguide 38 mm (303-103)
13. Encoder LED Lightguide 22 mm (303-102)
14. Large Fluted Encoder Knob 38mm (303-052)
15. Small Fluted Encoder Knob 22mm (303-060)
16. Metalwork Base Assembly (301-235)*
17. Metalwork Front Panel Assembly (301-234)**
18. Metalwork Rear Support (301-240)
19. Metalwork Rear Hinge (301-241)
20. Metalwork Display Tray (301-239)
21. Plastic Display Bezel (303-104)
22. Combined Touch Screen/ LCD Display (410-105)
23. Processor PCB Assembly (313-136)***
24. Module Firefly Assembly (313-149)
25. DMX PCB Assembly (313-137)****
26. Front Panel PCB Assembly (313-138)*****
27. Cable - Display/Processor (315-189)
28. Cable - Front Panel/ Processor Data (315-190)
29. Cable - Front Panel/ Processor Power (315-193)
30. Cable - Working Light/ Front Panel (315-195)
31. Cable - Front Panel/DMX 16 Way (315-192)
32. Cable - Processor/DMX 8 Way (315-191)
33. Cable - DC/Relay-Coil/ Battery (315-194)
34. Cable - Truecon/Relay/ Switch/Earth (315-196)
35. Relay SPST-NO 30A 12Vdc-Coil (412-002)
36. Fader Lightguide Dividers (qty. 8)
37. Fader Lightguide (303-113)
38. Plastic Moulding Large Fader Knob (303-019)
39. M4 Nyloc Nut (302-010) M4 Shakeproof (302-024)
40. Display Bezel Standoff (qty. 2)
41. Firefly Module 4.5mm Standoff (302-156)
42. M3x6 Silver Screws (302-001 - qty. 37)
43. M3x6 Shakeproof Washers (302-003 - qty. 27)
44. M3x10 Silver Screws (302-005 - qty. 4)
45. M3x5 Silver Screws (302-084 - qty. 3)
46. M3x6 Silver Countersunk Screws (qty. 9)
47. M3 Nyloc Nut (302-013 - qty. 18)
48. M4x6 Black Screws (302-008 - qty. 11)
49. 2.9x13mm Pozi Pan Black Screws (302-012)
50. M3x6 Black Screws (302-004 - qty. 11)
51. M3x10 Black Screws (302-014 - qty. 4)
52. M3x4 Black Countersunk Screws (qty. 6)
53. Fader ALPS 10k (308-001-01)
54. A-Y Encoders (417-003)
55. Pushbutton Cherry Switch (307-001)
56. Large Flash Switch (307-002)

* MQ50 Variant: 301-252 ** MQ50 Variant: 301-257 *** MQ50 Variant: 313-157 **** MQ50 Variant: 313-158 ***** MQ50 Variant: TBC

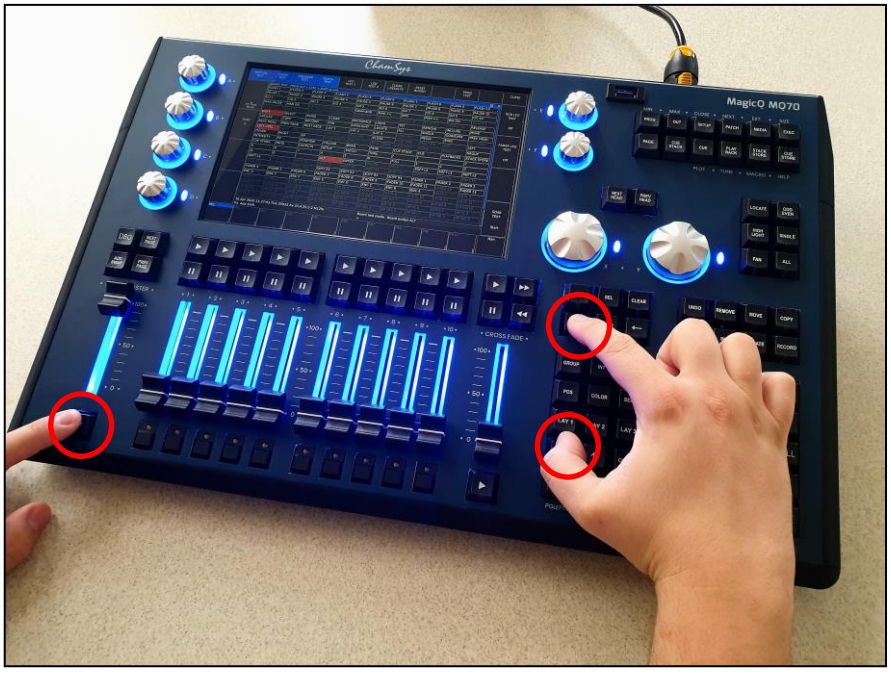
Section 2: Testing to determine faults.

All ChamSys consoles contain built-in hardware tests to help diagnose any faults that may occur. To access these tests on any MagicQ console, first power on the console. The board test mode can then be accessed using one of two methods, listed below.

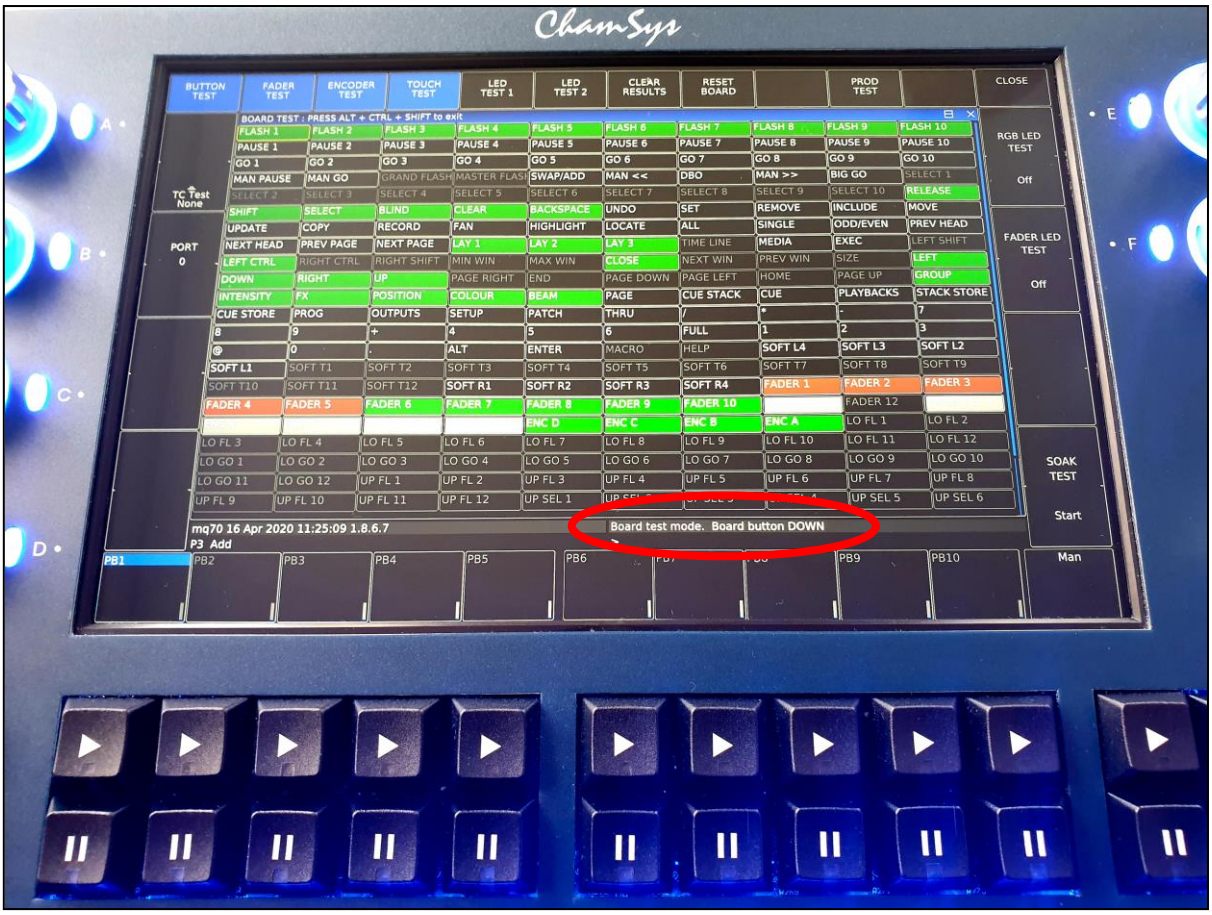
- Navigate to the Setup window using the physical key on the console, located in the top right group of keys. Then use the on-screen soft keys (see image below) to navigate to View System > View Wings > Board Test.



- **OR** Press 3 keys together to trigger the shortcut to access the board test mode. These keys are ALT + CTRL + SHIFT (see image below for locations).



Once in board test mode you can begin testing the keys, faders and encoders on the console straight away, as described below. When testing these, you will see the name of the key, fader or encoder used appear in the command box down the bottom right of the screen, as in the image below.



Testing keys: When pressing keys on the console, you will see the key name appear in the command box on screen, as mentioned below. When a key is pressed, you will also see it highlight on screen, briefly red, then green. If the key stays highlighted green, it is working correctly, but if it stays highlighted red, then it is getting stuck. You should only ever see the key pressed highlight on screen. If more than one key highlights at a time, there is an issue. If more than one key is pressed at once, the test will fail and these will need to be tested again individually.

Testing faders: When testing a fader, you will again see the number of the corresponding fader appear in the command box. Ensure the correct fader number is being listed. Slowly raise and lower the fader as sharp movements can lead to inaccurate results. You should see only positive values when raising the fader, and only negative values when lowering it. When a fader is fully lifted, it will highlight grey on screen, and then green when returned to the bottom. If the fader is not fully lifted, when returned to the bottom, it will highlight red. Be sure also to only test one fader at a time. Mixed values or triggering of other faders implies an issue with one or more faders.

Testing encoders: The letter for the encoder will be listed in the command box when testing it, with positive values when turning the encoder clockwise and negative values when turning the encoder anti-clockwise. Once fully turning in one direction, the encoder will highlight grey on screen, and then green when fully turned in the opposite direction. The faster the encoder is turned, the higher values are reported, but the encoders should be turned slowly in order to produce accurate results. Mixed values, triggering of other encoders or encoders not working at all implies faults with one or more encoders.

Testing the touch screen: While in board test mode, drag your finger around the screen and you should see co-ordinates reported in the command box. If you do not, the touch is not working correctly. Also, if you witness the co-ordinates jump to other values when taking your finger off the screen, this can also imply a fault.

Testing LEDs: When in board test mode, you can activate LED tests using the on screen soft keys. If any LEDs do not light up during these tests, then they will likely need replacing. To see which LEDs should be lit during each test, see the images below. There are 4 tests in total: 2 for key LEDs and 2 for fader LEDs in each colour.

You can also run through a full production test using the PROD TEST soft key on screen in board test mode, but some specific testing equipment is required for testing some other functions on the console, such as the DMX, Network and Midi ports.

Once all testing is complete, see **Section 3, below** for instructions on disassembly of the console, then **Section 5** for instructions on replacing any faulty parts.

Section 3: Full disassembly of the console.

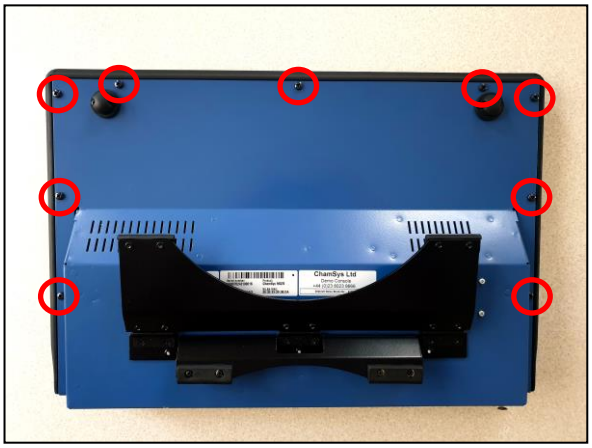
Here are instructions for complete disassembly of an MQ70 or MQ50 console. The example is for an MQ70 console, but the MQ50 console is similar, and any differences will be highlighted. Note that in some cases for repairs, only partial disassembly will be required, by following the relevant steps.

Just five tools are essentially required for complete disassembly of an MQ70 or MQ50 console, as pictured to the left. From top to bottom, these are:

- 2mm ball driver
- 7mm nut driver*
- 5.5mm nut driver*
- PZ2 screwdriver
- PZ1 screwdriver

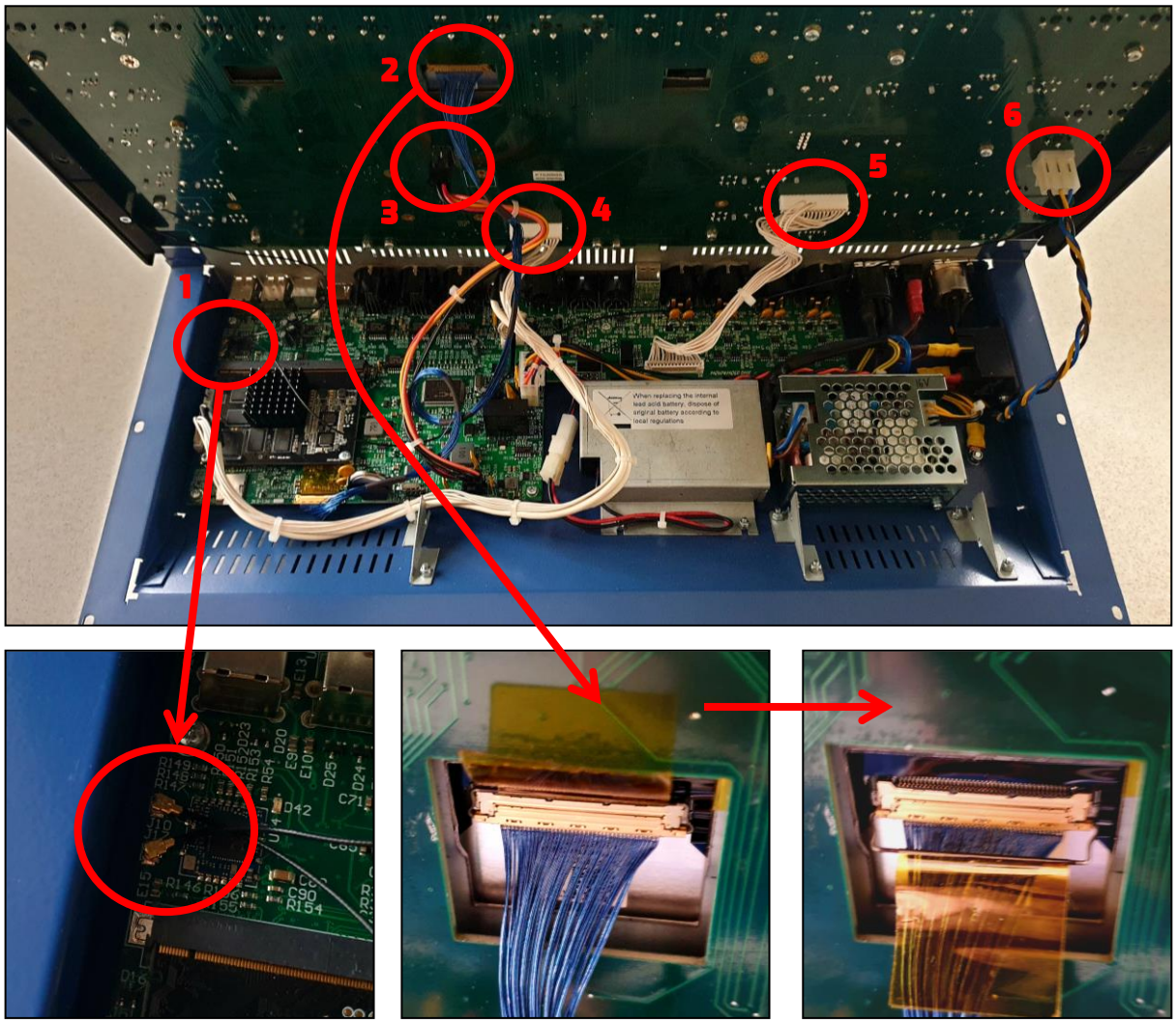
*can be substituted with an adjustable spanner.

Step one: Start by carefully placing the console upside down on a protective surface and then remove the 9x M4x6 black screws from the base of the console as pictured, right, using a PZ2 screwdriver.



You can then turn the console back over, holding the base and front panel together as you do so, and remove the 6x M3x6 black screws from the rear panel using a PZ1 screwdriver. The front panel will now be loose, ready for removal.

Step two: The front panel can now be lifted from the front, up to around 90 degrees as pictured, below. Be careful when doing so, as there is a total of 7 connections running between the front panel and base of the console, as highlighted in the images below. Follow the notes below the pictures for instructions on disconnecting each connector. All cables can be removed at the front panel end, except the 2x Wi-Fi antenna, which must be disconnected at the processor PCB, as pictured.

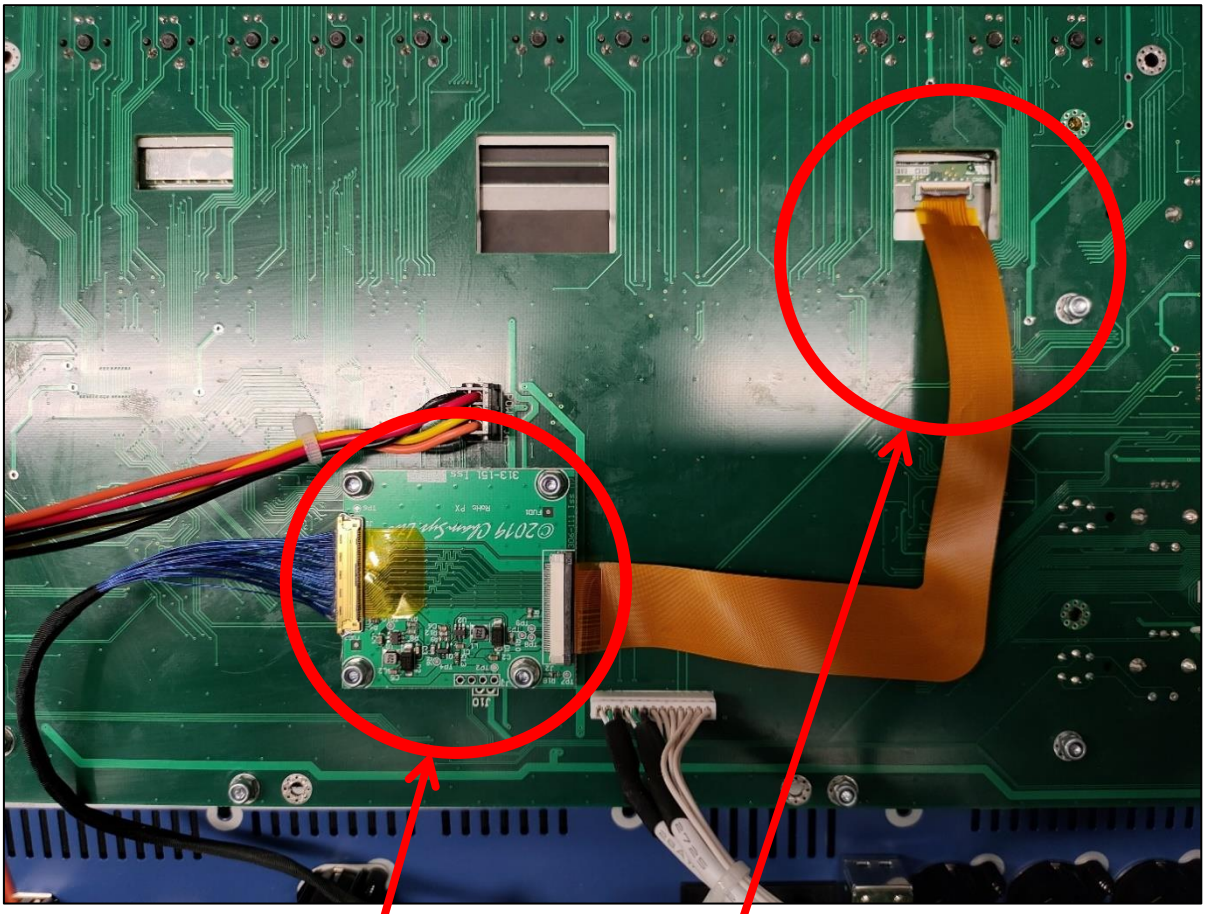


1. **2x Wi-Fi antenna** – Carefully wiggle and pull to disconnect.
2. **Display cable** * – Pull the tab down, then pull the connector out.
3. **Processor to front panel power cable** – Push the latch in, then pull.
4. **Processor to front panel data cable** – Pull to disconnect.
5. **DMX PCB to front panel data cable** – Pull to disconnect.
6. **Working light connector** – Pull to disconnect.

Once all cables are disconnected, the front panel can be completely removed from the base. Ensure no cables are caught when doing so, particularly the 2x Wi-Fi antenna cables that will still be connected to the front panel assembly.

* **Note:** the location of this cable varies depending on console model and age. See the next page for further notes on this.

On all MQ50 consoles, and MQ70 consoles since issue no. 03, the blue display cable runs into a separate adaptor PCB, as pictured below, fixed to the underside of the main PCB. There is then an orange ribbon cable running from this PCB into the display. The part numbers for the PCB and ribbon cable are also listed below.



PCB Assembly MQ50, MQ70 LCD Adaptor: **313-151**
Display ribbon cable (FCC Cable 40 pin to 51 pin): **305-025**

To remove the ribbon cable, the tab securing it in place must first be lifted up, as pictured to the right.

When refitting the cable, ensure the ribbon is pushed right in place, with white corners showing in both the bottom left and bottom right, as highlighted in the picture below, right. The tab can then be pushed back down carefully.

If the display doesn't work after re-fitting this cable, try re-seating it again. This can be difficult to seat correctly.

Below are further instructions on complete disassembly of both the front panel and the base of the console. Not all instructions may be relevant to the repairs you require.

Disassembly of the base:

Processor removal:

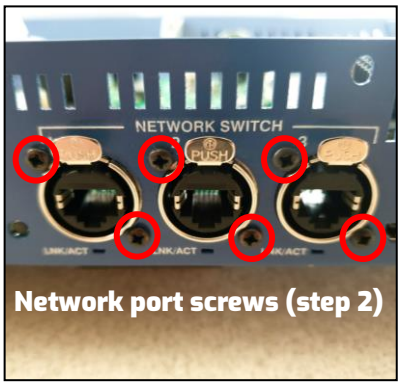
1. Disconnect the 5x connections on the processor PCB as pictured below, highlighted red.

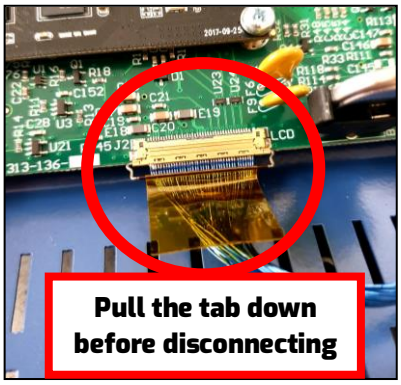
2. Remove the 6x black self-threading screws from the network ports on the rear panel using a PZ1 screwdriver as pictured, right.

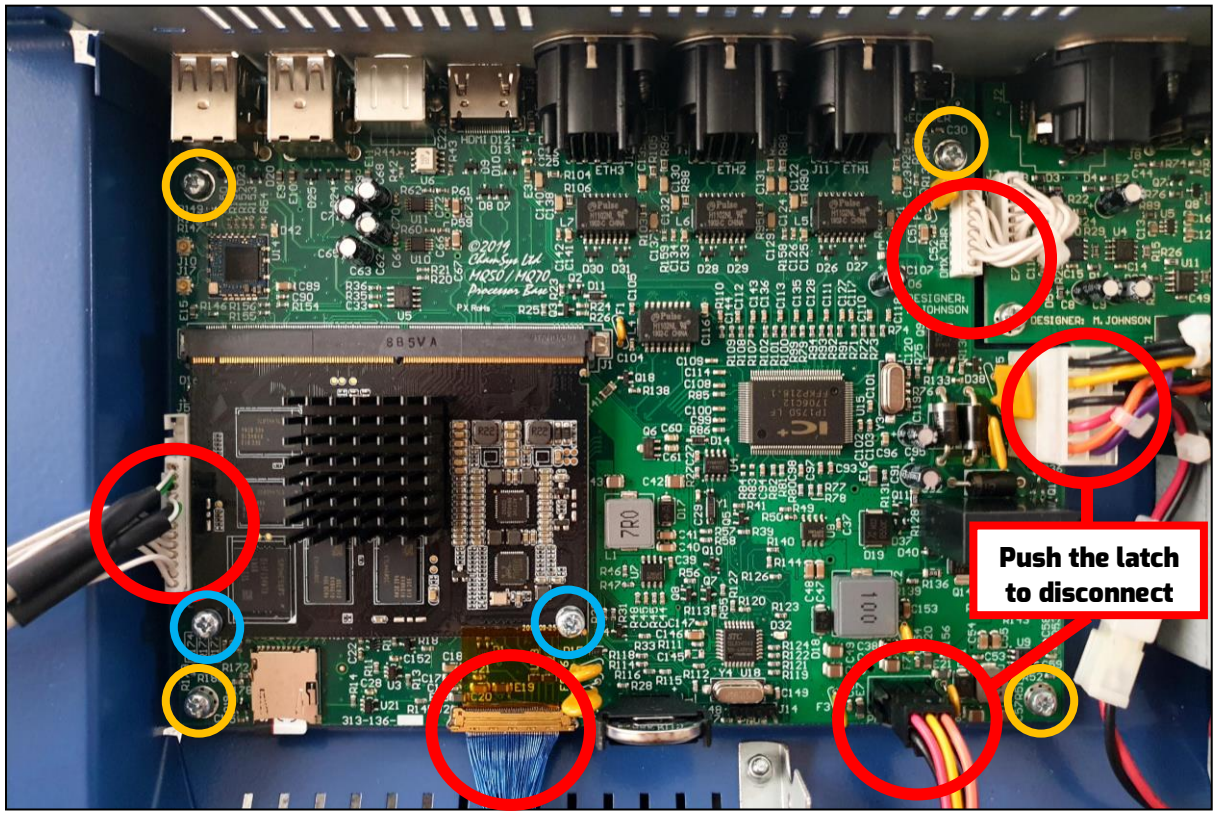
3. Remove the 4x M3x6 silver screws and shake-proof washers securing the processor card into the base as pictured below, highlighted orange.

4. Finally, remove the 2x M3x10 silver screws and shake-proof washers securing the Firefly module in place (blue below). Once these are removed, the module will lift to roughly 45 degrees. You will also find 2x spacers that the screws were through underneath the module are now loose.

5. Carefully lift out the processor PCB and Firefly module. These can now be replaced if required, and must always be replaced together as a pair.

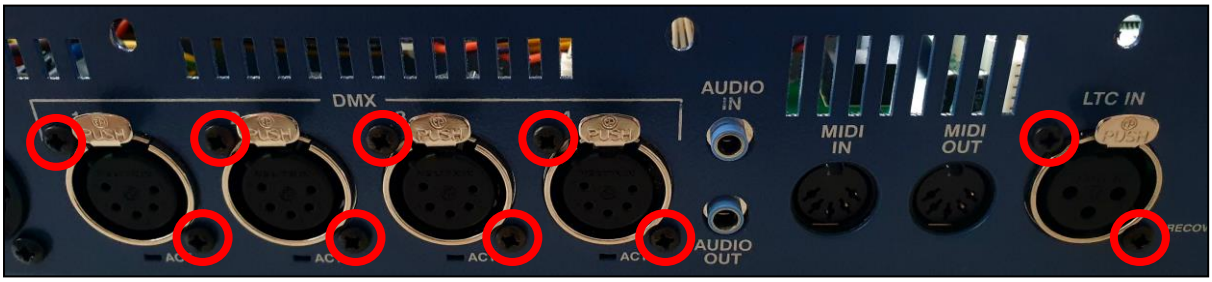






DMX PCB removal:

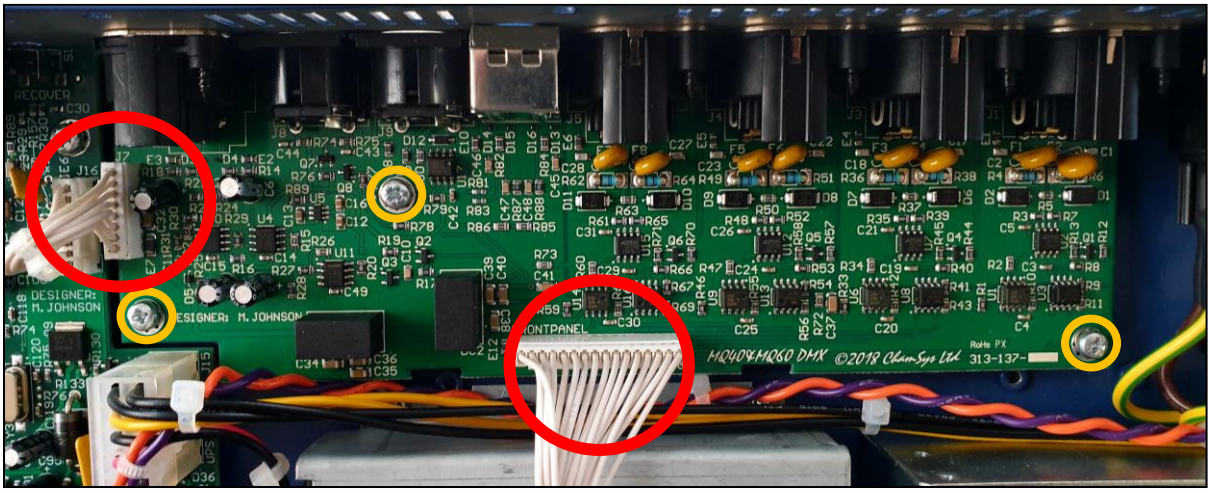
1. Remove the 10x black self-threading screws from the DMX and LTC ports on the rear of the console (as pictured, below) using a PZ1 screwdriver.



2. Disconnect the 2x cables as highlighted red in the image below. Both can simply be pulled off with a little force.

3. Also using a PZ1 screwdriver, then remove the 3x M3x6 silver screws and shake-proof washers from the PCB, as highlighted in orange below.

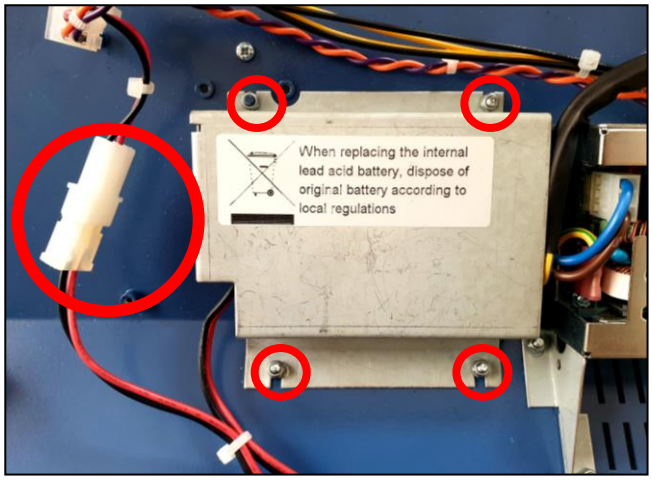
4. Lift out the PCB, ensuring the latches for the ports don't get stuck.



Removing the UPS battery:

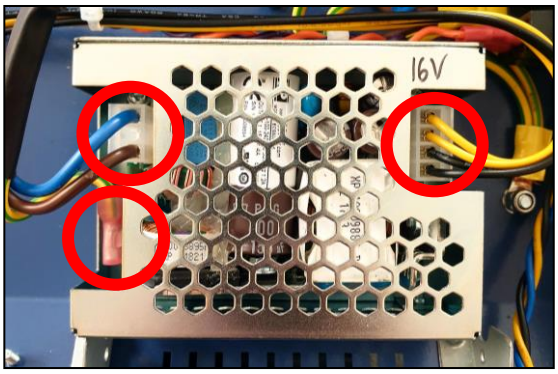
Pull the connector to unplug and then remove the 4x M3 nyloc nuts from around the bracket using a 5.5mm nut driver. See the picture, right.

The bracket can then be removed with the battery inside, before taking out the battery to replace if required.



Removing the power supply:

First, unplug the 3x connectors into the power supply as pictured, right. All connectors just pull off with a little force, but make sure to remember their orientation. You can use the picture, right for reference.

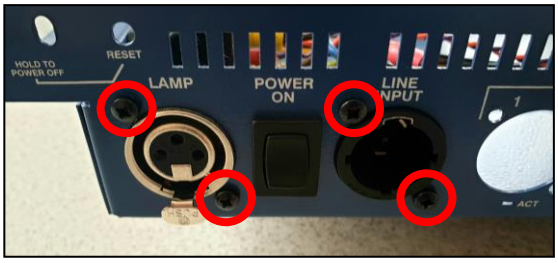


You can then remove the 4x M3x6 silver screws running through the underside of the base into the power supply using a PZ1 screwdriver.

The power supply will then be loose to be removed and replaced, if required.

Removing the working light socket:

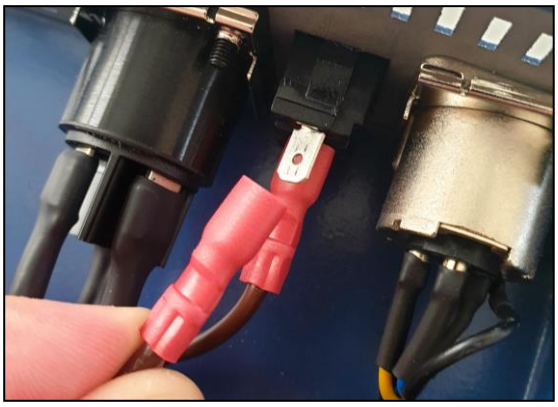
The working light socket can be removed by simply unscrewing the 2x M3x10 black screws on the rear as pictured, left.



Removing the power cable assembly:

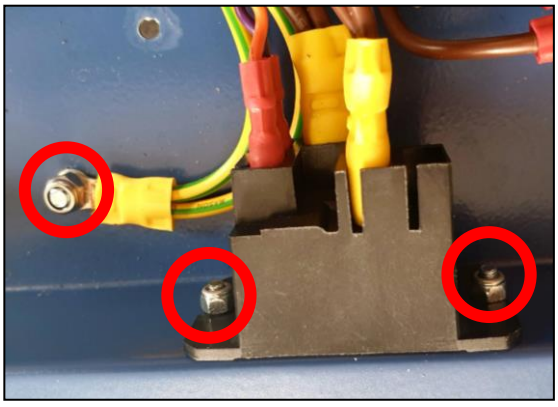
1. Start by unscrewing the 2x M3x10 black screws on the rear also in the picture above, left.

2. Pull the 2x cables off the power switch with a little force and gentle wiggling.



3. Remove the 2x M3 nyloc nuts from the relay using a 5.5mm nut driver.

4. Remove the M4 nyloc nut and shake-proof washer securing the earth cable to the base, using a 7mm nut driver.



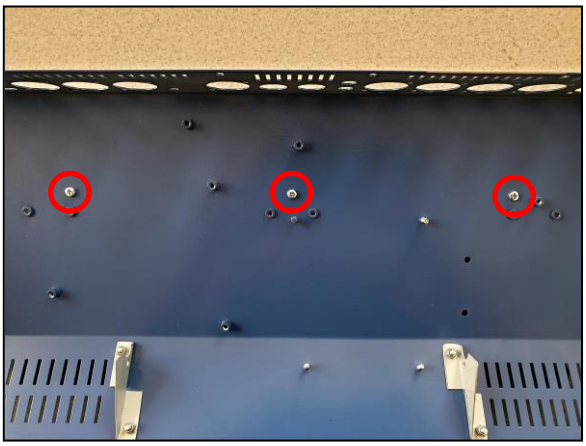
5. The cable assembly can now be removed.

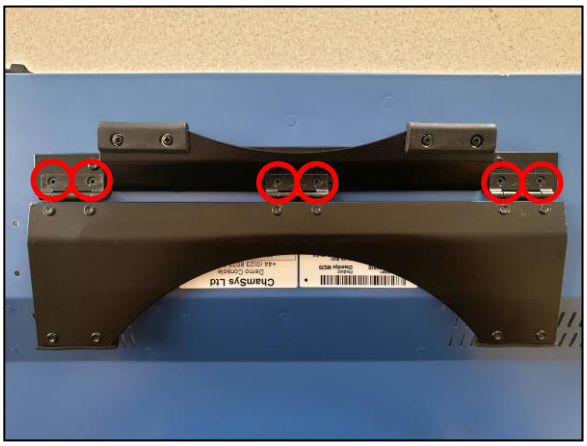
6. Once removed, the cables can be pulled out of the relay if required.

7. The power switch can also be removed by pushing it out through the back of the metalwork, if required.

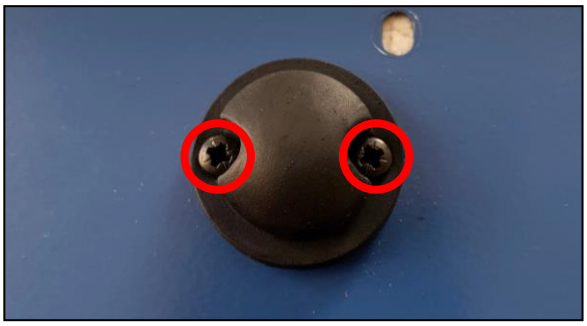
Removing the kickstand, feet, and remaining metalwork:

The kickstand can be removed by unscrewing the 3x M3x5 screws through the top and the 6x M3x4 black countersunk screws through the underside of the console using a PZ1 screwdriver. See the pictures below for reference. The kickstand will then be free and separate into two pieces.

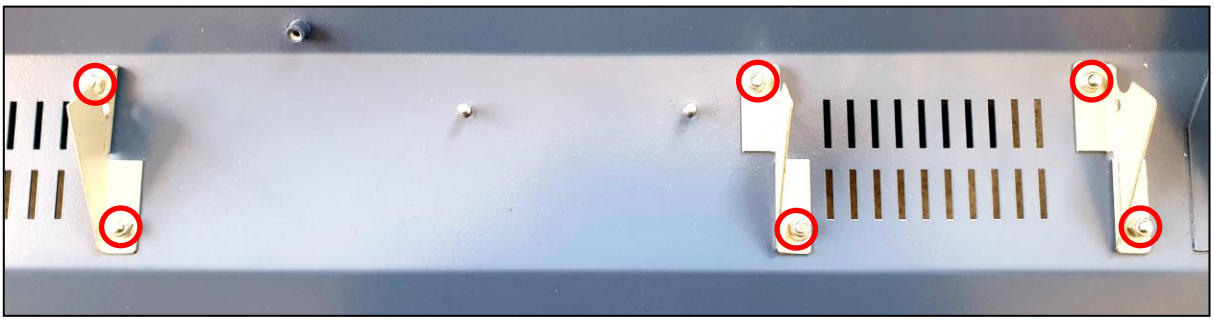




The front 2x feet can be removed by simply unscrewing the 2x M3x6 black screws in each foot using a PZ1 screwdriver.



Finally, the 3x metal baffles inside the base can also be removed if required. If replacing the base metalwork, for example. These are secured in place with 2x M3 nyloc nuts in each one, which can be removed with a 5.5mm nut driver.



This is now all steps completed for full disassembly of the base section of the console. Continue on to the next section for instructions on disassembly of the front panel.

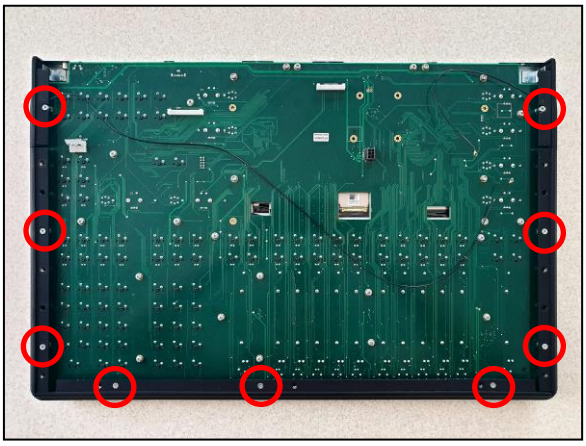
Disassembly of the front panel:

Step one: Pull off all fader caps from the faders – 12 in total.

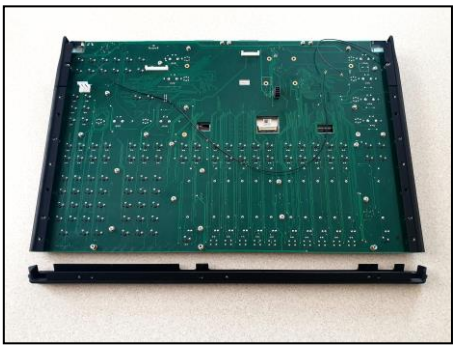
Step two: Pull off the A-F encoder knobs. This is only required if the encoders need replacing, as removal is not necessary for disassembly.

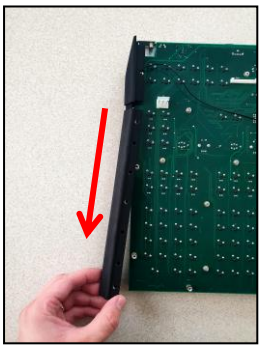
Step three: Remove the X and Y encoder knobs by first unscrewing them using a 2mm ball driver. This is again optional, just as with the A-F encoder knobs.

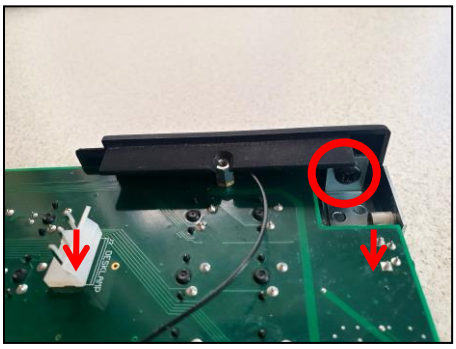
Step four: Carefully place the front panel face down on a protective surface and unscrew the 9x M3x6 silver countersunk screws securing the extrusion bezel in place as pictured, right.



Step five: Remove pieces of the bezel by pulling them out. The front can pull straight out as one piece, while the sides will need to first slide down, out of the corner pieces (these are still secured in place). See the two images below for reference.





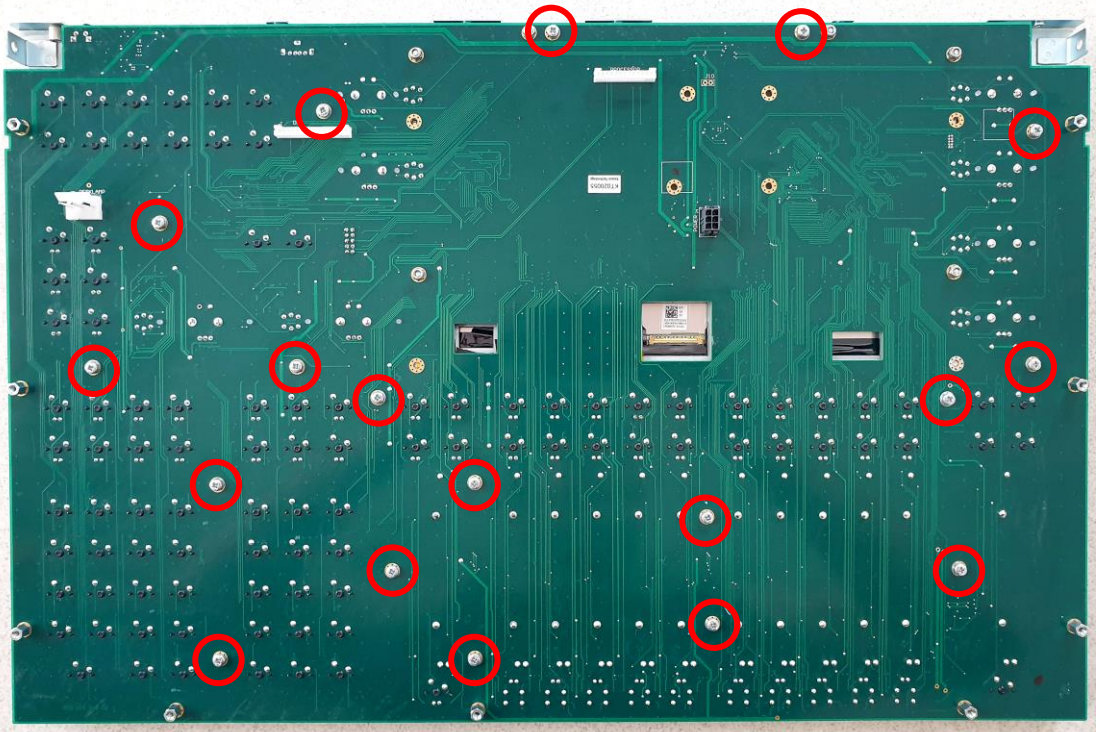


Step six: Unscrew 1x M4x6 black screw from each of the corner pieces containing the Wi-Fi antenna - 2 screws in total. See the image above, right for reference. Once the screw is removed, the corner piece will be loose and can be removed.

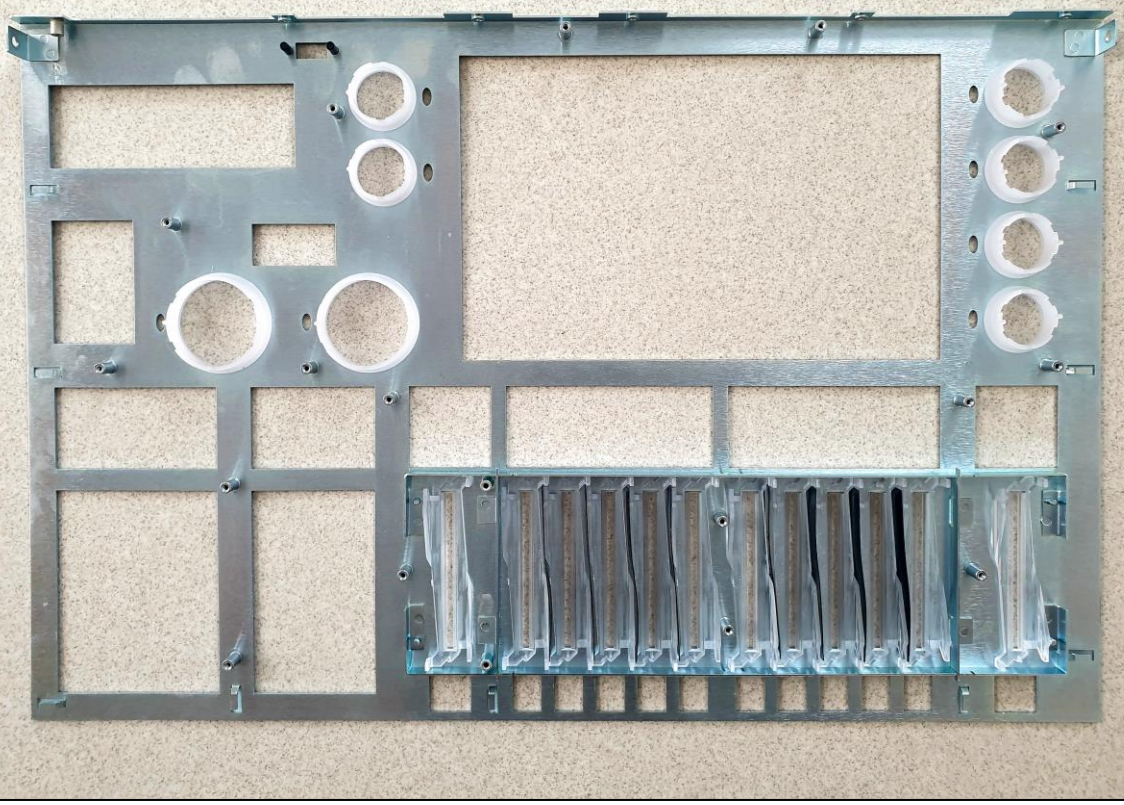
Step seven: To remove the front panel metalwork, you will need to unscrew the 18x M3x6 silver screws and shake-proof washers securing it in place through the underside of the front panel PCB. See the first image below for locations of these screws. Once these have been removed, the metalwork will come loose.

Step eight: Once the metalwork is loose, you can pick up and remove the front panel PCB. You should now be left with the front panel metalwork lying flat on the desk. See the second image, below. Now you can remove the encoder and fader light guides from the metalwork. These are not secured in place. Note how the fader light guides have dividers between them.

Front panel metalwork screw locations

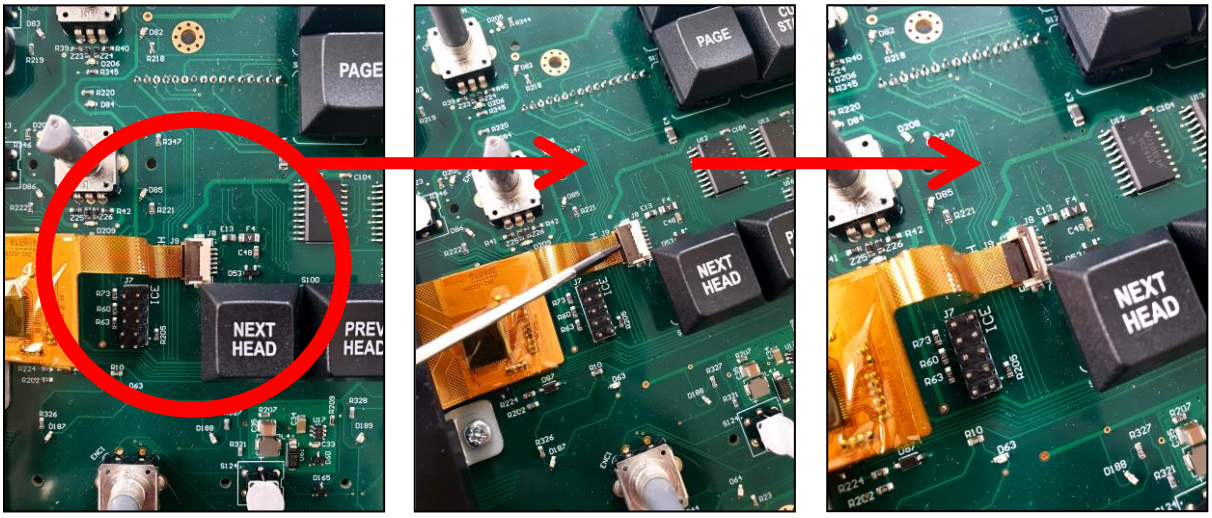


Front panel metalwork removed with light guides attached

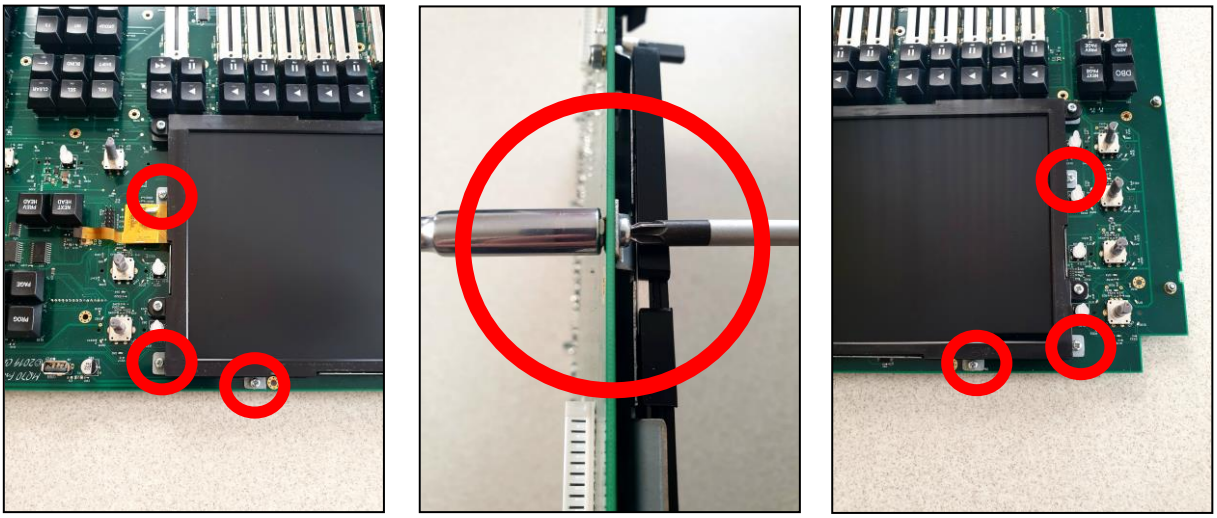


Removing the display assembly:

With the front panel removed front all metalwork, you will now be able to also remove the display assembly, if required. This is done by first unplugging the connector on the top side of the PCB as pictured, below. Before removal, you will need to lift the tab on the connector, using either a small flat head screwdriver, or your fingernail.

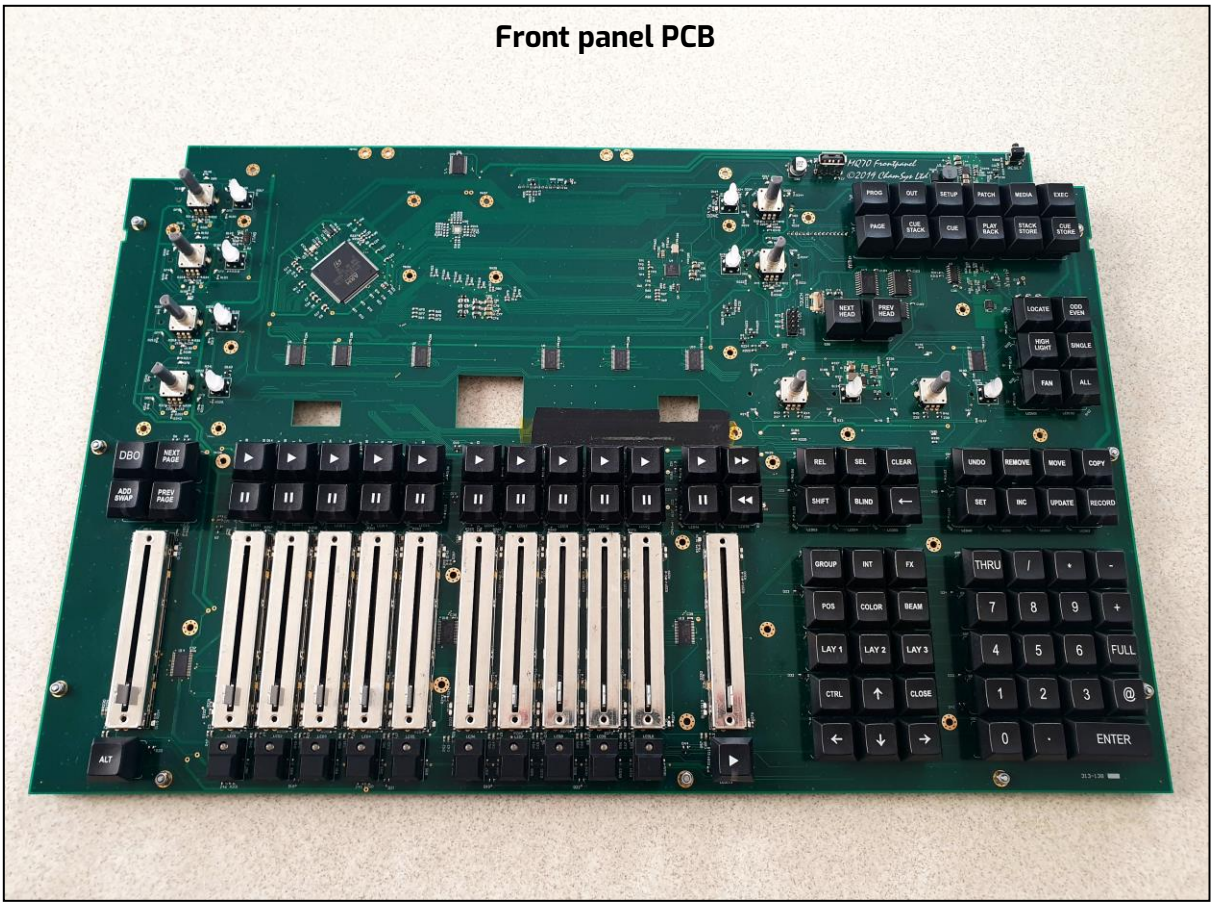


Once disconnected, the display assembly can be removed by unscrewing the 6x M3x6 silver screws running through the front, into M3 nyloc nuts on the rear. This can be done by carefully propping up the PCB and using a PZ1 screwdriver and 5.5mm nut driver together, as pictured below. We recommend removing the nuts and leaving the screws in place while removing the other nuts. Once all nuts are removed, place the PCB down and then remove the screws. The display assembly will then be free to be removed.

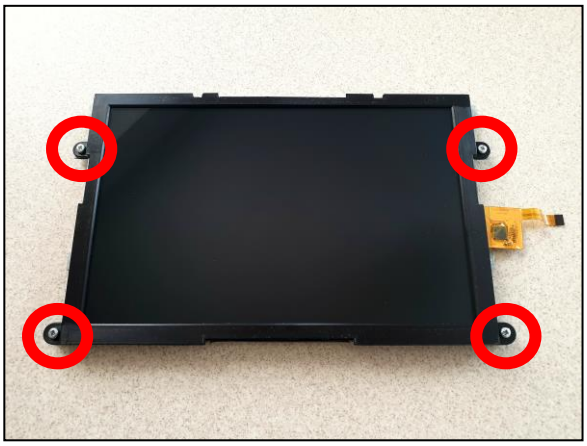


Once the display assembly is removed, you will be left with the bare PCB as pictured below. The display assembly can also be disassembled if you need to replace the display. See below instructions on this.

Front panel PCB



Finally, **to remove the display** from the plastic bezel and rear metal plate, remove the 2x M3x6 silver and 2x M3x10 silver screws using a PZ1 screwdriver. See the image, right for reference. The M3x10 screws also run through plastic spacers, which will come loose when the screws are removed. You will now be able to replace the display, if required.



All steps for complete disassembly of an MQ70 or MQ50 console have now been detailed. In section 4, below you can find some tips for reassembly, while in section 5 are instructions for solving some common hardware issues that can occur.

If any issues you are facing with a console are not covered, you require further help, or have any questions at all, please do get in contact with our support team.

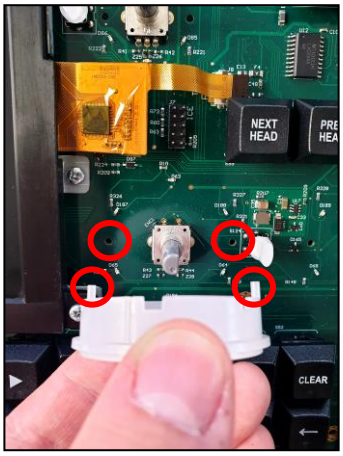
Tel: +44 (0)2380 238 666

Email: support@chamsys.co.uk

Section 4: Reassembly Tips.

Reassembly of the console is much the same as dismantling, but in reverse. Below are some tips to bear in mind during the process.

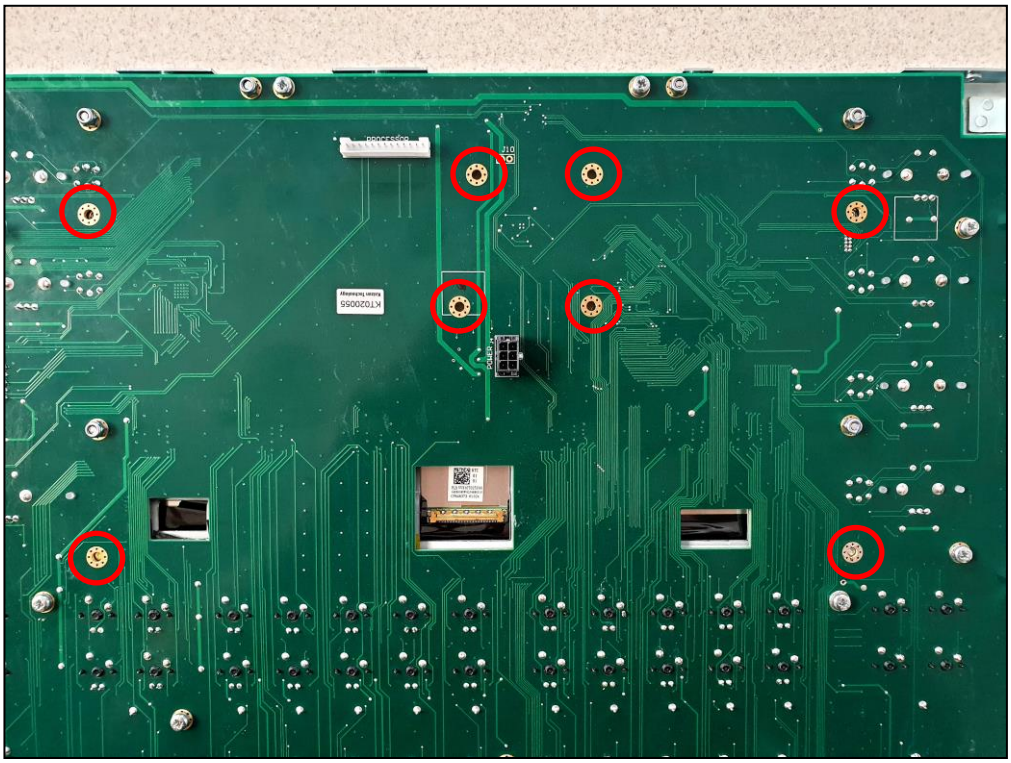
- Place the encoder light guides on the PCB before reassembling the front panel. Each light guide has two feet to sit in holes on the PCB, as pictured, left.



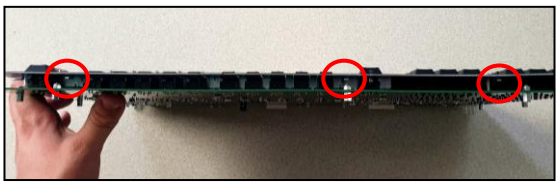
- The light guides for the faders should be placed on the faders as pictured, with a divider between each of the playback faders.

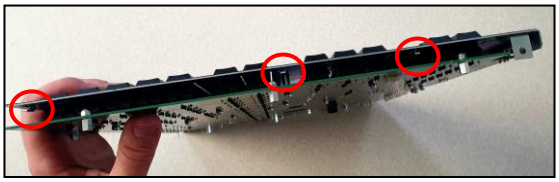
- The front panel metalwork can then be placed on top and must be held together while the first few screws are put back in. You may find it easiest to lift the assembly from the front and replace the screws closest to you first. Once a few screws are in, you should be able to flip the assembly over and replace the rest.

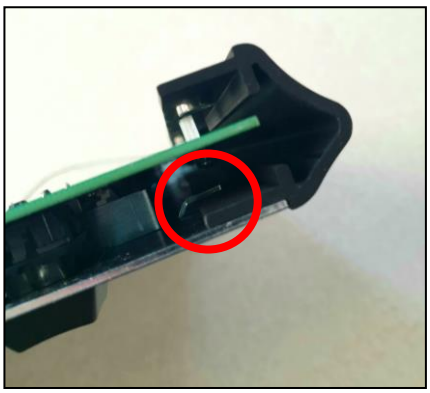
- When replacing the rest of the screws through the PCB into the front panel metalwork, you'll find there are 8 holes where screws are not needed, as pictured.



- When placing the bezel extrusions back in place, ensure they sit within the clips on the front panel metalwork, as pictured below. There are 3 on each side. These should fit in fairly easily, with little force required.







- When replacing the X and Y encoder knobs, ensure you screw into the flat side of the encoder (place the encoder knob on with the hole in line with the flat side).

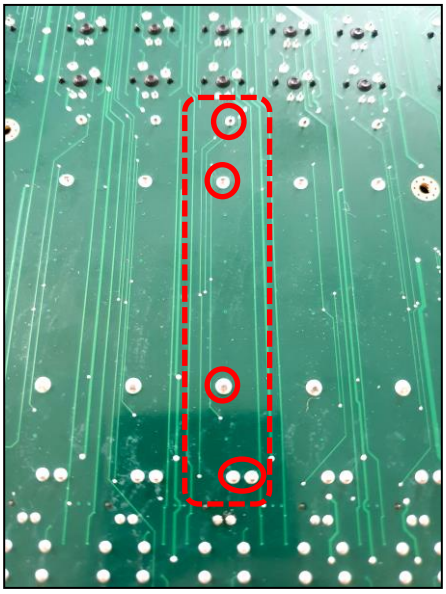
- If you need to replace the front two rubber feet, take care not to over tighten the screws as this will miss-shape the feet.

- When placing the front panel back down on the base, be sure no cables are trapped by looking level with the base while doing so.

Section 5: Resolving some common issues.

Below are some common issues that can appear on an MQ70 or MQ50 console and how to solve these, including replacing faders, encoders, and keys.

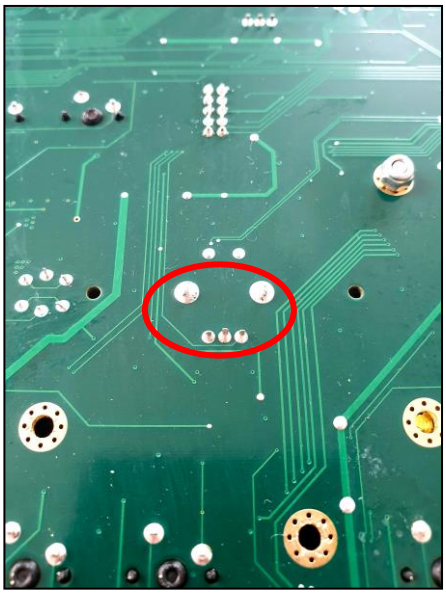
Replacing faders:



Faders can naturally wear down with use and may end up needing replacement if noise is being experienced, or they feel scratchy, or unusually loose.

To replace a fader, start by completely de-soldering the five solder joints for the fader, as highlighted in the image to the right. The holes must be completely free of solder to allow the fader to be removed. Once removed, place the new fader into the holes and solder the connections. We recommend using high-quality lead-free solder.

Fader part number: 308-001-01



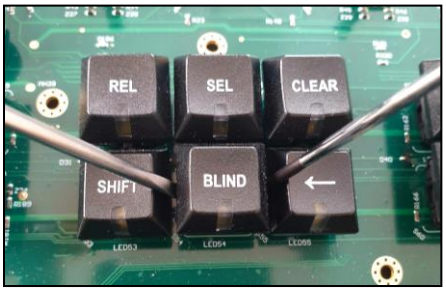
Replacing encoders:

It is common for encoders to wear with use. As mentioned in section 2, when testing encoders, you should see positive values only when rotating clockwise and negative values when rotating anti-clockwise. If mixed values are experienced in one or both directions, the encoder will need replacing.

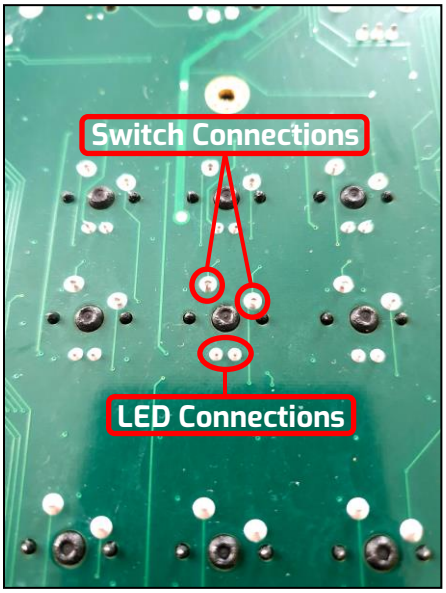
To replace an encoder, start by completely de-soldering the five solder joints for the encoder, as highlighted in the image to the left. The holes must be completely free of solder to allow the fader to be removed. Once removed, place the new encoder into the holes and solder the connections.

Encoder part number: 417-003

Replacing cherry switches:



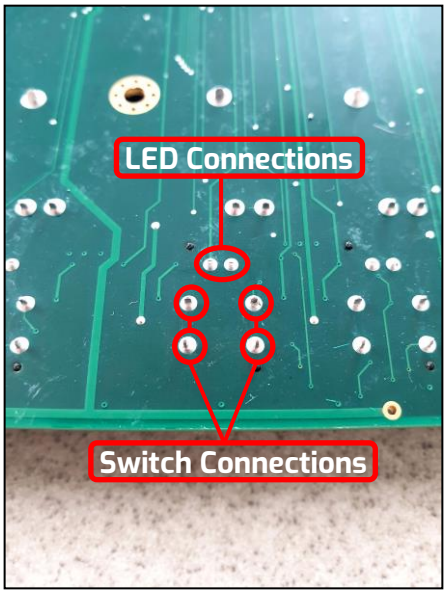
To replace a cherry switch on the console you will first need to carefully remove the key cap. Do this by carefully lifting it with either a key cap removal tool, or 2x small flat head screwdrivers, as pictured. Use gentle force equally on each side to lift the key cap.



Next, de-solder the LED connections if an LED is fitted to the switch. If no LED is present, skip this part. The LED connections are the two at the bottom of the switch which are close together. Once fully de-soldered, remove the LED and remember its orientation. This is important for when it is re-fitted.

Finally, completely de-solder the two connections to the switch, and remove the switch. Place the new switch in the holes and solder the connections with high quality lead-free solder. Replace the LED (if fitted to the switch) in the same orientation it was removed, and re-solder this also. Replace the key cap by pushing it back onto the switch.

Cherry switch part number: 307-001



Replacing flash switches:

To replace a flash switch first, de-solder the LED connections. These are the two at the top of the switch which are close together, as pictured to the left. Remove the LED and remember its orientation. This is important for when it is re-fitted.

Now you can completely de-solder the four connections to the switch, and then remove the switch. Place the new switch in the holes and solder the connections with high quality lead-free solder. Replace the LED in the same orientation it was removed, and then re-solder this also.

Flash switch part number: 307-002

Section 6: MagicQ Console Fault Finding

Here are some common faults that could be experienced with a console, but solvable without the need of hardware repairs by following the tips below.

No output from the console:

Check whether the desk is operating correctly by opening the Outputs Window (press the OUT key in the top right block of keys on the console) and looking at the channel data. If channels are not at their correct levels, then check the following:

- Are the Grand Master and Playback Master (Sub Master) faders up?
- Are Playback faders raised?
- Are the Playbacks active (shown as Red in the legends on screen)?
- Is there channel data recorded in the cues on the playbacks?
- Is BLIND mode on (the BLIND key LED will be lit)?
- Are fixtures patched to the correct universes?

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 converter box check that it is receiving data correctly. Check:

- Outputs are configured correctly
- Outputs are enabled
- TCP/IP address and sub net mask are configured correctly (Setup View, Settings). Typically, IP address should be 2.9.200.1 and sub net mask should be 255.0.0.0.
- Ethernet box is powered up and connected to the console correctly
- Ethernet box is configured correctly (typically uses ArtNet Universe 0-0)

Desk not responding:

Is the time changing in the status window (bottom left of the display)? If the time is not changing then a reset is required (see **section 7**, below). If the time is changing, then the main processor and software are running fine. Check:

- Master faders are up
- Correct playback pages selected
- Playback has a cue stored on it
- The desk is not locked (press CTRL top left soft button)
- Is board test mode on? (press ALT+CTRL+SHIFT, as in **section 2**)

Are all the Select buttons flashing blue? This indicates that the front panel is not communicating with the main processor board. Try:

- Pressing CTRL 9 on an external keyboard – this resets the front panel.
- Pressing CTRL 0 on an external keyboard – this resets the MagicQ application.
- Pressing CTRL BREAK on the external keyboard – this shuts down the console.

Strange key presses or unexpected window changes:

Enter board test mode to determine the cause of the fault (Press ALT+CTRL+SHIFT).

- Check a button has not become stuck down (see **section 2**)
- Check nothing is accidentally leaning on the keyboard or other buttons

Exit board test mode (Press ALT+CTRL+SHIFT).

Section 7: Resetting or Restoring the Console

Resetting the console:

To reset the console, hold SHIFT whist quitting the MagicQ application (go to SETUP > QUIT - top right). This performs an immediate soft reset of the console - the MagicQ application will be running the show again within around 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).

If this 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 rarely cause problems with the file system. To perform a hard reset, press and hold the reset button for 5 seconds. To force the console to power off completely, disconnect the mains power to the console and hold the reset button on the back panel until it powers off (approximately 15 seconds). You can then switch the console back on.

Restoring to factory defaults:

In some rare cases where persistent issues are experienced, it may help to restore the console to its default factory state. This can be done by going to Setup > View System > View Status > Change Software. This boots the console into the software recovery utility. This can also be accessed by pressing any key while booting the console.

Once in the software utility, locate the factory reset options. You will find there are two options here, one which will erase all user data on the console, and one which will not.

NOTE: IF YOU CHOOSE TO ERASE ALL DATA, BE SURE TO BACK UP SHOW FILES FIRST. THESE WILL BE PERMANENTLY DELETED FROM THE CONSOLE DURING THE RESTORE.

Section 8: Backup Archives and Log Files

Backup archives:

By default, the console stores an archive of the show files for every quarter of an hour of the day, and for every day of the week. This enables the user to revert to a previous copy of their show.

Archive files are only made when the console auto saves – so if auto saves are disabled then no archive files will be generated. If the console is set to "auto save on changes" then archive files will only be stored when changes are made. To revert to an archived file press SHIFT and LOAD SHOW in the Setup Window.

Archive files are stored in a special directory that should not be modified by the user. When the user re-loads an archived backup file, the backup file is restored into the standard show directory.

Archive files have the name "backup0530.sbk" to indicate the show file that was recorded just before 5.30am. Daily files are also stored – "backupfri.sbk" indicates the show file that was recorded at the start of Friday. Archive files are overwritten every 24 hours, except for the daily files, which are overwritten every 7 days.

Log files and reporting problems:

MagicQ stores diagnostic information about keys pressed, strange events and resets in log files. If you notice a problem, then please send us the show file and the log file for the time the problem occurred, and we will investigate and fix the problem in the next version of software.

Log files are stored in the log folder and are named according to the time and date the session was started – a new log file is started each time the console re-starts. The time and date of the file is the time that the session ended.

Please email the log files and show files to support@chamsys.co.uk

Note: To provide more accurate logs to the ChamSys team, please enable extended logging on the desk under Setup > View Settings Hardware.

Section 9: Upgrading Console Software

New versions of MagicQ console software are made available on the downloads page of the ChamSys website – www.chamsys.co.uk/download

There are different versions of the MagicQ software available. Download the MQ70 and MQ50 software installer from the website, which ends with the extension .cdz

Note: if downloading on Mac based systems check OSX has not added "._" before the file name, as this will cause the update to fail.

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 and ensure any personality files 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.

Download the software and copy it onto a USB flash drive.

Updating the console:

1. Insert the memory stick into the one of the USB sockets on the console
2. Start up the console and navigate to Setup > File Manager
3. Select USB Drive view
4. Select the Upgrade file from the USB drive
5. Console will ask 'do you want to upgrade software' - select 'YES'
6. New software will now be loaded onto the console. Do not touch any keys, encoders or faders during this process.
7. Once complete, the console will then boot back into MagicQ again and start expanding the updated heads library that is included with the software update.
8. Wait for the heads library to finish expanding before using the console.

Technical Specifications

	MQ70	MQ50
Universes supported:	24 expandable to 48	6
Max channels:	12288 expandable to 24576	3072
Max number of fixtures:	12288 expandable to 24576	3072
Cues:	5000	5000
Groups:	5000	5000
Display:	10.1"	10.1"
Console Display:	10" Multi touch display	10" Multi touch display
External Monitor:	HDMI - supports touch	HDMI - supports touch
DMX 5-Pin XLR:	4	4
RDM Support:	Yes	Yes
Faders:	12	12
Attribute encoders:	8	8
Network ports:	3	1
Inbuilt WIFI:	Yes	Yes
USB ports:	5	4
Audio in:	Yes	Yes
Audio out:	Yes	Yes
MIDI:	Notes, TC, Show Control	Notes
LTC in:	Yes	Yes
Remote input port:	Yes	Yes
Illuminated faders:	Yes	No
Illuminated encoders:	Yes	No
Wing Support	Yes	Yes
Multi console:	Yes	Yes
Power input:	110 to 240 VAC	110 to 240 VAC
UPS Battery:	Yes	No
Width:	525mm (20.6")	525mm (20.6")
Depth:	350mm (13.7")	350mm (13.7")
Height:	60mm (2.3")	60mm (2.3")
Weight:	7kg (15.4lb)	7kg (15.4lb)

If you are experiencing any issues with a console that are not covered in this document, or have any further questions, please contact ChamSys support for more information.

Tel: +44 (0)2380 238 666

Email: support@chamsys.co.uk