TECHNICAL NOTE

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Quantum 338 MIXER
FITTING WAVES ® OPTION

Important Note: These instructions are a guide to fitting the Waves option to this mixer. This option is normally supplied factory fitted and is not considered a user installed option. This note is for the use of factory approved technicians only. The USB key included in the kit includes these install instructions and the operation manual.

Read the instructions carefully before starting, and leave yourself time to perform the work.
You will need to have the following tools to hand:
2mm Hexagonal driver (Allen Key) stubby (less than 40mm) – normally supplied with the Q3
Pozi or Philips screwdriver no 0
Pozi-screwdriver 1 pt
2.0 Hexagonal driver (Allen Key)
Soft material (e.g. bubble wrap) for resting panels flat on

You should also have:

1) Authorisations for Waves Multirack, Superack, Waves Studio or a PC driver for recording at least, as obtained from Waves (http://www.waveslive.com/html/soundgrid-for-digico.aspx) This will be required to use the installation.
2) To fully test Waves functionality, you will also require a compatible PC to run the Waves software required, also usually a Soundgrid Server, a Waves approved 1GB Network switch and 3 CAT5e/CAT6 network cables. Details of approved switches and appropriate Cables can be found at http://www.waveslive.com/html/soundgrid-switches.aspx

Ensure you have taken appropriate anti-static precautions

The kit includes a disposable wrist strap and heel strap. Ensure you wear both. The wrist strap should be connected to the chassis of the engine whilst you work on it, in or out of the mixer. The heel strap ensures the skin of your leg is connected to the floor and not isolated by a rubber soled shoe.

Avoid working in areas with synthetic floor coverings or carpet, especially polypropylene material, as opposed to natural materials such as solid wood or wool. Ideally work at a proper workbench with ESD safe features, such as a metal frame. Before work, try to discharge yourself into a mains earth fitment, water pipe etc.

This is important as parts of this kit are static sensitive and even if any damage is not immediately obvious, so called “latent damage” can occur, where a device may be partially degraded yet continue to perform its intended function. However, the operating life of the device may be reduced dramatically, leading to premature failure.

If you are unsure about any part of the upgrade procedure, seek advice before proceeding.

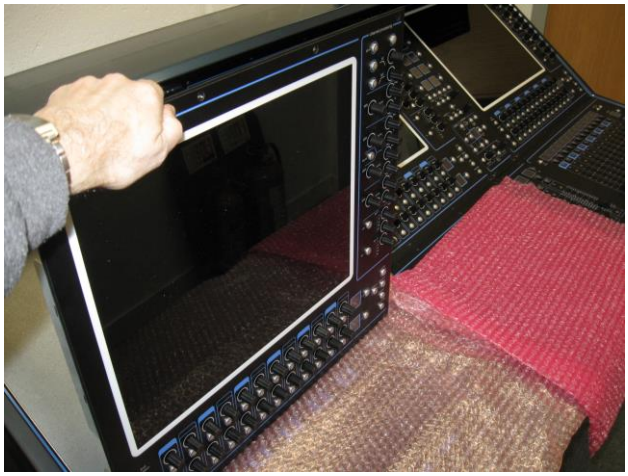
Before you start:
Shut the mixer down, switch off, and remove power leads.
Locate and remove the stubby driver and bits supplied with the mixer in the keyboard drawer.

Access to mixer interior

Remove screws from control panel surfaces screen panels left and middle, take out screws to master and the right sections only if required.

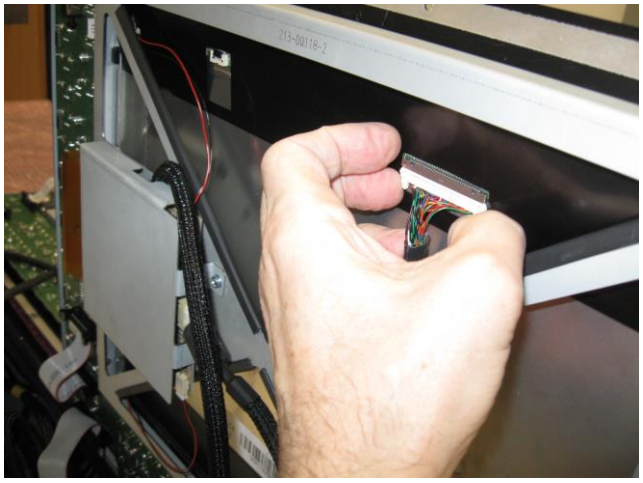
Remove screws from the upper panels using the stubby 2mm hex driver, with the remaining panels with a regular driver

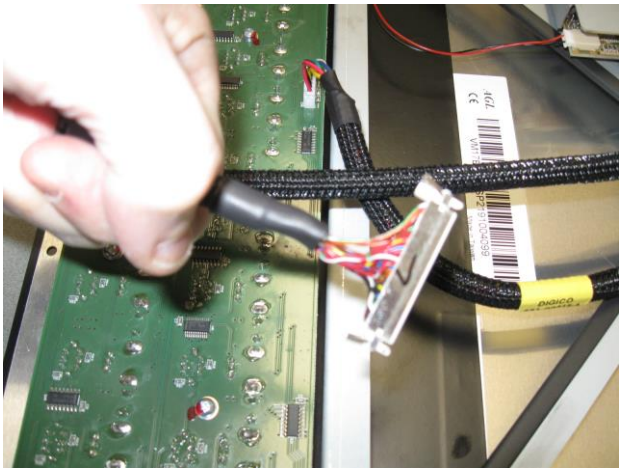
Lift the upper panels out from the lower edge and tip forward, resting the upper panel on the chassis or soft material covering the fader panel



Lay the panel flat across the fader panel on soft material.

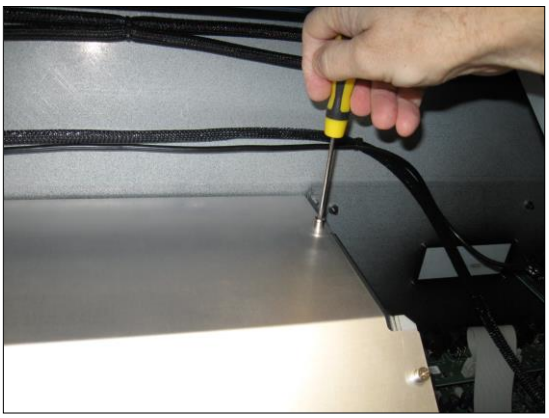
If required, unplug the display drive cable from the rear of the screen (squeeze the 2 ends of the connector to release). Note how the plugs are labelled L M R for the respective screens.

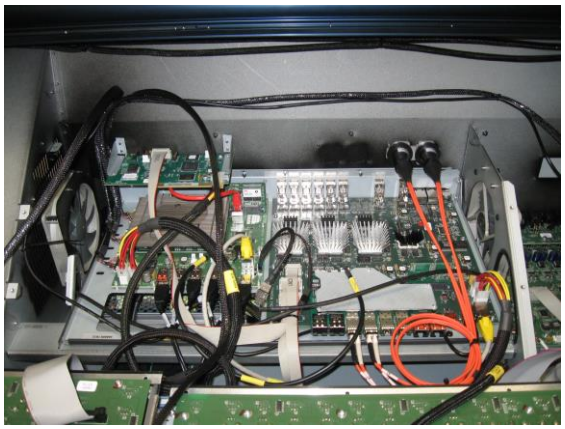




Lay the upper panels flat on the fader panels but do not remove the master control section panel. The right hand panel is also not removed to fit the Waves option.

See the engine and computer cover. This is held with 6 captive 0pt Pozi screws (or use a small flat blade). Release all 6 screws, remove the cover from within the mixer and see the engine exposed below.





The interior is now accessible for required work.

Waves Option PCB Module

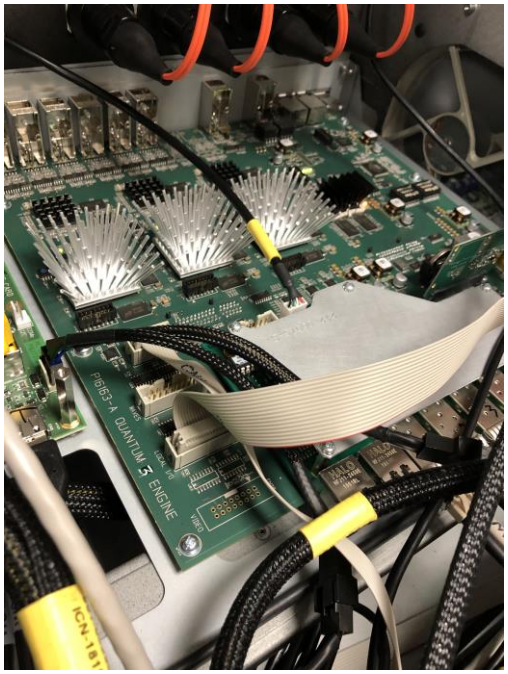
Remove the blanking plate fitted above the console power supplies on the rear of the console. Note the screws go into nuts on the inside of the console.

Within the mixer fit the Waves module to the rear panel, re-using the bolts from the blank.

See picture on the following page showing the interior view of the installed Module PCB.

Take a note of the 12 character module Waves serial number on the PCB whilst this is being installed. This will be required for activating your Waves licence.

Waves Option cables
Locate the ribbon cable connection to Engine connector CN8 labelled Waves.



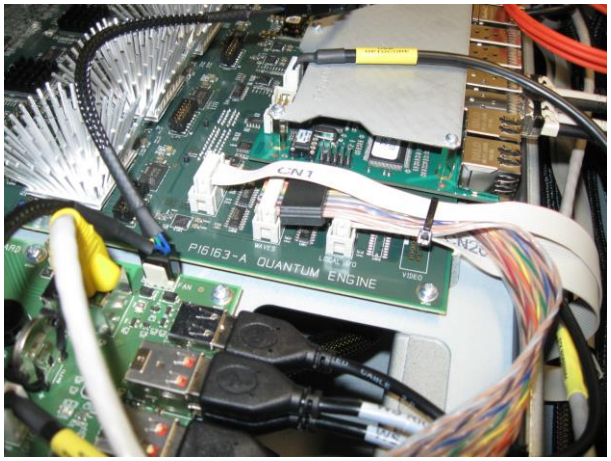
If the Waves option was not installed before but this cable was fitted and tied off, it should be removed and replaced with the new cable included with the kit.

Cut the Ty-Wrap at the engine PCB end to release the cables leading to the PCB, if required.

Fit the “twist/flat” ribbon cable. Note the pre-fitted ferrite goes at the engine end.
Replace the cable tie at the engine end.

Locate the power cable in the chassis which is pre-fitted and tied off adjacent to the Waves module. Cut the Ty-Wrap and release the cable

Connect both the other ends of the 2 cables to their mating connectors on the Waves PCB.



The Waves hardware installation is now complete.

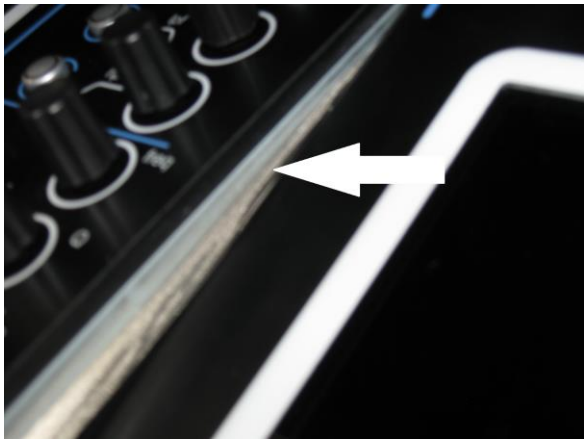
Test the mixer functions
On completion of work connect the mixer to power and perform a functional test to confirm all screens and controls function correctly, prior to fixing covers and panels.

On completion of test, shut down and the switch off power.

Reassemble the mixer
Lift the upper left and middle panels and lay flat across the faders again.
Replace the engine cover plate. This is critical for the correct operation and cooling of the unit and must not be omitted.
Ensure no cables are trapped by this and all 6 screws are correctly done up.

Refit and screw down all control and fader panels.

Note how the upper panels have a flexible RF gasket on the right edge. Ensure this is in place and not removed. Assembling panels from right to left is the correct method to get these in, finally sliding the leftmost panel edge without a gasket into the chassis.



SOFTWARE SETUP NOTES

Enable Waves in the Console options page and restart.

The Waves IO port will appear as an option and can be added in the audio IO page.
The option will also activate external Waves control integration features allowing the Waves system to synchronize features such as snapshot firing and the session load and save, via Ethernet.

Q3 supports Waves only on a separate external control computer. Legacy internal Waves operation is not supported in any form.

Connect both the Waves port and one of the console network ports to the Waves compatible network switch.

Ensure the Waves computer is on the current version compatible with the mixer version installed on the mixer. Refer to your Waves Central account to download and install this, following instructions included from Waves.

The Waves port will appear as “Digico IO” in the Waves inventory. Refer to Waves instructions for the relevant Waves software for operation of the integration features.

If required the PC waves audio only driver can be downloaded from Wave Central once an account has been created. This can be created at no initial cost by using the serial number recorded from the Wave module PCB above.