

TECHNICAL NOTE

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Fitting Fourier Interface Option Card

Quantum 225

Preparation

Important Note: These instructions are a guide to fitting the Fourier Interface Option Card 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 installation 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:

- Pozi screwdriver no.1
- 5.5mm Socket driver for M3 Nuts
- 2.0 Hexagonal driver (Allen Key)
- Soft material (e.g. bubble wrap) for resting panels flat on

You should also have:

- A Fourier transfrom.engine or another Dante audio device for post installation testing.

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 the equipment 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 procedure, seek advice before proceeding.

Procedure

Before you start:

Shut the mixer down, switch it off, and remove power leads.

Removal of installed Waves card.

If the console was previously fitted with a Waves card, please consult TN352.

The removal of the card is the reverse procedure of the steps described in this Technical Note.

Access console interior

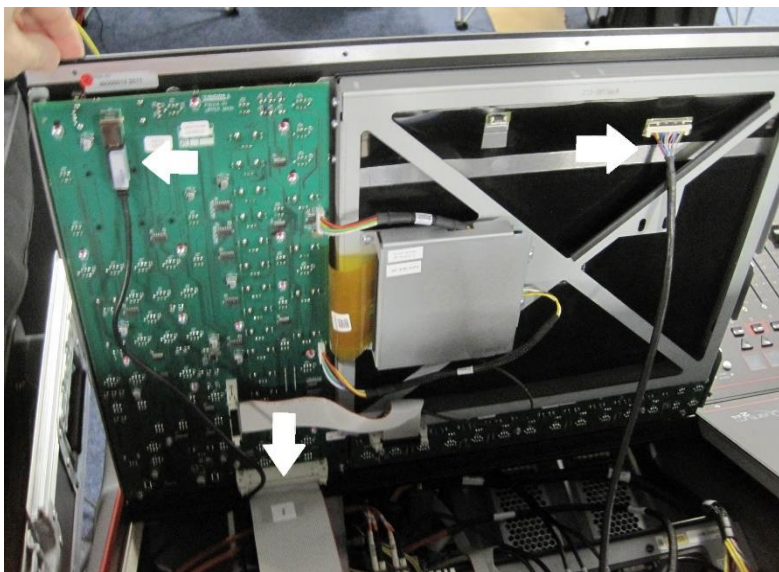
Important Note: These instructions are based on the Quantum 225 Console. Please ensure to read the instructions carefully.

If the console is fitted with an external monitor mounted on the left upper panel it may be required to first remove the monitor to access the master upper panel.

Remove screws from the master panel surface.



Lift the panel and tip forward, Disconnect the USB cable, grey ribbon cable connecting to the lower surface and the display drive cable from the rear of the screen (squeeze the two ends of the connector to release) and then remove the master panel completely.



Squeeze the two ends of the connector and release



Once removed, set the LVDS cable aside to avoid any type of damage while performing the installation.



Fourier Interface Option PCB Module

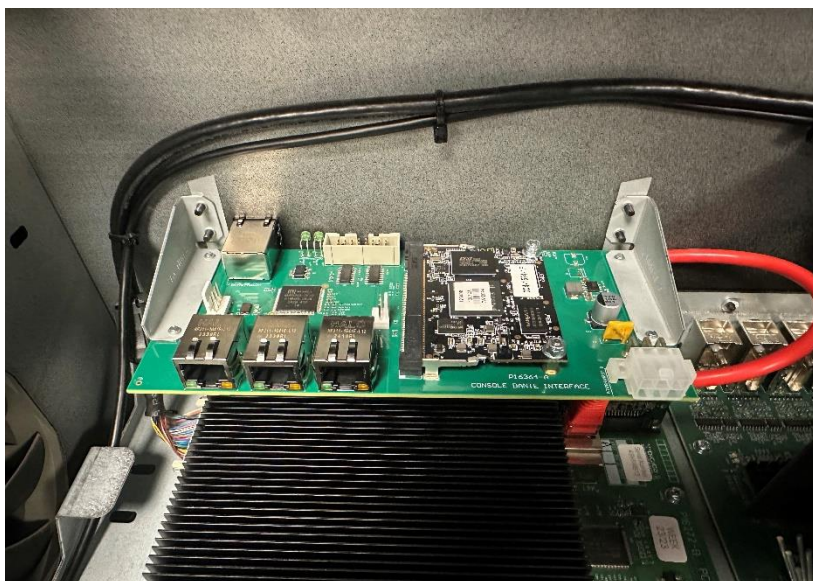
Remove the blanking plate fitted by removing the screws on the rear of the console. Note the screws go into nuts on the inside of the console.



Before fitting the Fourier interface module, place the sticker provided with the kit (see picture below)



Inside the mixer fit the Fourier Interface module to the rear panel, re-using the bolts from the blanking plate.



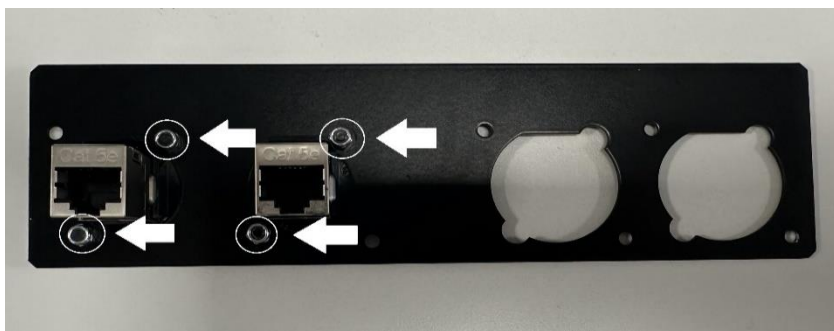
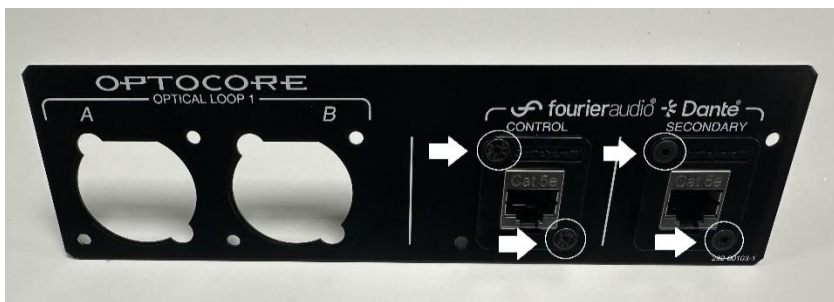
OPTOCORE MOUNTING PLATE INSTRUCTIONS

Optocore / Fourier Mounting plate

The kit comes with a mounting plate which needs to be installed on the Optical loops section on the rear of the console. For consoles fitted with a dual Optocore loop, the installation of this mounting plate can be omitted in order to keep the 2nd loop however, this prevents access to the Dante Secondary and Control ports.



Fit the two Cat5 sockets into the plate with the M3 countersunk, hex socket screws and nuts provided.



If optics are installed in loop 1, remove the optical connections and the blanking plate from the other loop so the new combined Optocore / Fourier plate can be installed.

If no optics are fitted, one blanking plate can be re-used after the installation of the new mounting plate to cover the openings for the connectors on loop 1.



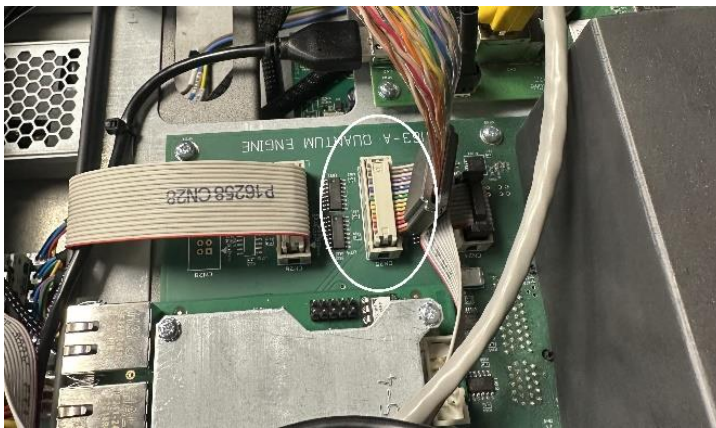
Once the above-mentioned parts are removed, install the plate with the CAT5 connectors fitted. (external and internal view below)



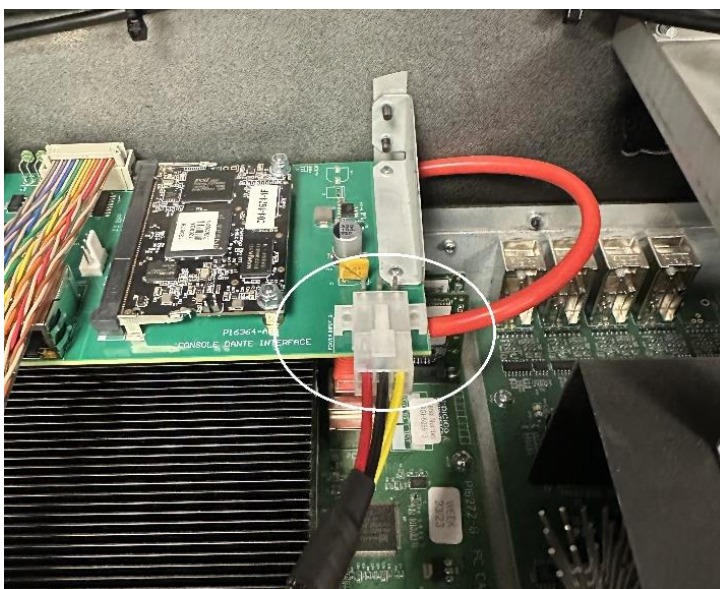
Fourier Interface Option cables

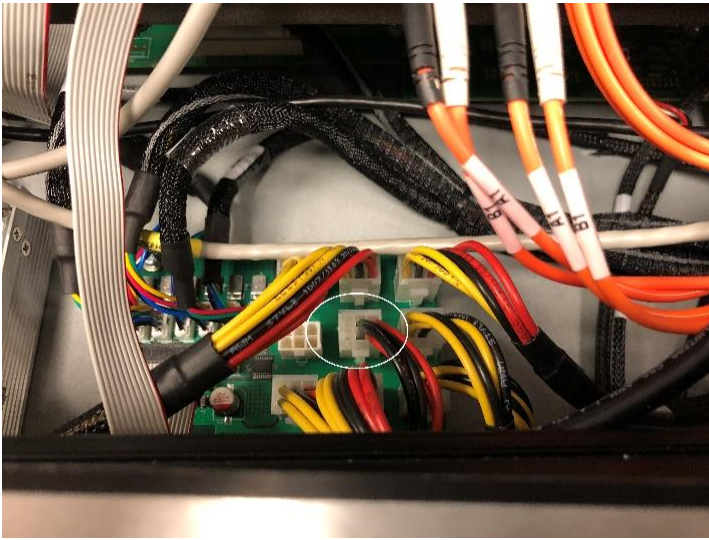
If the console was previously fitted with a Waves card, the ribbon and power cables can be used as these are the same type of looms.

Fit the Fourier interface loom 681-00373 from CN3 on the Fourier card to CN25 on the P16163 Quantum Engine board.

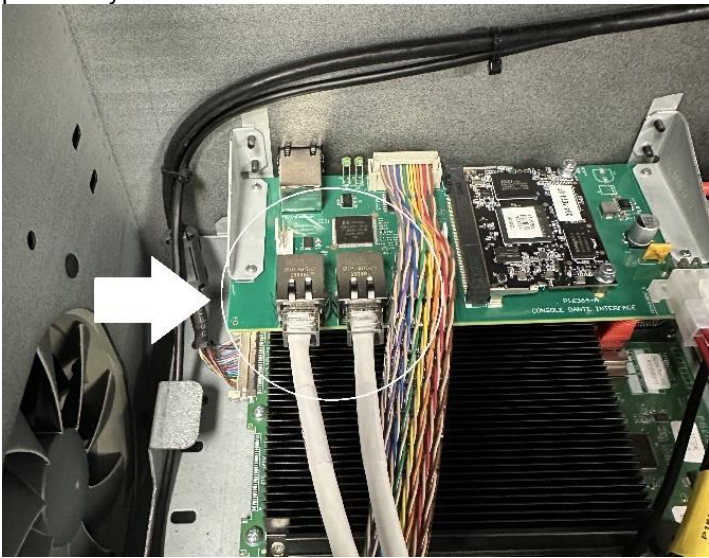


Fit the Fourier power loom 681-00347 from the interface card to CN12 on the P16316 power distribution board.



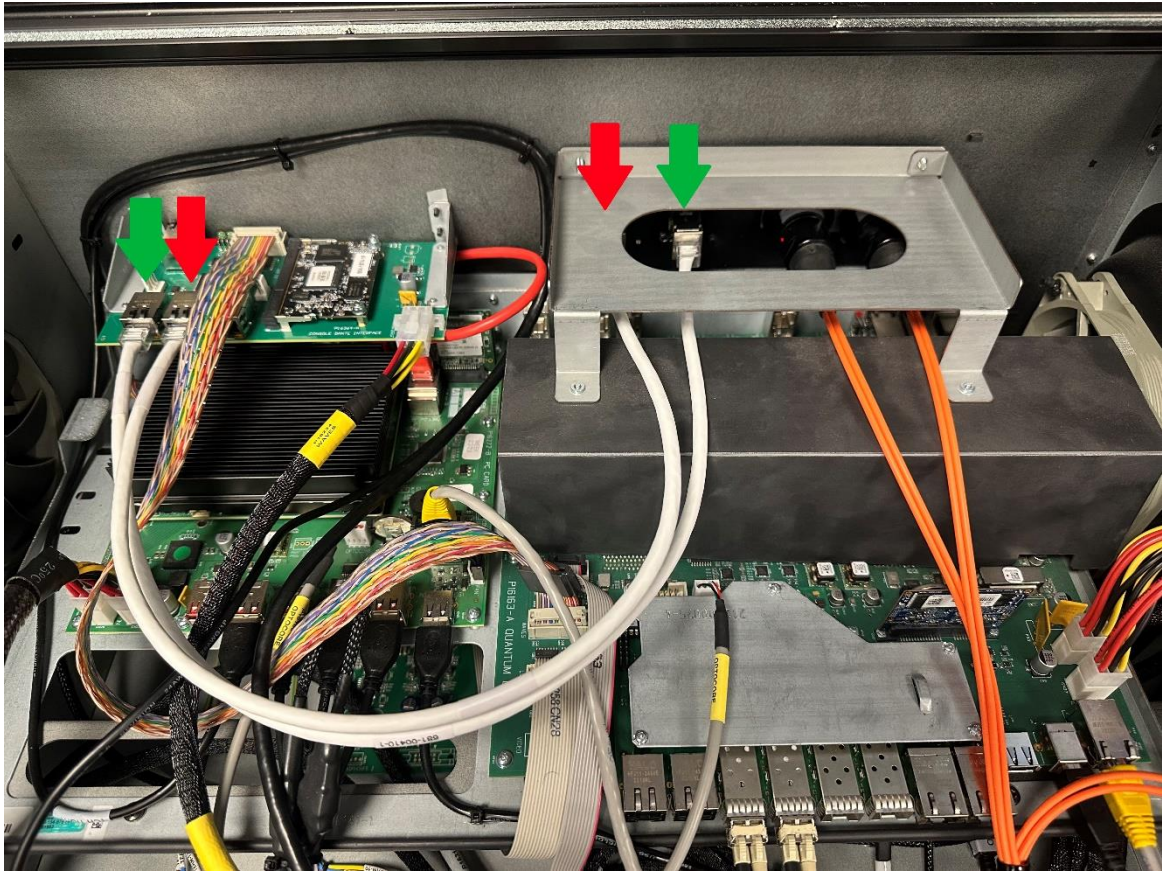


Connect the two Cat5 cables from the interface card to the Optocore / Fourier Mounting plate previously installed.



NOTE: Make sure to connect and match end to end accordingly

CONTROL <-> CONTROL
SECONDARY <-> SECONDARY



The option card hardware installation is now complete.

Reassemble the mixer

Reconnect the display drive cable and refit the master panel ensuring no cables are trapped.

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 the panel.

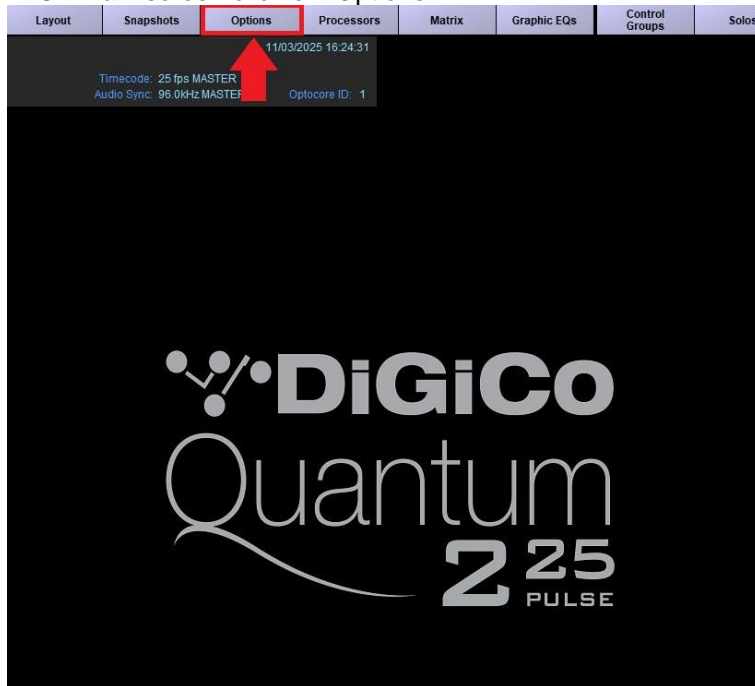
On completion of test, shut down and the switch off power.

Screw down panel.

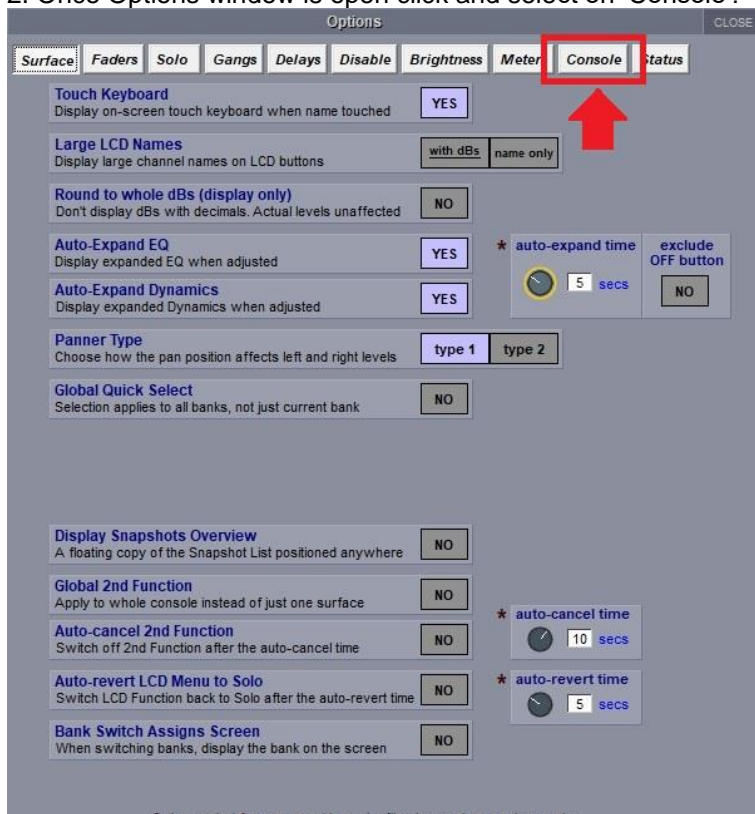
SOFTWARE SETUP NOTES

To enable Fourier Card:

1. On main screen click on 'Options'.



2. Once Options window is open click and select on 'Console'.



3. Click on 'Fourier' to enable.



4. Close and restart the console.

Fourier Interface Card Specifications.

- The Fourier Interface Card provides 64 channels in and 64 channels out at 48kHz or 96kHz to the Dante network.
- The card does not feature Sample Rate Conversion so make sure that the console sample rate and the Dante sample rate of the card (set in Dante controller) match or it could end up with distortion/clicking/no audio.
- The Fourier Interface card cannot be used to control socket parameters (phantom power and gain) of DQ Racks or A168D/A164D Racks.
- When fitted to Quantum consoles, the user can Enable Sync to External in Dante controller for the Fourier Interface Card to get it to clock to the console. Alternatively, the console can be set to clock from the Fourier interface card in Setup\Audio Sync. This will result in the console following the Dante network for audio clock.