TECHNICAL NOTE

Date 24th October 2025
ref 651
Raised by: MT
Distributed to: as required

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SD7 Quantum

Fitting Fourier Upgrade

Preparation

Important Note: These instructions are a guide to fitting the Fourier Interface Option Card to these mixers. 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.0
- 5.5mm Socket driver for M3 Nuts
- 2.0 Hexagonal driver (Allen Key)
- Soft material (e.g. bubble wrap) for resting panels flat on

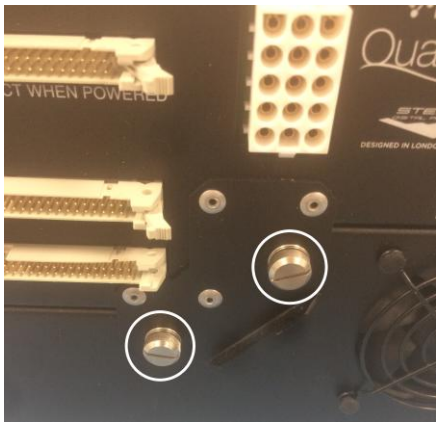
You should also have:

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

Ensure you have taken appropriate anti-static precautions, such wearing antistatic wrist strap etc. 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.

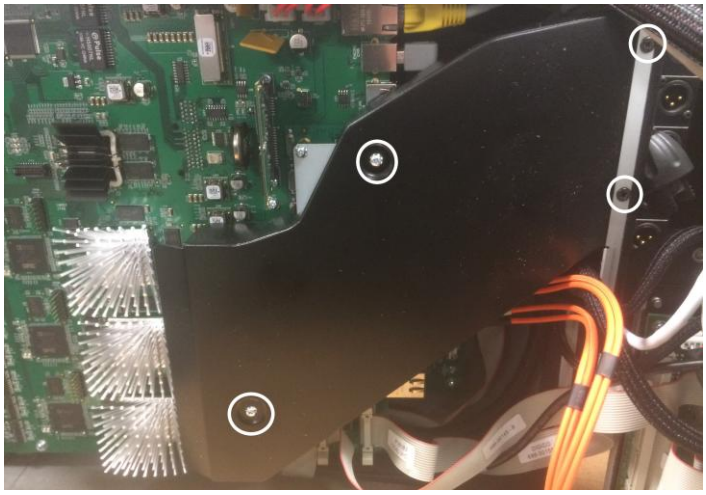
With the SD7 Quantum engine removed from the console release the top holding screws on each handle.

On the rear of the engine release the two thumb screws.

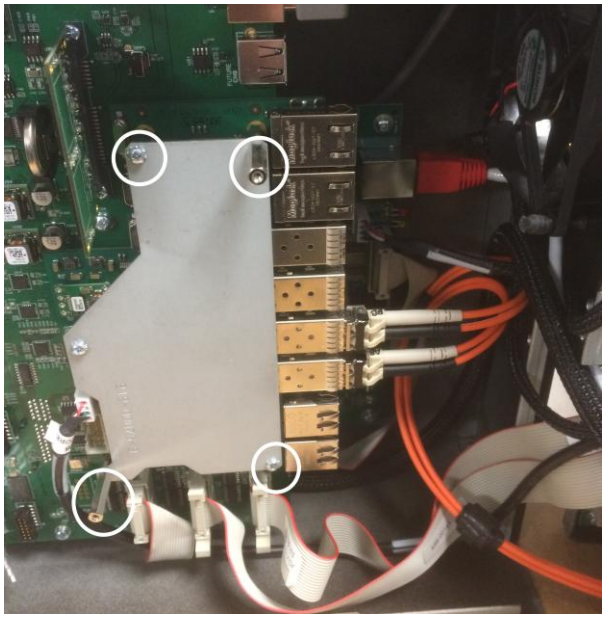


Position the engine on its side. Separate the upper and lower section. There should be no need to disconnect any cables at this point.

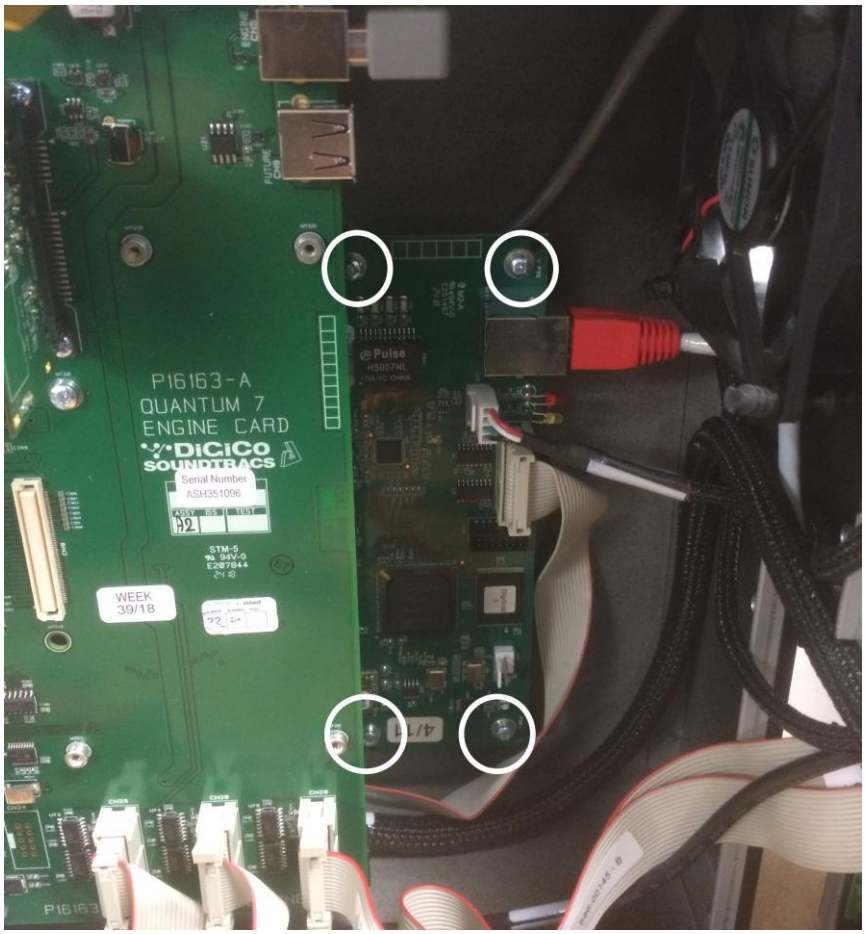
Unscrew and remove the air guide.



Unscrew and remove first the optocore reinforcement plate and then the optocore PCB from the main audio engine card.



If Waves is fitted unscrew and remove the Waves card from the engine chassis. (you can reuse the ethernet, led loom and power loom if waves has previously been fitted)

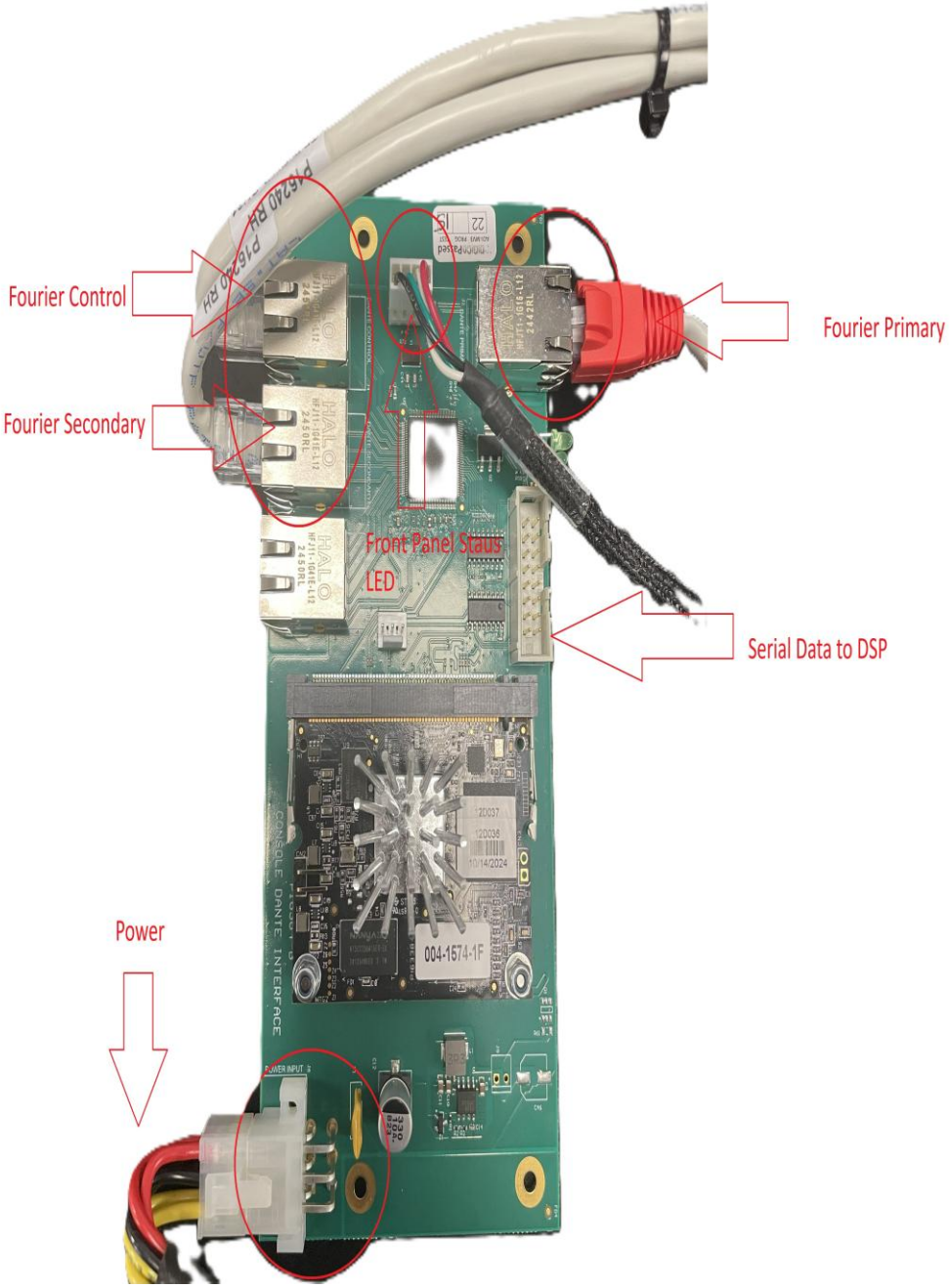


Fourier Card Installation Instructions
Removing the Waves Card

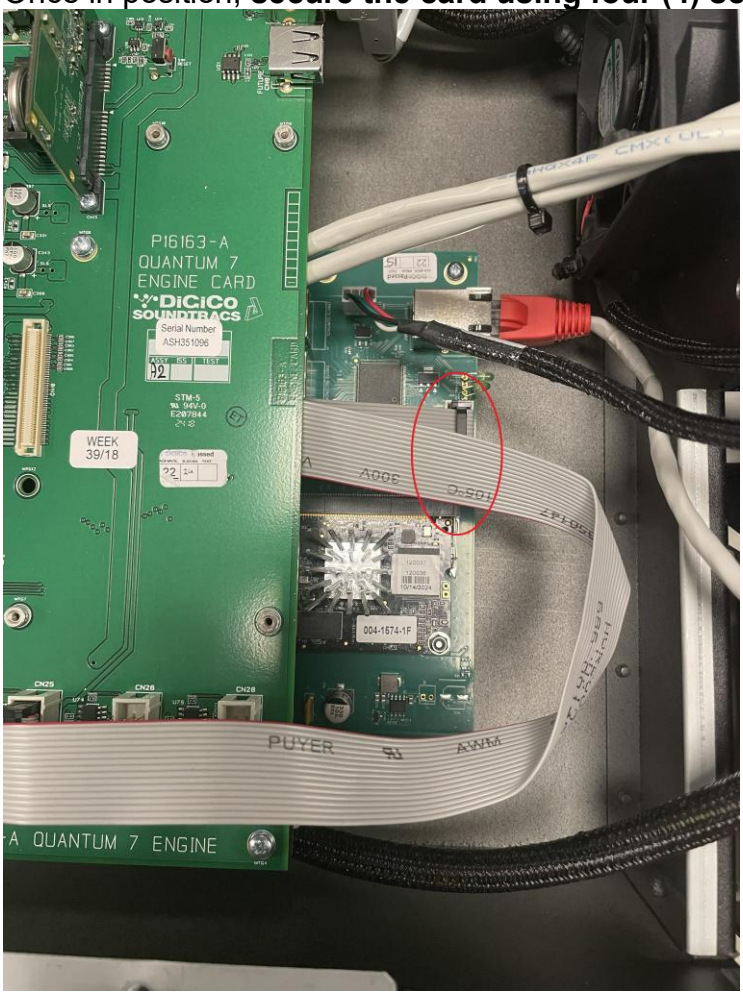
1. **Remove the Waves card** from the chassis.
2. **Disconnect the following cables:**
    - Ethernet cable from **SKT1**
    - Power loom from **CN7**
    - LED loom from **CN1**
3. **Disconnect the 686-00146 cable** from:
    - **CN3** on the Waves card
    - **CN25** on the DSP

Preparing and Installing the Fourier Card

1. **Pre-fit the Ethernet cables** to the Fourier card before placing it inside the chassis:
    - Connect both **Primary** and **Secondary** Ethernet cables.



2. Once the Ethernet cables are in place, connect:
    - The **front panel Ethernet** cable to the **Control** port
    - The **LED loom**
    - The **Serial loom**
3. **Fit the Fourier card into the chassis**:
    - Insert it **at a slight angle** to prevent the Ethernet connectors from catching on the DSP.
    - Once in position, **secure the card using four (4) screws**.



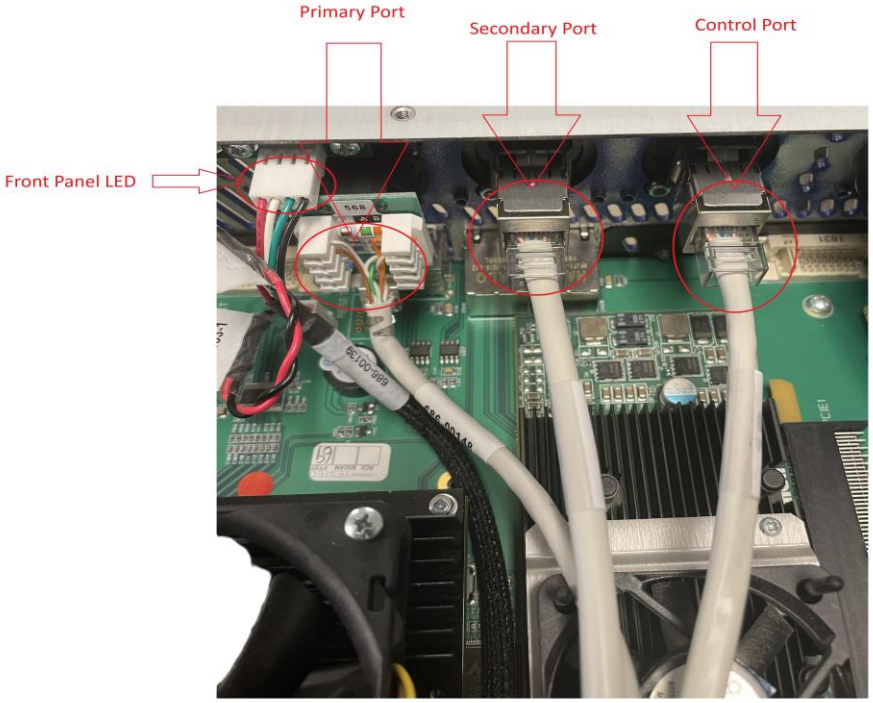
4. **Connect the serial loom** from the Fourier card to the **DSP CN25**.

Fitting the Front Panel Faceplate

1. **Remove the optic nuts and plates** from the engine front panel.
2. **Fit the Fourier faceplate**:
    - Position it so that it covers the **Optocore loop** (if fitted).
    - Pass the **RJ45 connectors** through the opening where the second loop would normally be.
3. **Secure the faceplate** to the engine front panel using the provided screws.
4. **Reattach the Optocore nut** to the engine.
    - For other optic types, follow the manufacturer's fitting instructions for the faceplate.
    - Place Fourier Audio stocker around the status LEDs

Connecting Ethernet Cables

1. **Connect the Ethernet cables** from the Fourier card to the associated **RJ45 connectors** on the front panel:
    - **Primary Ethernet**
    - **Control Ethernet**
2. **Route the Ethernet cables** neatly:
    - Follow the existing Ethernet loom from the **DSP to the PC card**.
    - **Secure the cables with cable ties** along the route.



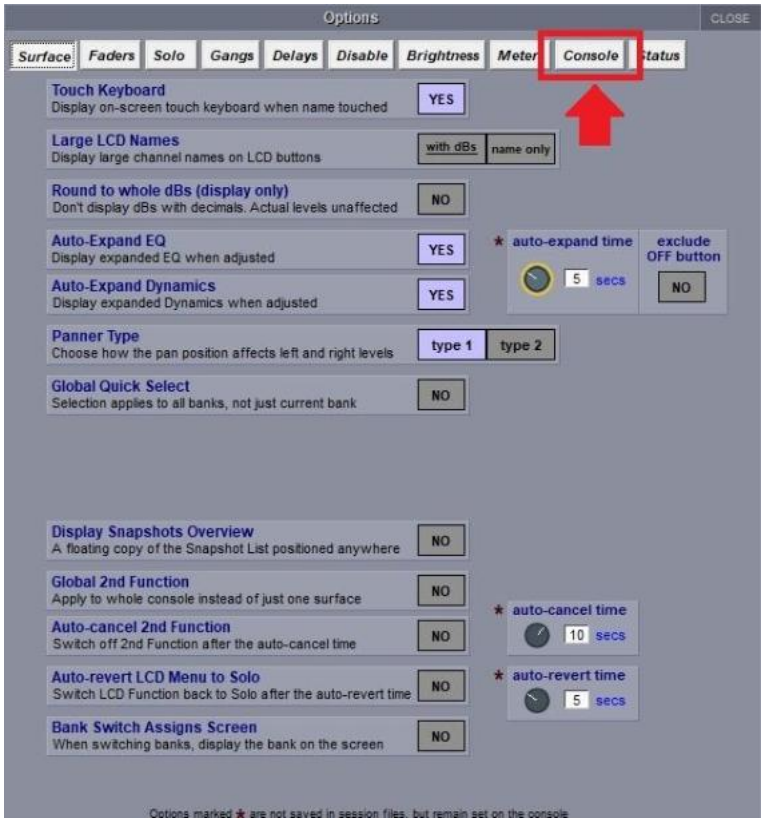
Once the installation is complete follow the steps backwards to reassemble the engine. One completed, return engine to the console and ensure correct operation.

SOFTWARE SETUP NOTES

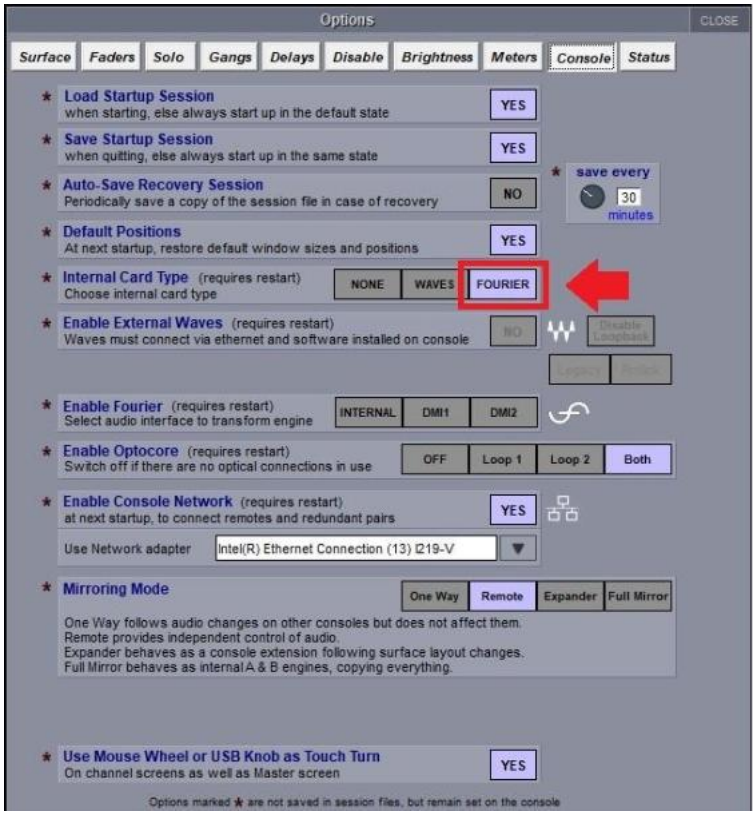
To enable Fourier Card:

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.