H H Electronics Q12FX Analogue Mixing Console Instruction Manual

Contents

H H Electronics Q12FX Analogue Mixing Console

Specifications

- Model: Q12FX / Q16FX
- Power Consumption: 30W
- Voltage: Universal (100-240V~)
- Channels: Q16FX – 16 channels, Q12FX – 12 channels (4 mono mic channels)
- USB: Type-B USB socket for 2 channel in and 2 channel out audio streaming

Product Usage Instructions

Initial Setup

1. Unbox the mixer and inspect for any damage.
2. Plan out cable connections for setup.
3. Ensure power switch on the rear panel is in the off position.
4. Connect the IEC power cable and plug into a mains socket.
5. Switch on all input devices, then power on the mixer.
6. If using XLR input devices requiring phantom power, turn it on before connecting powered speakers.
7. Turn on connected output speakers.

Signal Check

1. Set mixer to PFL mode by pressing the MODE button.
2. To check a single channel, press the SOLO button next to the channel fader.
3. Adjust channel gain knob until level meter reaches 0 while audio plays through the input.
4. Turn off SOLO mode before checking the next channel.

Signal Flow

- **To the Main Outputs:** Follow signal flow to route audio to main outputs.
- **To the FX and Aux Send:**

- **FX Send:** Adjust settings to send signal to FX.
- **Aux Send:** Adjust settings to send signal to Aux.

- **To the Subgroup:** Route audio to subgroup according to requirements.

Connecting the USB
Use the type-B USB socket on the rear panel for audio streaming. Connect directly to a computer/laptop for transferring audio.

FAQ

- **Q: Can I use both MIC and LINE input sockets on a single channel?**
  A: No, do not use both MIC and LINE input sockets on a single channel. This applies for both mono and stereo channels.

Q SERIES OVERVIEW

The Q Series brings decades of British design and engineering to your audio productions. The series consists of 4 analogue mixing consoles which cover an array of live sound applications (6 channels, 8 channels, 12 channels, and 16 channels). 2in/2out USB expands the functionality of all Q Series mixers even further making these mixers a great tool for music production and recording live performances or podcasts. The Q Series' comprehensive channel strip allows you to take complete control over the tonal shape, dynamics, and depth of your mixes with low-noise mic-preamps, 3-band EQ, single control compression, and high-quality DSP effects.

(Panel image depicts the Q16FX – the Q12FX is the same minus 4 mono mic channels)

CONTROLS OVERVIEW

CHANNEL SECTION

MONO INPUTS (012 = CHI-4 016 = CHI-8)

- MIC INPUT – balanced female XLR socket for low level audio inputs typically from a microphone. Connect via a balanced cable to reduce noise, especially over long cable runs. (pin 1 = ground, pin 2 = positive signal, pin 3 = negative signal).
- LINE INPUT – balanced TRS socket for mono audio inputs such as from an audio interface. Balanced or unbalanced cables can be used, with balanced preferred to reduce noise, especially over long cable runs.
- INSERT – input and/or output socket that is located post-gain and pre-EQ stage. The tip of the jack is the send signal out of the mixer, and the ring of the jack the return signal back to the mixer. Useful for single effects, compressors, filters etc.

MONO/STEREO INPUTS (012 = CH5-8, 016 = CH9-12)

- MIC INPUT – the same as the mono input mics. A female balanced XLR socket preferably used with a balanced cable. (pin 1 = ground, pin 2 = positive signal, pin 3 = negative signal).
- L+R INPUTS – Stereo TRS balanced inputs used for line level signals. If using a mono input, connect only to the Left socket and the signal will play through both channels.

NOTE: Do not use the MIC and LINE input sockets on a single channel. This applies for both mono and stereo channels.

STEREO INPUTS (012 = CH9-12, 016 = CH13-16)

- L+R INPUTS – stereo TRS balanced inputs used for line level inputs. These channels have no gain knob or compressor. The input gain is fixed to +6dB.

PRE-EQ CONTROLS (012 = CHI-8, 016 = CHI-12)

- LOW CUT – apply a high pass filter with 18dB/octave roll off to the channel's MIC input only. Frequencies below 75Hz will be attenuated.
- GAIN CONTROL – adjusts the input gain of the channel. Ranges from +5 to + 45dB, however stereo channels are padded down to a range of -15 to +30dB.
- COMPRESSOR (Q12 CH1-5 only, Q16 CH1-8 only) – Increasing the compression will decrease the threshold and increase the ratio and makeup gain. The led will illuminate when compression is applied to the signal.
    - Ratio – 1:1 to 2:1
    - Makeup Gain – 0dB to 9dB

EQ SECTION

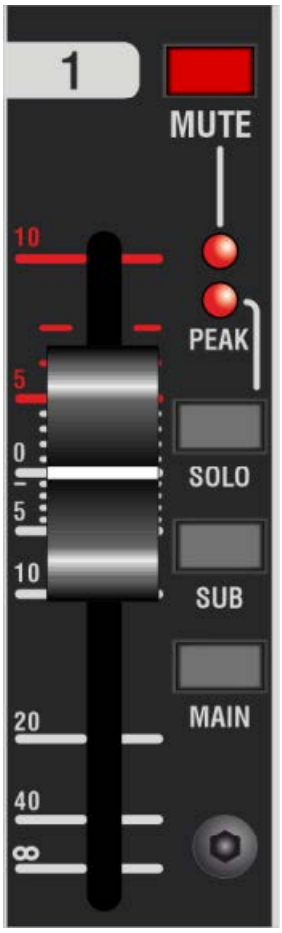
- HIGH – shelving filter at 12kHz – increase/decrease the high frequencies by +/-15dB.
- MID – peaking filter at 2.5kHz – increase/decrease the mid frequencies here by +/-15dB.
- LOW – shelving filter at 100Hz – increase/decrease the low frequencies here by +/-15dB.

BUS SENDS

- AUX – Controls the level of the channel going to the Aux send. The Aux bus is post mute/pre-fader.
- FX LEVELS – Control the level of the channel going to the FX send. The FX bus is post mute/post-fader.
- L/R PAN – controls the split of the channel between the Left and Right channels (such as the monitor and main output). Centre results in equal split, hard-left gives no output to the right channel and all to the left channel, hard-right gives no output to the left channel and all to the right channel.

CHANNEL FADER CONTROLS

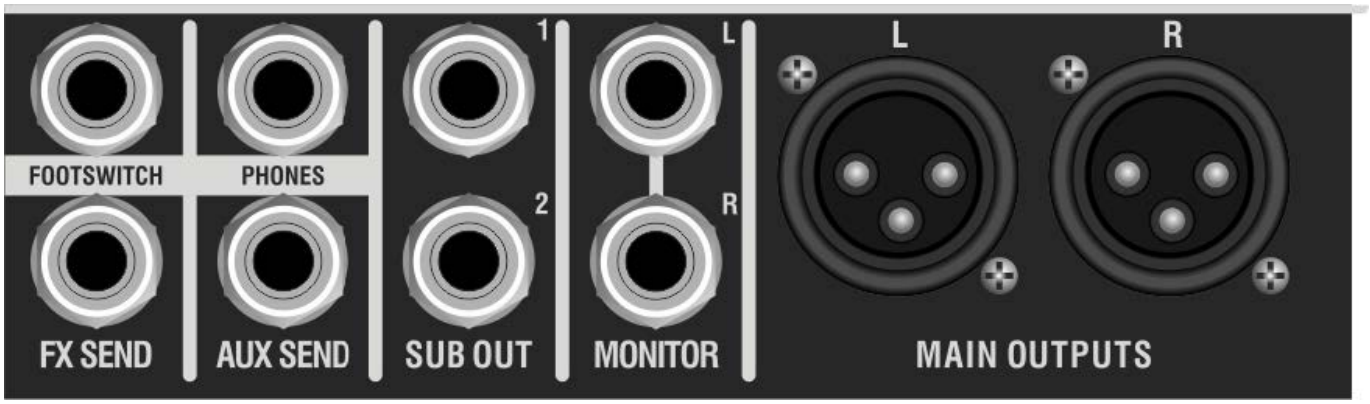
- FADER – ranges from -∞ to +10dB gain, with markers to signify the gain level. A peak LED is also included to signify when the signal is clipping at the front end.
- MUTE BUTTON – used to mute the channel, with an LED to indicate mute status.
- BUS BUTTONS – used to direct the signal flow from the channel to the desired bus. Can be sent to any combination of the SOLO, SUB and/or MAIN buses. The SOLO button will route the signal to the PFL (Pre-Fade-Listen) and SOLO left / right busses.



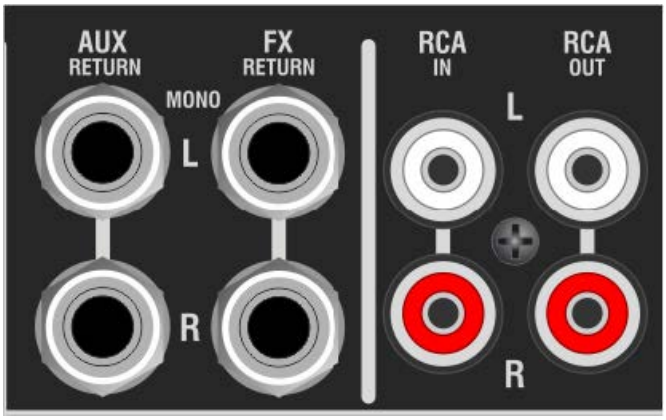
NOTE: When not using a channel, it is recommended to mute the channel and keep the channel fader at –∞ to keep noise to a minimum.

MASTER SECTION

INPUT/OUTPUT SOCKETS



- FX SEND – Mono output for FX bus. FX send comes just before the DSP FX line.
- AUX SEND – Mono output for Aux bus. Aux send comes from the Left channel of the main XLR outputs.
- FOOTSWITCH – Used to control whether the FX send signal goes through the DSP FX or not. Plug in a single footswitch controller to this socket to use the external control.
- PHONES OUT – TRS socket intended for headphones. Stereo connection that outputs the same signal as the Monitor out.
- SUB OUT – Dual outputs allowing signal routed to the subgroups to be sent to alternative outputs. Can link to the main mix or directly from channels with SUB pressed.
- MONITOR OUT – A stereo TRS output linked to the phones out. SOLO and PFL signals output here.
- MAIN OUTPUTS – A stereo XLR output intended for balanced cable connections. Channels directed to MAIN will be sent here.
- FX/AUX RETURN – provides a left and a right TRS input socket that support unbalanced signals only. Can be run mono by connecting signal to the Left channel socket.
- RCA IN/OUT – provides stereo phono input and output sockets.

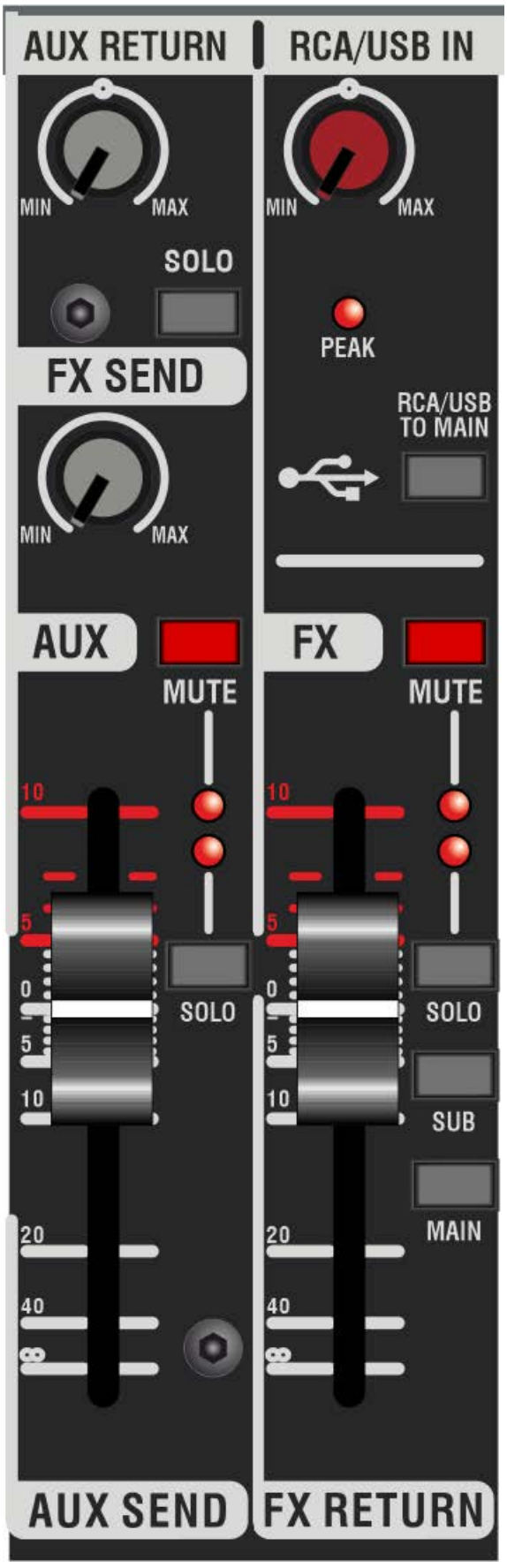


AUX/FX/RCA/USB LEVELS

- AUX RETURN LEVEL – Controls the level of the signal coming in from the aux return. Pressing the SOLO button will send this signal to the PFL and SOLO buses.
- FX SEND LEVEL – Controls the overall level of the signal coming out of the FX send socket.
- AUX SEND FADER – Controls the level of the signal coming out of the aux send socket, from –∞ to +10dB. MUTE button with LED indicator shows when the signal is muted. SOLO button to send the signal to PFL and

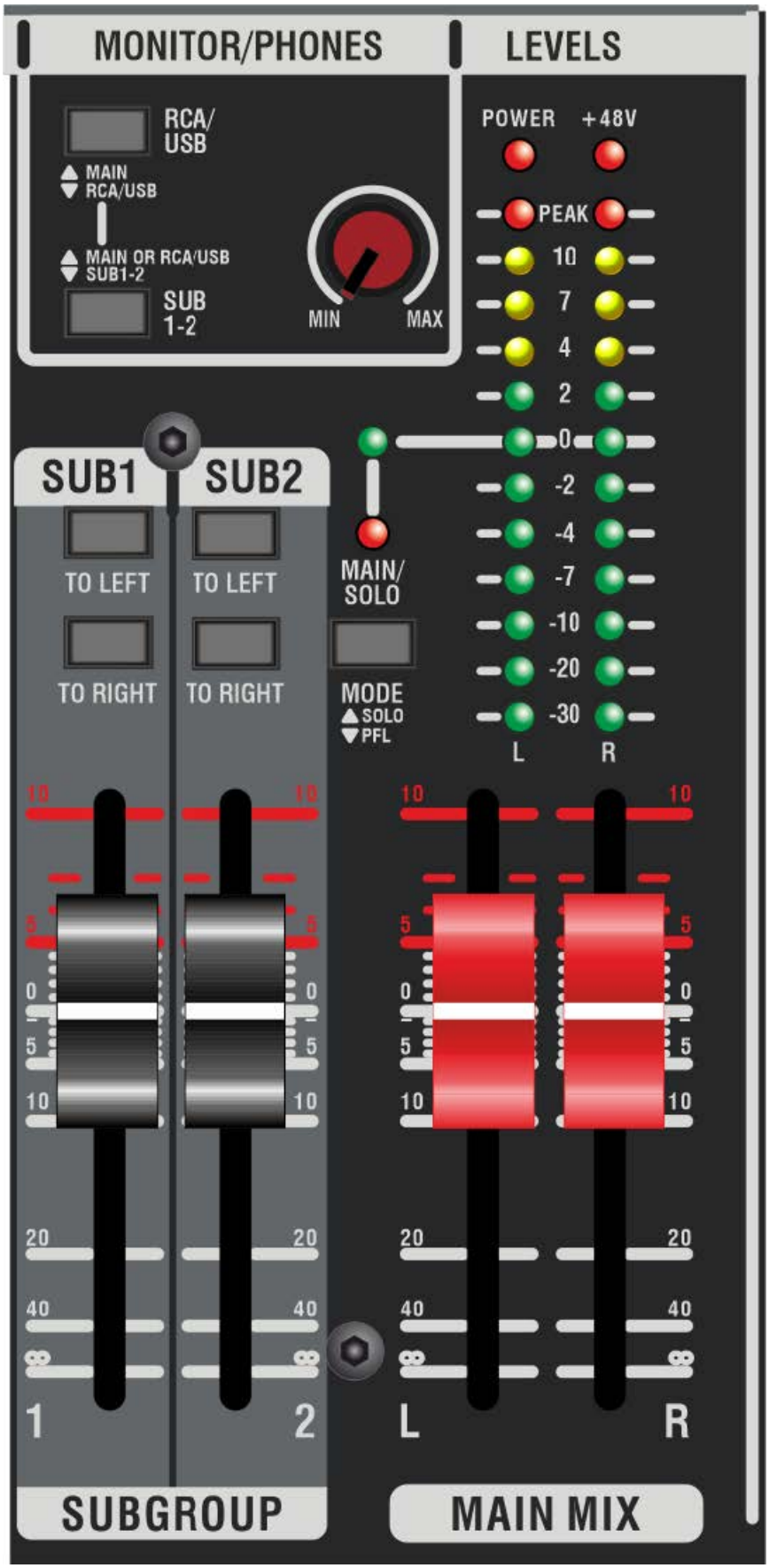
SOLO buses, with an LED indicator to show when active.

- FX RETURN FADER – Controls the level of the signal coming in from the FX return socket, from –∞ to +10dB. MUTE button with LED indicator shows when the signal is muted. Direct the signal to the SOLO, SUB and MAIN buses via the buttons to the right of the fader.
- RCA/USB IN – Level control for both the RCA and USB signals coming into the mixer. Includes a peak LED to indicate when the signal is close to clipping. Use the RCA/USB button to direct the signal to the MAIN bus.



PRIMARY OUTPUT LEVELS

- MONITOR/PHONES – Level control for both monitor and phones outputs. Use the two buttons to the left of the knob to control what signal goes to these outputs
    - MAIN/RCA OR SUBS1-2 – By default will be from either
      Main bus or RCA/USB input. When pressed in, the signal will come from the SUB bus.
    - MAIN OR RCA/USB – Only valid if the button below this is NOT pressed in. Choose between the Main bus or the RCA/USB signal.
    - LEVEL METER – Represented in dB, currently shows the real time level of the output signal going directly to the Monitor/Phones outputs. The source of the signa depends on the settings of the MONITOR mode switches. To avoid clipping, ensure the level doesn't reach the red peak LED. Also present are the power LED to indicate the unit is switched on and +48V phantom power LED to indicate the Mic In phantom power is switched on.
    - PFL/SOLO – Use this mode button to choose between PFL (pre-fader listen) or SOLO mode from the monitor/phones out. Putting any channel/input to the SOLO bus will automatically mute the other buses going to the monitor/phones out and only play the SOLO/PFL signal.
- SUBGROUP – Two faders to control each output – Sub 1 and Sub 2 – individually. Ranges from –∞ to +10dB.
    - TO LEFT/RIGHT BUTTONS – Both Subs 1 and 2 can be directed to either the Left and/or Right channels of the MAIN bus.

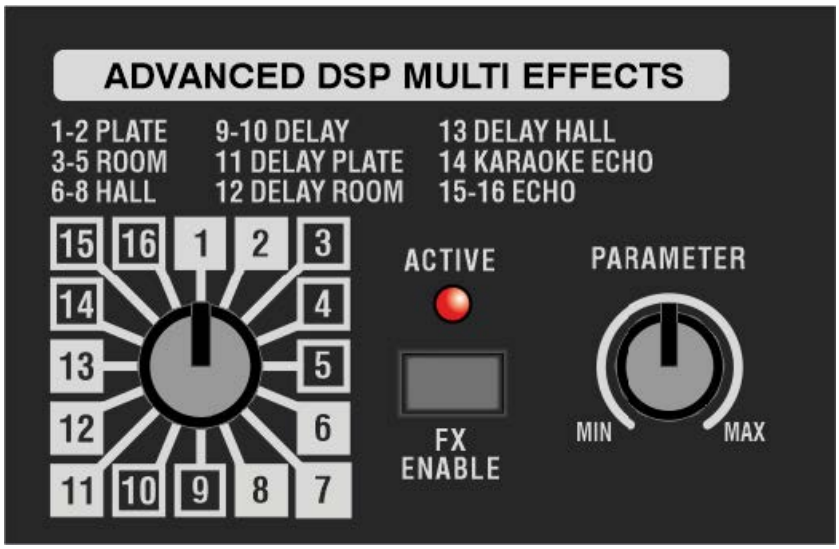


- MAIN MIX – Individual L and R faders ranging from –∞ to +10dB. Any signal directed to the MAIN bus will go through these faders to the main mix XLR outputs.

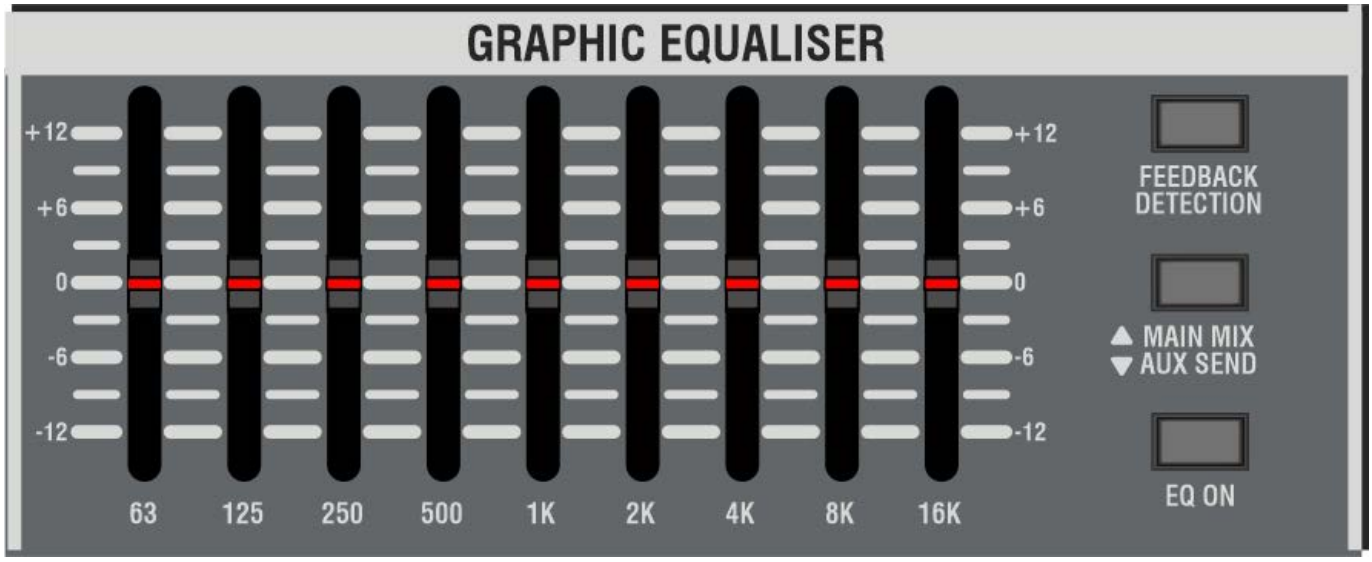
DSP FX

- FX SELECT – Choose from one of the 16 effects including delays, reverbs and echoes. Applies to the FX loop signal.

- FX ENABLE – Enable/disable the effect selected by the FX knob. Active LED to indicate whether the effect is on or off.
- PARAMETER LEVEL – Control the level of the effect applied to the FX loop signal. Effect level will change depending on what effect is chosen. The control will increase duration of the reverb/echo or the repeat of the delay.



GRAPHIC EQUALISER



- EQ CONTROLS – 9 band graphic EQ. The number at the bottom, eg 63, 500, 2k etc indicate the frequency of the band. Numbers on the left and right indicate the gain in dB.
- FEEDBACK DETECT – With this feature turned on, the LEDs on the EQ sliders will indicate which frequencies are predominant in the signal. By outlining the frequency response, you can view which frequencies may be too high and adjust accordingly to get the sound you need. When turned off, the slider LEDs return to normal function.
- MAIN/AUX – Choose which signal goes to the graphic EQ. When the switch is out, the MAIN bus will pass through and when the switch is pressed in, the AUX bus will pass through.
- EQ ON/OFF – Turn the EQ on or off. When on, the slider LEDs will light up to show this.

REAR PANEL

NOTE: This image shows the rear panel for the Q16FX. The Q12FX has a power consumption of 30W but is otherwise identical from this view.
From the rear panel you can find important product safety information as well as the serial number of the mixer.

• FUSED POWER SOCKET/SWITCH – Use the switch to power on the mixer once the plug is connected to the mains Connect the provided IEC mains plug here. The plug must be earthed and provides the safety earth to the unit. The drawer contains the main safety fuse for the unit. The fuse protects the mixer from damage in the event of fault by disconnecting the mains power supply. USE ONLY THE CORRECT SIZE AND RATING SPECIFIED ON THE PANEL. If a fuse blows or fails and a replacement of the same size and rating is installed which in turn blows, the mixer has suffered a malfunction and needs immediate service from a qualified HH approved technician. DO NOT TRY AFUSE OF HIGHER RATING – Using a higher rated fuse may cause serious, irreparable damage or presents a serious fire hazard.
• PHANTOM POWER SWITCH – Use this to turn on the global phantom power (+48V) to all the XLR mic inputs. Used when connecting a condenser (active) microphone, it is recommended to turn on before plugging in the microphone. Also mute/turn down the channel level to avoid any DC pops.
• TYPE-B USB SOCKET – Connect a Type-B use cable here, then plug the other end of the cable directly into your computer to send and receive audio to and from the mixer.

INITIAL SETUP

POWERING ON

INITIAL CHECK

- Upon unboxing your Q12FX or Q16FX, check it over for any damage that may have occurred in transit.
- Plan out which cables are required for your desired setup and ensure all cables are of adequate length to reach their destination.

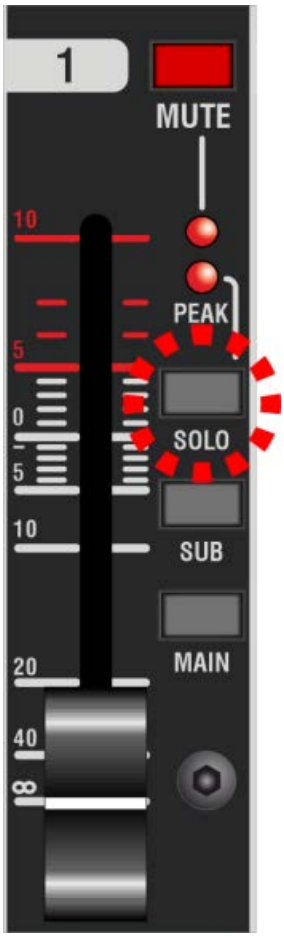
PLUGGING IN

- POWER – Check the power switch on the rear panel (next to the IEC socket), is in the off position (‘1’ indicates the on position). Plug in the provided IEC power cable, connecting the other end to a mains socket. The Q series mixers are universal voltage (100-240V~).
- INPUTS – With the mixer still powered off, plug in all microphones, instruments and audio tracks to the corresponding input socket.
- OUTPUTS – Plug in all the speakers, effects and headphones to the desired output on the mixer.
- Turn down all input and output gain knobs and faders on the mixer panel. To avoid any turn on pops, turn off all connected powered speakers. Ensure the +48V phantom power switch on the rear panel is in the off position. Switch on all input devices and then power on the mixer. If any XLR input devices need phantom power (such as condenser microphones), turn this on BEFORE the connected powered output speakers.
- Finally turn on any connected output speakers.

SIGNAL CHECK
The initial signal check will use the monitor/phones output to check each channel individually.

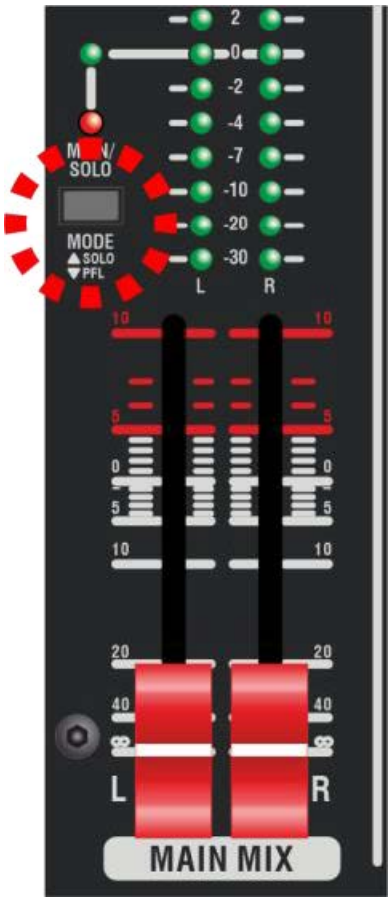
PFL CHECK

- Firstly, the mixer should be in PFL mode so press the MODE button to the left of the level meter, as shown on the right. This will put all channels in SOLO mode to PFL.
- To set a single channel to SOLO mode, press the SOLO button to the right of the channel fader, as shown on the left.
- With the channel to check in SOLO mode, and with audio playing through the input, turn up the channel gain knob until the level meter starts reaching “0”.



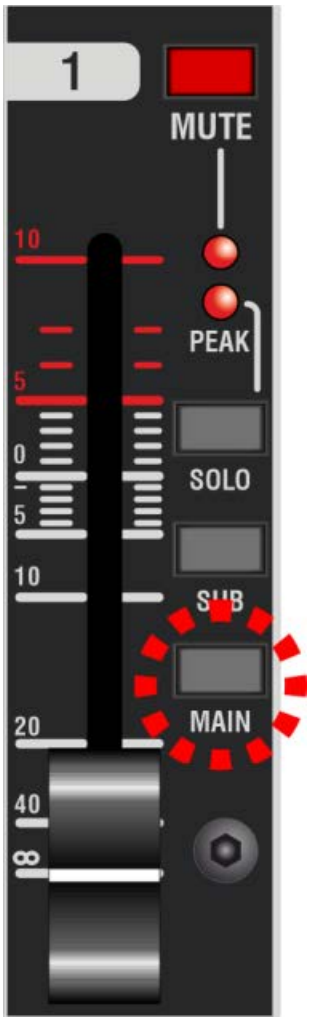
- Turn off the previous channel’s SOLO mode before checking the next channel, to check them in isolation. The monitor/phones level knob can be at 0 for this step.

NOTE: If using one of the Stereo only channels with no gain knob, perform this step via the output volume on the input device.



MAIN MIX CHECK

- Having checked all input channels on PFL mode, ensure all channel SOLO switches are off (in the up position). Also check that both monitor/phones buttons are off (in the up position), so the signal comes from the main bus.
- Press the Main button on each channel that is in use to direct it to the main bus.
- With this, turn up the L+R Main Mix faders to 0. From here, you can set the desired mix level by adjusting the individual channel faders.
- Check that neither peak or channel mute LED are illuminated. If any peak lights flash periodically, turn down the channel fader slightly to avoid clipping the signal.



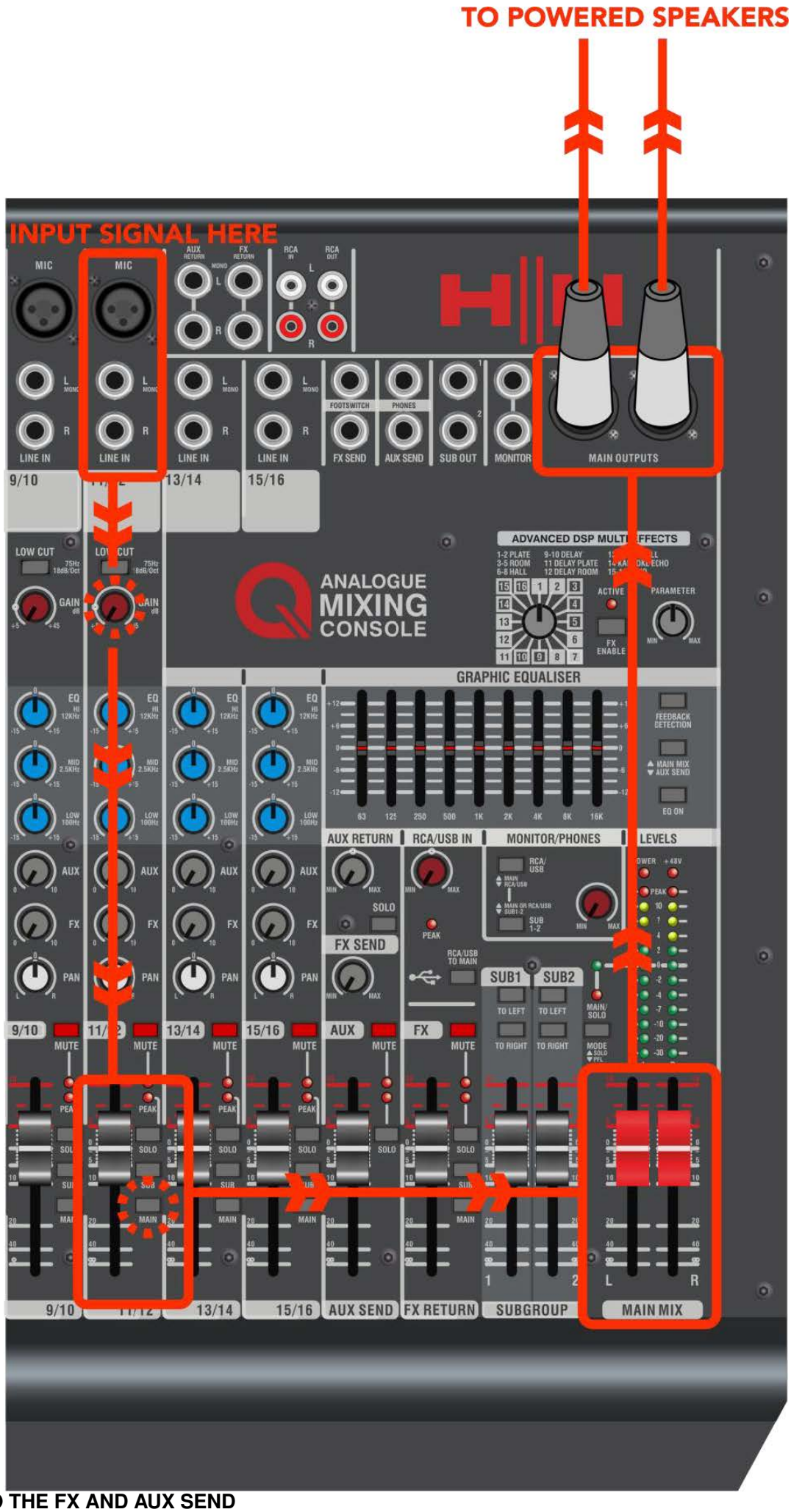
TONE

- From here, you are free to experiment with the mix and adjust the tone for each channel.
- Adjust the EQ and compressor settings to get the sound you want. Simply repeat the PFL check above to hear each channel in isolation.
- The next section will run through the basic steps of getting a channel's input to each output in turn.

SIGNAL FLOW

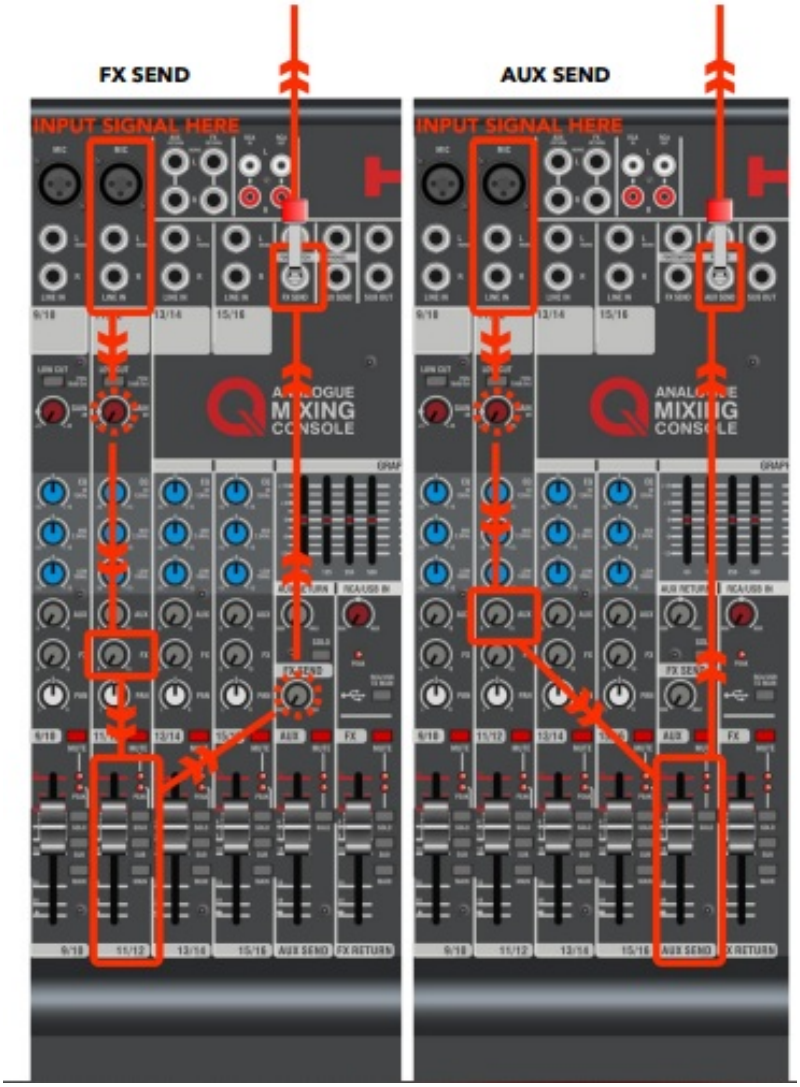
SIGNAL TO THE MAIN OUTPUTS

- Adjust the gain knob to avoid peak LEDs coming on.
- Ensure the channel is not muted
- Adjust the channel fader and press the MAIN bus button.
- Turn up the stereo Main Mix faders.
- Connect balanced XLR cables to the Main Output sockets.



SIGNAL TO THE FX AND AUX SEND

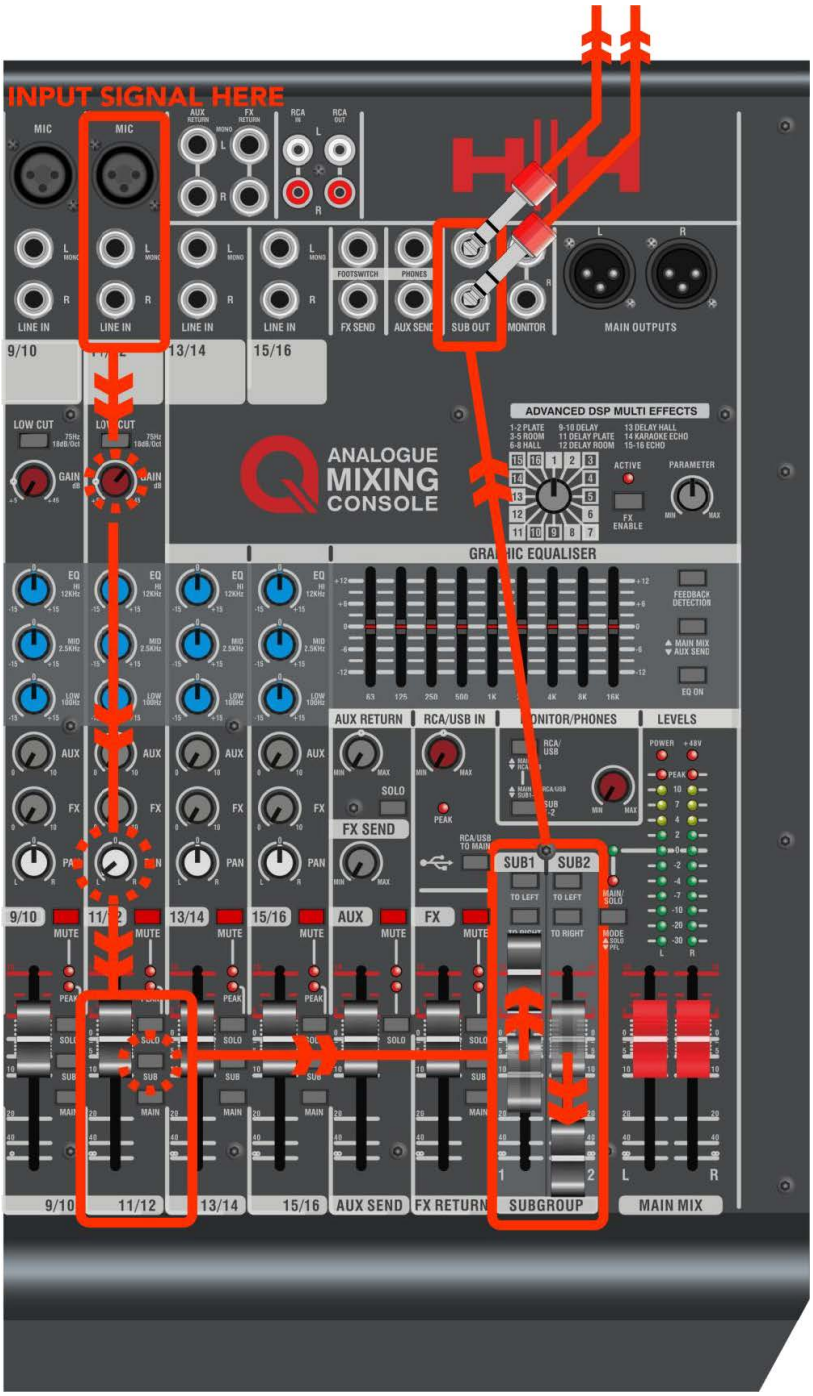
FX SEND



- Adjust channel gain knob.
- Turn up FX and/or Aux gain knob on the channel.
- The Aux send is PRE channel fader.
- The FX send is POST channel fader.
- For the FX send to the gain knob up to the desired level.
- For the Aux send, turn up the Aux fader to the desired level.

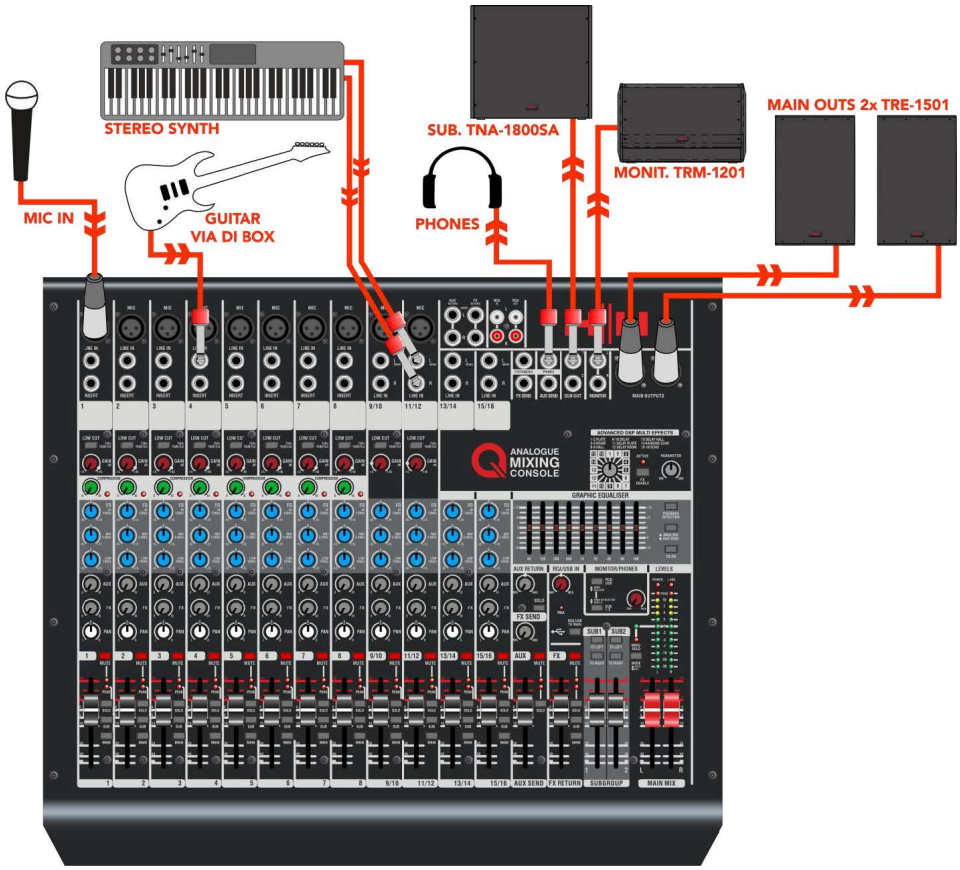
SIGNAL TO THE SUBGROUP

- Adjust the channel gain knob to the desired level.
- Centre results in equal split between Sub 1 and Sub 2, hard-left gives no output to the Sub 2 channel and all to the Sub 1 channel, hard-right gives no output to the Sub 1 and all to the Sub 2.
- Adjust the channel fader and press in the SUB button.
- Adjust faders for Sub 1 and/or 2, depending on which are being used.
- Plug TRS jacks to SUB OUT sockets to connect alternative output sources.



CONNECTIONS EXAMPLE SETUPS

LIVE PERFORMANCE

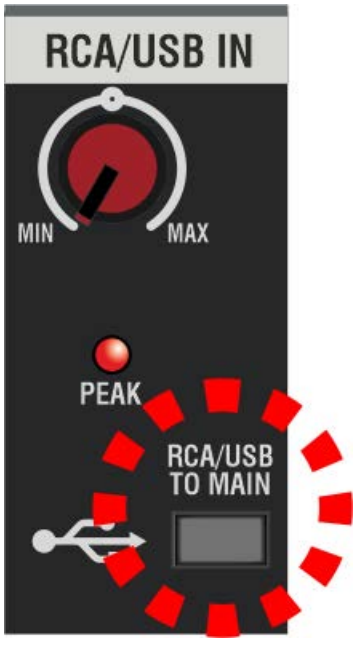


CONNECTING THE USB

Q series mixers feature a type-B USB socket situated on the rear panel for 2 channel in and 2 channel out audio streaming. The device will appear as ‘Q Series Audio Mixer’ in the device manager. Simply plug the mixer directly into your computer/laptop to start transferring audio between the two devices.

STREAMING AUDIO TO THE Q12FX/Q16FX

To stream audio to the mixer, load up your chosen media player on the connected computer and ensure the levels on there are high enough. Select the Q series mixer as your computer’s audio output.



Check audio on the media player isn’t muted as well as the overall Volume Mixer for all applications. Audio will

enter the mixer on the USB/RCA bus, so use the RCA/USB IN gain control shown on the right to increase the level of the USB audio coming in.

The RCA/USB audio bus can be directed either to the MAIN bus or the Monitor/Phones out via the relevant buttons highlighted on the right.

RECORDING AUDIO FROM THE Q12FX/Q16FX
To begin recording using the Q12FX/Q16FX with your chosen digital audio workstation (DAW), ensure that “HH Q Series” is selected as the audio input device within the audio preferences/settings menu of your DAW. No additional drivers are required to use the Q12FX/Q16FX with your DAW.

Once “HH Q Series” has been selected as your audio input device, create 2 audio tracks in your DAW. Then select the input source of each track. Select Input 1 on your first audio track to bring the Left channel of your mix through to your DAW. Then select Input 2 on your second audio track to bring the Right channel through. To begin recording ensure that your audio tracks are “record armed” in your DAW and the Main Mix level is set appropriately on your Q12FX/Q16FX. Recording both left and right signals simultaneously will give you a stereo digital recording of the mix you have dialled in on the Q12FX/Q16FX across 2 tracks.

SPECIFICATIONS

QI 2FX

SPECIFICATIONS	Q12FX
Inputs	
Mic Inputs	*6x XLR CH1-8*
Mic EIN	*Mono Mic E.I.N. (max gain): <-126dBu (150Ω), Stereo Mic Input E.I.N. (max gain): <-124dBu (150Ω)*
Input impedance	*1.2kΩ*
Maximum input level	*13dBu in @ min gain (+7dBu for stereo mic lines)*
Adjustable gain	*+5dB to +45dB*
CMRR	*80dB*
SNR	*113dB*
THD+N%	*~0.002%*
Crosstalk	*–80dB*

Phantom power	*Global switch, +48V*
Line Inputs (Mono)	*4x 1/4" 6.3mm TRS CH1-4*
Input impedance	*10kΩ*
Maximum input level	*>30dBu in @ min gain*
Adjustable gain	*-15dB to +30dB*
CMRR	*73dB*
SNR	*102dB*
THD+N%	*~0.002%*
Crosstalk	*–80dB*
Line Inputs with mic (Stereo)	*2x stereo 1/4" 6.3mm TRS CH5-8*
Input impedance	*21.5kΩ*
Maximum input level	*+21dBu*
Gain	*-8dB to +35dB*
CMRR	*70dB*
SNR	*114dB*
THD+N%	*~0.0015%*
Crosstalk	*< -110dB*
Line Inputs (Stereo)	*2x stereo 1/4" 6.3mm TRS CH9-12*
Input impedance	*21.5kΩ*
Maximum input level	*+12dBu*
Gain	*+6dB*
CMRR	*70dB @ 1kHz*
SNR	*116dB*
THD+N%	*~0.0025%*
Crosstalk	*< -110dB*
General	
EQ	*per channel 3 band (±15dB), Low 100Hz, Mid 2.5kHz, High 12kHz*
Low cut	*75Hz cut off @ 18dB/octave (CH1-8)*
Compressor	*2:1 ratio, 9dB makeup gain, -8dBu input threshold (max compression, CH1-4)*
Pan	*per channel L/R, (0 ~ mute)*
Channel controls	*per channel fader (-∞ to +10dB), mute switch and indicator, peak indicator, FX and aux send levels(rotary pots)*
Level controls	*FX return fader (-∞ to +10dB), aux return and USB/RCA in (rotary pots)*

Additional inputs	*USB audio, stereo FX return, stereo Aux return, stereo RCA in*
Outputs	
Main Outputs	*Balanced stereo XLRs*
Max output	*+24dBu*
Output impedance	*150Ω (balanced), 75Ω (unbalanced)*
THD% (+8dBu output)	*~0.001%*
Residual noise	*10uV*
Frequency response (20-20kHz)	*±0.3dB*
Controls	*Master L+R faders (- to +10dB), solo/PFL mode select*
EQ	*Master 9 band graphic equalizer with feedback detect, on/off toggle*

Monitors	*Stereo 1/4" 6.3mm TRS sockets*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.002%*
Residual noise	*25uV*
Frequency response (20-20kHz)	*±0.3dB*
Controls	*Rotary level pot (shared with phones out)*
Sub Outputs	*2x 1/4" 6.3mm TRS sockets*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.001%*
Residual noise	*6.6uV*
Frequency response (20-20kHz)	*±0.05dB*
Controls	*Sub 1/2 faders (-∞ to +10dB), main mix L/R routing switches*
FX Send	*Mono 1/4" 6.3mm TRS*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.001%*
Residual noise	*6.4uV*
Frequency response (20-20kHz)	*±0.3dB*
Controls	*per channel level, master level (rotary pot)*
Aux Send	*Mono 1/4" 6.3mm TRS*
Max output	*+24dBu*

THD% (+8dBu output)	*~0.06%*
Residual noise	*6.5uV*
Frequency response (20-20kHz)	*±0.4dB*
Controls	*per channel level (rotary pot), master fader (-∞ to +10dB), mute switch*
Phones	*Mono 1/4" 6.3mm TRS*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.003%*
Residual noise	*200uV*
Frequency response (20-20kHz)	*±0.25dB*
Controls	*Rotary level pot (shared with monitor outs)*
RCA Out	*Stereo phono sockets*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.0015%*
Residual noise	*9uV*
Frequency response (20-20kHz)	*±0.3dB*
General	
DSP FX	*16 reverb and delay effects with enable switch and parameter control*
USB Audio	*Inputs/Outputs: 2-in, 2-out, 16-bit, 24-bit, Sampling rate: 48kHz*
AC Power	*Universal 100-240V~ 50/60Hz (IEC C14 Socket, AC Cord included)*
Power Consumption	*30W*
Dimensions	
Product Dimensions (HWD)	*107 x 401.5 x 443mm (4.2" x 15.8" x 17.4")*
Product Weight	*5.9 Kg (13 lbs)*
Carton dimensions (HWD)	*185 x 470 x 510mm (7.3" x 18.5" x 20.1")*
Packed Weight	*6.9 Kg (15.2 lbs)*
Master Carton Quantity	*2 pcs*
Master Carton dimensions(HWD)	*385 x 485 x 520mm (15.2" x 19.1" x 20.5")*
Master Carton Packed Weight	*14.8 Kg (32.6 lbs)*
Model EAN13	*5060109459029*
Master EAN	*5060109459036*

In the interest of continued development, HH reserves the right to amend product specification without prior notification.

Q16FX

SPECIFICATIONS	Q16FX
Inputs	
Mic Inputs	*10x XLR CH1-12*
Mic EIN	*Mono Mic E.I.N. (max gain): <-126dBu (150Ω), Stereo Mic Input E.I.N. (max gain): <-124dBu (150Ω)*
Input impedance	*1.2kΩ*
Maximum input level	*14dBu in @ min gain (+7dBu for stereo mic lines)*
Adjustable gain	*+5dB to +45dB*
CMRR	*85dB*
SNR	*113dB*
THD+N%	*~0.002%*
Crosstalk	*-80dB*
Phantom power	*Global switch, +48V*
Line Inputs (Mono)	*8x 1/4" 6.3mm TRS CH1-8*
Input impedance	*10kΩ*
Maximum input level	*>30dBu in @ min gain*
Adjustable gain	*-15dB to +30dB*
CMRR	*60dB*
SNR	*100dB*
THD+N%	*~0.003%*
Crosstalk	*-80dB*
Line Inputs with mic (Stereo)	*2x stereo 1/4" 6.3mm TRS CH9-12*
Input impedance	*21.5kΩ*
Maximum input level	*+21dBu*
Gain	*-8dB to +35dB*
CMRR	*85dB*
SNR	*113dB*
THD+N%	*~0.0015%*
Crosstalk	*< -110dB*
Line Inputs (Stereo)	*2x stereo 1/4" 6.3mm TRS CH13-16*

Input impedance	*21.5kΩ*
Maximum input level	*+12dBu*
Gain	*+6dB*
CMRR	*75dB*
SNR	*114dB*
THD+N%	*~0.0025%*
Crosstalk	*< -110dB*
General	
EQ	*3 band (±15dB), Low 100Hz, Mid 2.5kHz, High 12kHz per channel*
Low cut	*75Hz cut off @ 18dB/octave (CH1-12)*
Compressor	*2:1 ratio, 9dB makeup gain, -8dBu input threshold (max compression, CH1-8)*
Pan	*per channel L/R, (0 ~ mute)*
Channel controls	*per channel fader (-∞ to +10dB), mute switch and indicator, peak indicator, FX and aux send levels (rotary pots)*
Level controls	*FX return fader (-∞ to +10dB), aux return and USB/RCA in (rotary pots)*
Additional inputs	*USB audio, stereo FX return, stereo Aux return, stereo RCA in*
Outputs	
Main Outputs	*Balanced stereo XLRs*
Max output	*+24dBu*
Output impedance	*150Ω (balanced), 75Ω (unbalanced)*
THD% (+8dBu output)	*~0.001%*
Residual noise	*10uV*
Frequency response (20-20kHz)	*±0.3dB*
Controls	*Master L+R faders (- to +10dB), solo/PFL mode select*
EQ	*Master 9 band graphic equalizer with feedback detect, on/off toggle*

Monitors	*Stereo 1/4" 6.3mm TRS sockets*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.003%*
Residual noise	*30uV*
Frequency response (20-20kHz)	*±0.3dB*
Controls	*Rotary level pot (shared with phones out)*
Sub Outputs	*2x 1/4" 6.3mm TRS sockets*

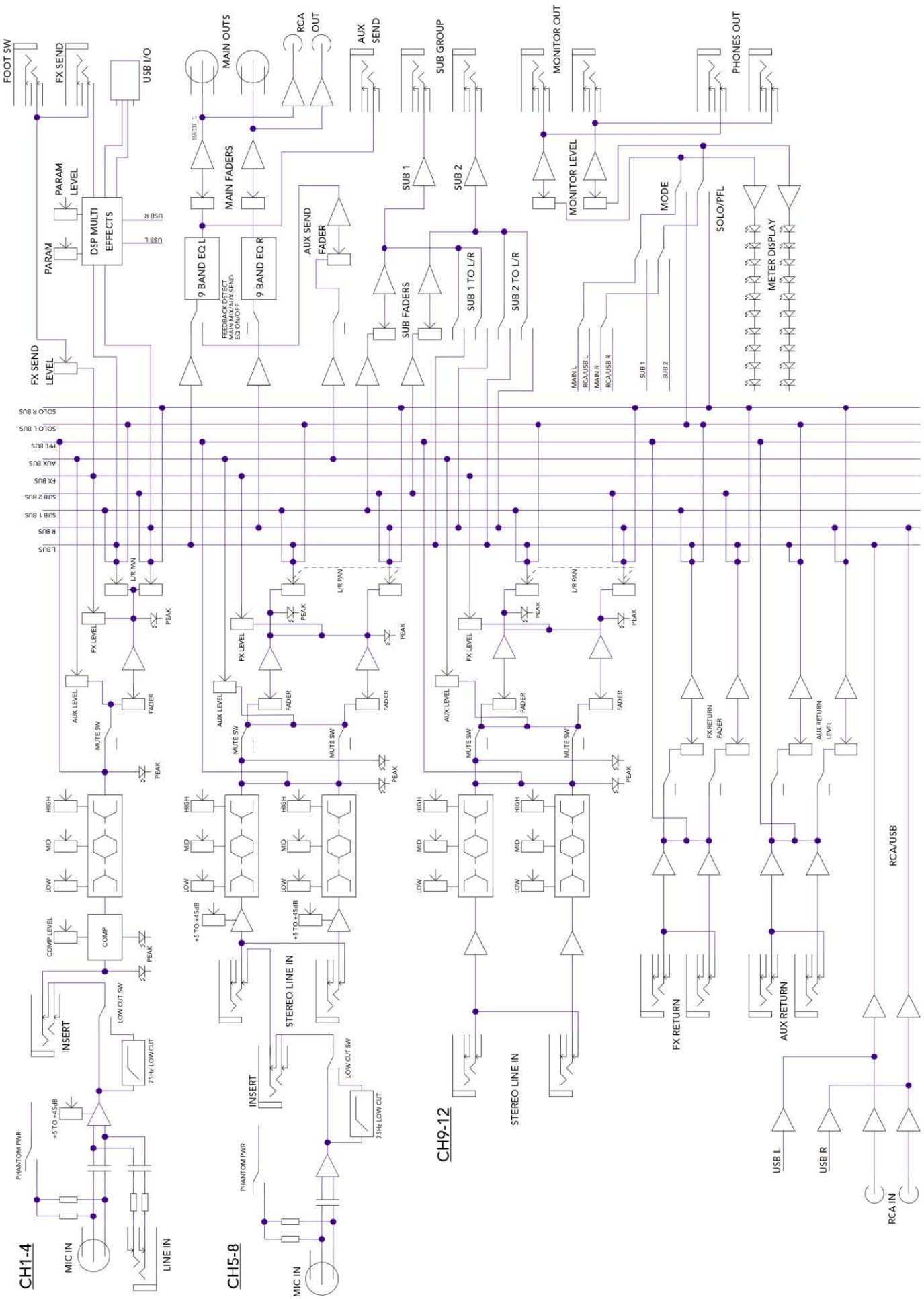
Max output	*+24dBu*
THD% (+8dBu output)	*~0.001%*
Residual noise	*7.6uV*
Frequency response (20-20kHz)	*±0.05dB*
Controls	*Sub 1/2 faders (-∞ to +10dB), main mix L/R routing switches*
FX Send	*Mono 1/4" 6.3mm TRS*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.0015%*
Residual noise	*5.7uV*
Frequency response (20-20kHz)	*±0.3dB*
Controls	*per channel level, master level (rotary pot)*
Aux Send	*Mono 1/4" 6.3mm TRS*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.002%*
Residual noise	*7.5uV*
Frequency response (20-20kHz)	*±0.2dB*
Controls	*per channel level (rotary pot), master fader (-∞ to +10dB), mute switch*
Phones	*Mono 1/4" 6.3mm TRS*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.005%*
Residual noise	*250uV*
Frequency response (20-20kHz)	*±0.2dB*
Controls	*Rotary level pot (shared with monitor outs)*
RCA Out	*Stereo phono sockets*
Max output	*+24dBu*
THD% (+8dBu output)	*~0.0015%*
Residual noise	*9uV*
Frequency response (20-20kHz)	*±0.3dB*
General	
DSP FX	*16 reverb and delay effects with enable switch and parameter control*

USB Audio	*Inputs/Outputs: 2-in, 2-out, 16-bit, 24-bit, Sampling rate: 48kHz*
AC Power	*Universal 100-240V~ 50/60Hz (IEC C14 Socket, AC Cord included)*
Power Consumption	*40W*
Dimensions	
Product Dimensions (HW D)	*107 x 509.5 x 443mm (4.2" x 20.1" x 17.4")*
Product Weight	*7.1 Kg (15.7 lbs)*
Carton dimensions (HWD)	*185 x 580 x 515mm (7.3" x 22.8" x 20.3")*
Packed Weight	*8.1 Kg (17.9 lbs)*
Master Carton Quantity	*2 pcs*
Master Carton dimensions (HWD)	*385 x 595 x 525mm (15.2" x 23.4" x 20.7")*
Master Carton Packed We ight	*17.2 Kg (37.9 lbs)*
Model EAN13	*5060109459043*
Master EAN	*5060109459050*

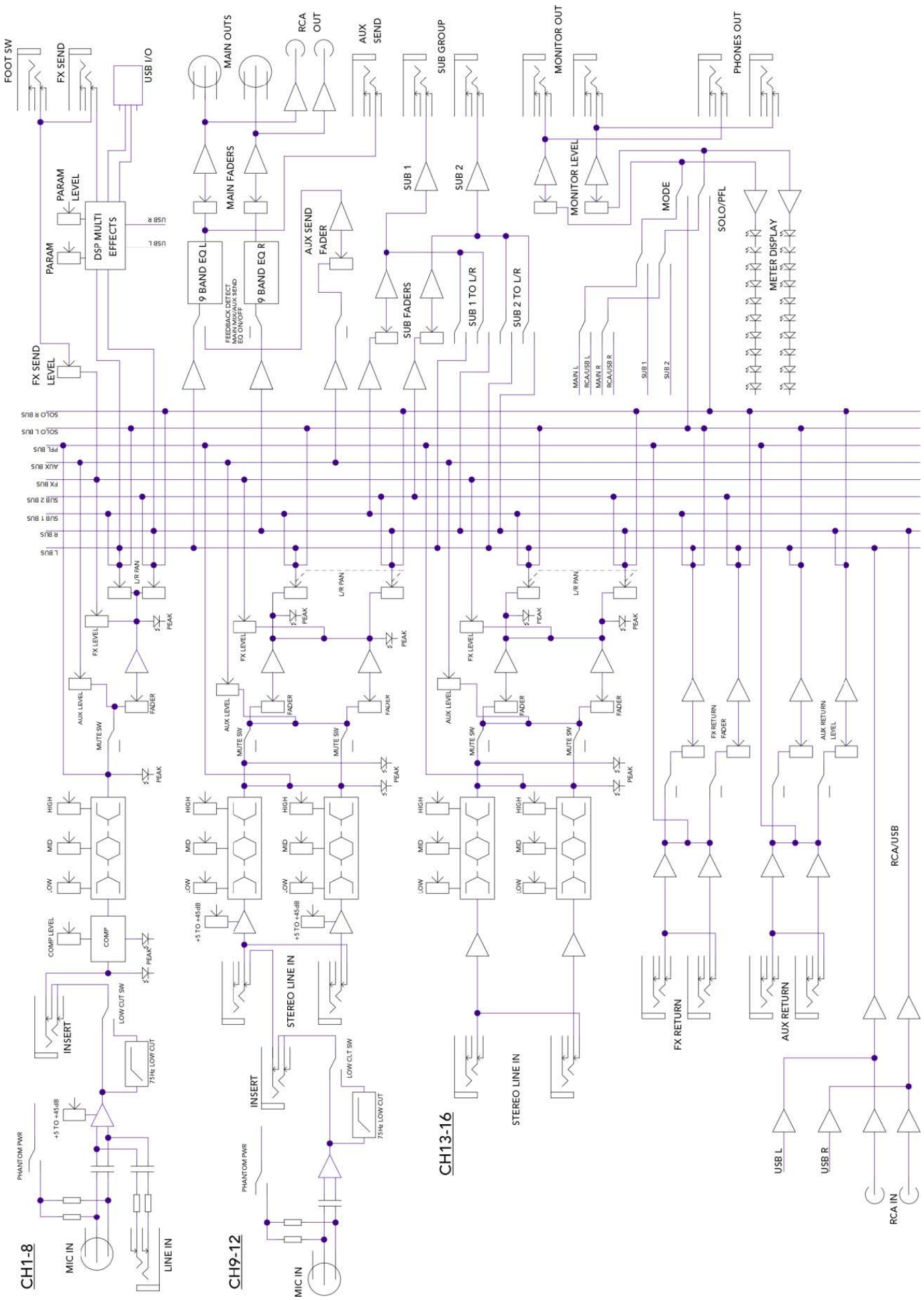
In the interest of continued development, HH reserves the right to amend product specification without prior notification.

BLOCK DIAGRAM

QI 2FX

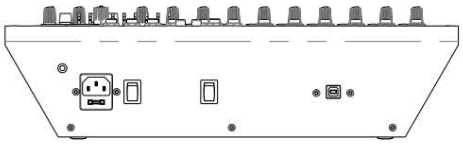

FOOT SW
FX SEND
USB I/O
MAIN OUTS
RCA OUT
AUX SEND
SUB GROUP
MONITOR OUT
PHONES OUT
PARAM LEVEL
PARAM
DSP MULTI EFFECTS
USB R
USB L
MAIN FADERS
9 BAND EQ L
9 BAND EQ R
FEEDBACK DETECT
MAIN MIX/AUX SEND
EQ ON/OFF
AUX SEND FADER
SUB 1
SUB 2
SUB FADERS
SUB 1 TO L/R
SUB 2 TO L/R
MONITOR LEVEL
MODE
SOLO/PFL
METER DISPLAY
FX SEND LEVEL
MAIN L
RCA/USB L
MAIN R
RCA/USB R
SUB 1
SUB 2
SOLO R BUS
SOLO L BUS
PFL BUS
AUX BUS
FX BUS
SUB 2 BUS
SUB 1 BUS
R BUS
L BUS
L/R PAN
PEAK
FX LEVEL
AUX LEVEL
MUTE SW
FADER
HIGH
MID
LOW
COMP LEVEL
COMP
INSERT
LOW CUT SW
75Hz LOW CUT
+5 TO +45dB
PHANTOM PWR
MIC IN
LINE IN
CH1-4
CH5-8
CH9-12
STEREO LINE IN
FX RETURN
FX RETURN FADER
AUX RETURN
AUX RETURN LEVEL
RCA/USB
USB L
USB R
RCA IN

Q16FX

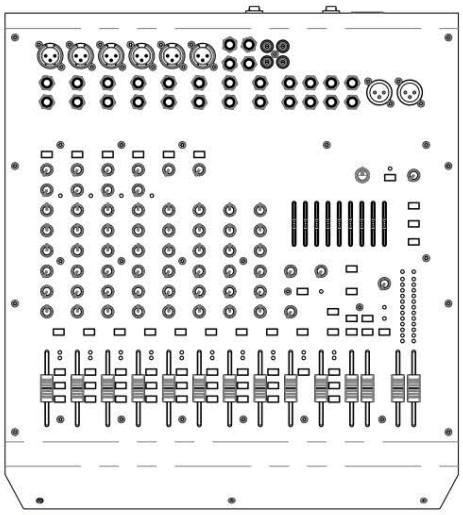


DIMENSIONS (in mm)

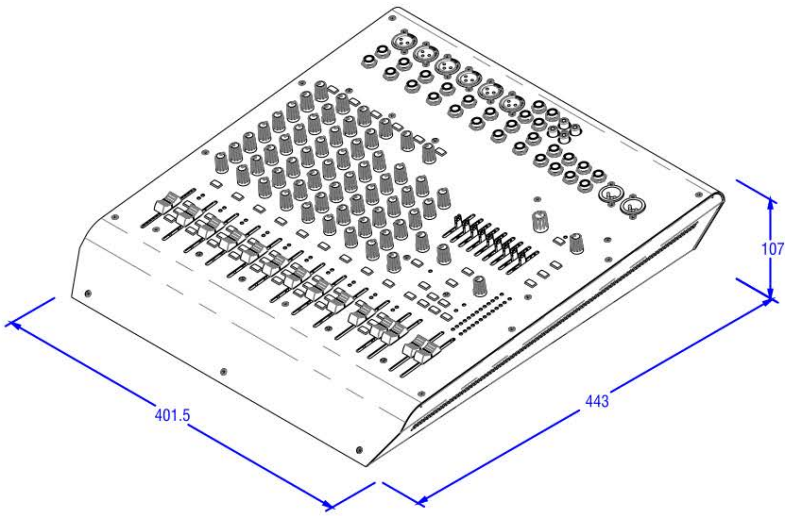
QI 2FX

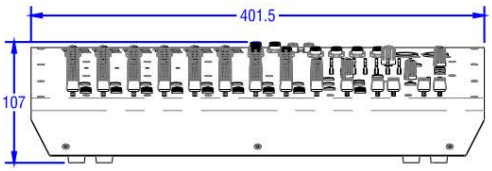


REAR

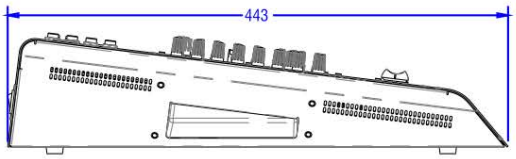


TOP





FRONT



LEFT

Q16FX

SAFETY AND WARNINGS

To take full advantage of your new product and enjoy long and trouble-free performance, please read this owner's manual carefully, and keep it in a safe place for future reference.

1. Unpacking: On unpacking your product, please check carefully for any signs of damage that may have occurred whilst in transit from the HH factory to your dealer. In the unlikely event that there has been damage, please re-pack your unit in its original carton and consult your dealer. We strongly advise you to keep your original transit carton, since in the unlikely event that your unit should develop a fault, you will be able to return it to you dealer for rectification securely packed.
2. Amplifier Connection: To avoid damage, generally it is advisable to establish and follow a pattern for turning on and off your system. With all system parts connected, turn on source equipment, mixers, effects processors etc, BEFORE turning on your amplifier. Many products have large transient surges at turn on and off which can cause damage to your speakers. By turning on your amplifier LAST and making sure its level control is set to a minimum, any transients from other equipment should not reach your loudspeakers. Wait till all system parts have stabilised, usually a couple of seconds. Similarly, when turning off your system always turn down the level controls on your amplifier and then turn off its power before turning off other equipment.
3. Cables: Never use shielded or microphone cable for any speaker connections as this will not be substantial enough to handle the amplifier load and could cause damage to your complete system. Use good quality

shielded cables everywhere else.

4. Servicing: The user should not attempt to service these products. Refer all servicing to qualified service personnel.
5. Heed all warnings.
6. Follow all instructions.
7. Do not use this apparatus near water.
8. Clean only with a dry cloth.
9. Do not block any of the ventilation openings. Install in accordance with manufacturer's instructions.
10. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
11. An apparatus with Class I construction shall be connected to a mains socket outlet with a protective connection. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point they exit from the apparatus.
13. Only use attachments/accessories provided by the manufacturer.
14. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
15. The mains plug or appliance coupler is used as the disconnect device and shall remain readily operable. The user should allow easy access to any mains plug, mains coupler and mains switch used in conjunction with this unit thus making it readily operable. Unplug this apparatus during lightning storms or when unused for long periods of time.
16. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
17. Never break off the ground pin. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
18. If this product is to be mounted in an equipment rack, rear support should be provided.
19. Note for UK only: If the colours of the wires in the mains lead of this unit do not correspond with the terminals in your plug, proceed as follows:
    - The wire that is coloured green and yellow must be connected to the terminal that is marked by the letter E, the earth symbol, coloured green or coloured green and yellow.
    - The wire that is coloured blue must be connected to the terminal that is marked with the letter N or the colour black.
    - The wire that is coloured brown must be connected to the terminal that is marked with the letter L or the colour red.
20. This electrical apparatus should not be exposed to dripping or splashing and care should be taken not to place objects containing liquids, such as vases, upon the apparatus.
21. Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to

sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures: According to OSHA, any exposure more than the above permissible limits could result in some hearing loss. Earplugs or protectors to the ear canals or over the ears must be worn when operating this amplification system to prevent a permanent hearing loss, if exposure is more than the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

Duration Per Day in Hours	Sound Level dBA, slow response
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ ou inférieur	115

22. If your appliance features a tilting mechanism or a kickback style cabinet, please use this design feature with caution. Due to the ease with which the amplifier can be moved between straight and tilted back positions, only use the amplifier on a level, stable surface. DO NOT operate the amplifier on a desk, table, shelf or otherwise unsuitable non-stable platform.
23. Symbols & nomenclature used on the product and in the product manuals, intended to alert the operator to areas where extra caution may be necessary, are as follows:

CAUTION

Intended to alert the user to the presence of uninsulated 'Dangerous Voltage' within the products enclosure that may be sufficient to constitute a risk of electrical shock to persons.

WARNING

Intended to alert the user of the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

CAUTION:

Risk of electrical shock – DO NOT OPEN. To reduce the risk of electrical shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified personnel.

WARNING:

To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture. Before using this appliance, please read the operating instructions for further warnings.

FCC STATEMENT

This device complies with Part 15 of the FCC rules Operation is subject to the following two conditions:

1. This device may not cause harmful interference.

2. This device must accept any interference received, that may cause undesired operation.

Warning: Changes or modification to the equipment not approved by HH can void the user's authority to use the equipment.

Note: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures. Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

This product conforms to the requirements of the following European Regulations, Directives & Rules: CE Mark (93/68/EEC), Low Voltage (2014/35/EU), EMC (2014/30/EU), RoHS (2011/65/EU), ErP (2009/125/EU)

SIMPLIFIED EU DECLARATION OF CONFORMITY
Full text of the EU declaration of conformity is available at the following internet address:
http://support.hhelectronics.com/approvals

The object of the declaration described above is in conformity with the relevant statutory requirement Electrical Equipment (Safety) Regulations 2016, Electromagnetic Compatibility Regulations 2016, The Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, The Ecodesign for Energy-Related Products and Energy Information, (Amendment) (EU Exit) Regulations 2012

In order to reduce environmental damage, at the end of its useful life, this product must not be disposed of along with normal household waste to landfill sites. It must be taken to an approved recycling centre according to the recommendations of the WEEE (Waste Electrical and Electronic Equipment) directive applicable in your country.

HH AUDIO
STEELPARK ROAD, COOMBSWOOD BUSINESS PARK WEST, HALESOWEN, B62 8HD HH AUDIO PART OF HEADSTOCK GROUP FOR THE LATEST INFORMATION PLEASE VISIT **WW.HHAUDIO.COM** IN THE INTEREST OF CONTINUED DEVELOPMENT, HH RESERVES THE RIGHT TO AMEND PRODUCT SPECIFICATION WITHOUT PRIOR NOTIFICATION

Documents / Resources

	H H Electronics Q12FX Analogue Mixing Console [pdf] Instruction Manual Q12FX, Q16FX, Q12FX Analogue Mixing Console, Q12FX, Analogue Mixing Console, Mixing Console, Console

References

- HH Audio
- User Manual