



## F48X Matrix DSP



## Next step in technology

Now in its third generation, the F48X enhances both audio performance and remote control flexibility, meaning your system sounds better and is easier to control.

### Overview

With inputs and outputs switchable in channel pairs between analogue or AES/EBU the F48X gives you the flexibility you need to integrate into your system. Compressors are available on every input as well as a high pass filter, 8 bands of parametric EQ, a 28 band graphic EQ, 3 bands of dynamic EQ and up to 1.3 seconds of delay. Routing to outputs can be configured to either mix-matrix mode, free-routing or several pre-configured routing options.

Flexible channel Linking enables quick and easy configuration of common crossover setups or customised configurations as required. Every output channel has high and Low pass filters, 16 bands of parametric EQ and up to 1.3 seconds of delay. FIR filtering is also supported. Our Predictive excursion Limiter (PXL) algorithm, on every output, is designed to offer the best driver protection with the lowest distortion.

Front panel control allows instant mute of any input or output as well as editing of all the most commonly used parameters and recall of presets. Our Fatware Ethernet based control software for PC, Mac and iPad gives you the ability to not only control all the devices on a network but also to store preset memories and configure systems offline. A new USB-C front panel connection with Ethernet bridging means you can plug into any device and control the entire network. Additionally, a new Ethernet dual port switch in every unit means flexible connection options -either quick daisy chaining of devices or traditional star routing back to a dedicated external router/switch.

With enhanced audio performance thanks to the latest ESS AD/DA converter chipsets increasing the already impressive dynamic range and reducing THD+N figures. The F48X with updated looks sounds fantastic and continues to be great to use.



Mac . Windows . iPad

PC, Mac and iPad compatible remote control software with USB and Ethernet access. Full control of all DSP, routing and configuration of multiple F48X units with the ability to design systems offline and store/Load presets and structure preset Libraries.



## DSP Software Functions

- **Input Delay (per channel):** 0 to 1.3s in 10.4uS steps
- **Input Compressor (per channel):** Threshold (-30 to +22 dBu), Attack, Release, Ratio, Soft-Knee
- **Input Parametric EQ (per channel):** 8 bands – parametric, low shelf, high shelf, notch, band-pass
- **Input Dynamic EQ (per channel):** 2 bands – parametric/low shelf/high shelf, boost/cut above /below, threshold, ratio, attack, release
- **Input High-Pass Filter (per channel):** Up to 24dB/octave ( Butterworth / Bessel / Linkwitz-Riley)
- **Routing Inputs to Outputs:** Full matrix mixer
- **Output Parametric EQ (per channel):** 16 bands – parametric, low shelf, high shelf, notch, band-pass
- **Output High-Pass and Low-Pass Filter (per channel):** Up to 48dB/octave ( Butterworth / Bessel / Linkwitz-Riley)
- **Output Gain (per channel):** -30 to +15dB in 0.1dB steps, mute, phase
- **Output Delay (per channel):** 0 to 1.3s in 10.4uS steps High performance, two-stage PXL limiters ensure systems can be safely and reliably played at high level without compromising sound quality
- **Output Limiter power amplifier (per channel):** Threshold (-50 to +14dBu), attack, release, auto attack/release option
- **Output Limiter AUX XLR output:** Threshold (-50 to +22dBu), attack, release, auto attack/release option
- **Output Delay (per channel):** 0 to 1.3s in 10.4uS steps

## Technical specifications

**Analogue Inputs:** 4 x XLRF  
**Balanced CMRR:** 60dB@ 1kHz  
**Maximum Level:** +20dBu  
**Input Impedance:** 10k electronically balanced  
**AES Inputs - 2 x 2:** Transformer balanced  
**AES Input Sample Rates:** 8kHz - 192kHz  
**AES Input s/n Ratio:** 139dB  
**Input Impedance:** 110 R  
**Analogue Outputs:** 8 XLRM electronically balanced  
**Source Impedance:** 60R

**AES Outputs:** 4 x 2 Transformer Balanced  
**Sample Rate:** 96kHz  
**Source Impedance:** 110 R  
**Performance & Mechanical**  
**Frequency Response:** 12Hz - 32kHz  $\pm 0.2$ dB  
**Dynamic Range:** 119dB 'A'wtd (in-out analogue)  
**THD+N (+19dB @1kHz):** 0.00029%  
**Latency: 0.427mS** (in-out analogue, 96kHz)  
**Power:** 90-250VAC, 50-60Hz, 20W  
**Dims:** 44 x 213 x 482mm (1.75 x 8.4 x 19in)  
**Weight:** 2.5kg Net; 3.5kg Shipping

### Audio I/O:

4 Analogue Inputs, 8 Analogue Outputs  
AES Digital I/O with SRC from 24 to 192kHz

### Input Processing Features:

Soft Knee Compressor 8 Parametric EQ's & 3 DEQ's  
24dB/Oct HPF & 28 Band Graphic EQ  
Gain, Polarity, Delay (up to 1.3s)

### Routing Matrix Modes:

Full Mix Matrix, Routing Matrix, Preset  
Configurations (2x4, 4x2, 1x8, 2x3 +2)

### Output Processing Features:

16 Parametric EQs  
Crossover Filters up to 48dB/Oct  
FIR Filter capable -  
1024 Taps/2ch, 512 Taps/4ch,  
256 Taps/8ch at 96kHz  
Gain, Polarity, Delay (up to 1.3s)  
PXL Limiters

Remote control 1Gbps/100Mbps Ethernet,  
USB Type C Up to 30 presets may be stored  
for offline recall

FFA has a policy of continued product improvement and accordingly reserves the right to change features and specifications without notice.