

MIR880F & MIR480I



Flagship Dynamic Audio Management



MARANI proudly presents the MIR-F/I Series, the pinnacle of professional audio processing technology. Designed for professional Sound and System Engineers, these processors feature advanced capabilities such as Dynamic EQ (DEQ) and Auto EQ (AEQ). With up to 27 bands of parametric equalizers, the MIR-F/I Series allows extensive customization to meet the unique needs of any audio environment. The 8 channels Dynamic EQ processing module incorporates a sophisticated 5-band dynamic equalization system, featuring High/Low Shelving filters and three parametric filters. The DEQ supports four operational modes: Boost/Cut Above/Below Threshold, covering the entire audible spectrum from 20 Hz to 20 kHz. Each parametric filter offers three Q-factor modes for precise adjustments. MARANI's Auto EQ simplifies system calibration with a proprietary algorithm that allows for one-touch measurement of impulse response. This innovative feature generates precise FIR coefficients and PEQ parameters automatically, enhancing efficiency in achieving optimal sound quality. Additionally, the inclusion of Dante protocol ensures seamless connectivity for modern audio networks.

Elevate your audio performance with the MIR-F/I Series, where cutting-edge technology meets Italian engineering, transforming your listening experience with precision and unparalleled sonic intelligence.

Features

- Exclusive MARANI Technology
- MIR Marani Linear Phase HP/LP filters (no phase distortion)
- 8 Channels plug-in with 5-band dynamic equalization (DEQ)
 - 3 Peak filters and Low/High Shelving filters
 - 4 Operational modes (Boost/Cut Above/Below Threshold)
 - 3 Q-value modes peak filters: ConstQ, VarQLTH, VarQHTL
 - Full 20 Hz ~ 20 kHz frequency range coverage
- Dante is included as a standard functionality in MIR880F
- Backup source input switching
- Flexible Routing Matrices
- Output channel summing matrices option
- Up to 4096 Taps FIR filter
- Dynamic Loudness Filter
- RMS compressor on each input/output channel
- Low distortion Peak Limiter on output channels
- Simultaneous control of 128 networked units
- Grouping with control of gain, mute, PEQ, and polarity
- Managed through our MARANI Control software

Specifications

Input x Output	8x8 / 4x8
Input Type	Analog, AES3, Dante (MIR880F)
Sample rate	96 kHz
Dynamic EQ	8
Input impedance	< 10 kΩ
Output impedance	150 Ω
A/D Dynamic range	123 dB
D/A Dynamic range	129 dB
Max Input level	+22 dBu
Max Output level	+22 dBu
THD+N	≤ 0.002% (+4 dBu, 1 kHz)
Frequency Response	20 Hz ~ 45 kHz ±0.3 dB
Crosstalk	≤ -98 dB
Signal-to-Noise Ratio	≥ 116 dB (A Weighting)
Noise Floor	≤ -96 dBu (A Weighting)
CMRR	65 dB
Connection Type	TCP/IP, USB, RS485
Presets	50
Dimensions W x H x D	482 x 44 (1U) x 253 mm
Weight	3.3 kg / 7.3 lb



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The MIR-F/I Series empowers audio professionals to achieve exceptional sound quality with unmatched precision. Each processor is engineered for reliable performance and high fidelity, ensuring dependability in both live sound and studio environments. A standout feature is the MARANI Auto EQ (AEQ), which simplifies filter design through a proprietary algorithm. This system enables one-touch impulse response measurement and automatic or manual curve correction across amplitude and phase domains. By generating precise FIR coefficients and PEQ parameters, Auto EQ streamlines audio calibration, allowing for optimal sound quality with ease. With these advanced capabilities, the MIR-F/I Series is the ideal choice for professionals seeking to elevate their audio processing and meet the technical demands of modern sound engineering. Experience the innovation that MARANI brings to your projects.

DSP Processing

Input & Output Gain	-18 dB ~ +12 dB, step 0.1 dB	IIR Crossover Filter & MIR Linear Phase Filter	Butterworth slope: 6/12/18/24/36/48 dB per oct.; Bessel slope: 12/24 dB per oct.; Linkwitz-Riley slope: 12/24/36/48 dB per oct.; NXF filter slope: 40/45/50/50/55 /60/65/70/75 dB per octave.
Noise Gate	Threshold range: -80 dBu ~ -45 dBu Attack time: 1 ms ~ 1000 ms Release time: 1 ms ~ 1000 ms		
Dynamic Loudness Filter	Gain range: 0 dB - 10 dB Attack speed: fast/medium/slow	FIR Crossover Filter	High & Low Pass Band Pass External import taps range: 256 ~ 512, slope range 21 ~ 120 dB Time window type: Rect / Sinc / Kaiser / Hanning Hamming / Blackman / Blackman- Harris / Blackman-Nuttall / Nuttall Kaiser-Bessel / Sine
Parametric EQ	IN ch: up to 27 Bands OUT ch: up to 8 Bands		
Optional Filters	Bell filter; High & Low Shelf 1st & 2nd ord.; Low & High Pass, 1st & 2nd ord.; Band Pass Filter; Notch Filter; All-Pass Filter 1st & 2nd ord.; All 2nd ord. filters with variable Q	Delay Input and Output	300 ms (in) / 150 (out) Step accuracy: 0.0104 ms (10.4 us)
Frequency Range	20 Hz ~ 20 kHz with a step of 1 Hz	RMS Compressor	Threshold range: -8 dBu ~ +22 dBu Compression ratio range: 2 ~ 32: 1 Soft and hard knee: 0 ~ 100% Attack Time: 0.1 ms ~ 1000 ms Release Time: 10 ms ~ 15000 ms Gain Compensation: Max 12 dB
Q Value / Bandwidth	Bell Filter: 0.4 ~ 128; Shelving, High, and Low-pass filter: 0.1 ~ 5.1; Bandpass and Notch filter: 4 ~ 104		
EQ Gain Range	-15 dB ~ +15 dB	Peak Limiter	Threshold range: -8 dBu ~ +22 dBu Attack Time: 1 ms ~ 1000 ms Release Time: 10 ms ~ 3000 ms
Auto EQ	Available	Hard Limiter	Threshold Range: -8 dBu ~ +22 dBu
FIR Filter	The plugin supports FIR filters: up to max: 4096 Taps Each input/output supports: up to max: 512 Taps		

