



60-Channel 192 kHz high-end USB Audio Interface

The Fireface 802 FS is a highly integrated pro audio solution all within a 19" enclosure for demanding live and studio environments. An interface designed for users who don't want to make compromises in sound, stability and ultra-low latency operation and who long for an unrivaled professional feature set.

A newly developed analog and digital board with 60 channels of audio, high-end microphone preamps, reference class converters, a complete effects section and operation at up to 192 kHz. Active SteadyClock FS jitter suppression, individually switchable reference levels for all inputs and outputs, DC-coupled outputs for all 8 analog Line outputs, stand-alone functionality, DigiCheck metering and analysis toolbox and identical operation on Windows PC and Mac. The Fireface 802 FS also includes an optional Class Compliant mode (30 channel I/O with up to 192 kHz) and operation with TotalMix FX for iPad, RME's app to fully control the Fireface 802 FS from the iPad, without any computer.

The alternative CC mode can be activated via a recessed pushbutton switch directly at the back of the interface. USB-A port for remote control (ARC USB) for a connection to TotalMix FX, remote in stand-alone mode and class compliant mode.

Overview of the Fireface 802 FS most important features:

- All settings can be changed in real-time
- Buffer sizes/latencies from 48 up to 8192 samples selectable
- 8 channels 96 kHz/24 bit Record/Playback via ADAT optical (S/MUX)
- 4 channels 192 kHz/24 bit Record/Playback via ADAT optical (S/MUX4)
- Clock modes slave and master
- Automatic and intelligent master/slave clock control
- Unsurpassed Bitclock PLL (audio synchronization) in ADAT mode
- SteadyClock FS: Jitter-immune, super-stable digital clock
- DDS technology for free setting of the sample rate
- SyncAlign guarantees sample aligned and never swapping channels
- SyncCheck tests and reports the synchronization status of input signals
- TotalMix for latency-free submixes and perfect ASIO Direct Monitoring
- TotalMix: 1800 channel mixer with 46 bit internal resolution
- TotalMix FX: 3-band EQ, Low Cut, Reverb, Echo, Compressor, Expander, Auto Level
- MIDI I/O with 16 channels high-speed Low-Jitter MIDI
- 2 x Hi-power low impedance headphone output
- DIGIcheck DSP: Level meter in hardware, peak- and RMS calculation

Connectivity

- 4 x Mic/Instrument Preamp
- 8 x Line Input
- 8 x Line Output
- 2 x Phones Output
- 1 x AES/EBU I/O
- 2 x ADAT I/O (or 1 x ADAT I/O plus 1 x SPDIF I/O optical or 2 x SPDIF I/O optical)
- 1 x Word Clock I/O
- 1 x MIDI I/O
- 1x USB 2.0

AD, Line In 1-8, rear:

- Input: 6.3 mm TRS, electronically balanced
- Signal to Noise ratio (SNR) @ LoGain: 116 dB (AES17), 118 dBA
- Signal to Noise ratio (SNR) @ +4 dBu: 115 dB (AES17), 117 dBA
- Frequency response @ 44.1 kHz, -0.1 dB: 8.9 Hz – 20.4 kHz
- Frequency response @ 96 kHz, -0.5 dB: 4.3 Hz – 45.2 kHz
- Frequency response @ 192 kHz, -1 dB: 3 Hz – 89 kHz
- Filter: Short Delay Sharp, 5 / 5 / 6 samples delay
- THD @ -1 dBFS: < -120 dB, < 0.0001 %
- THD+N @ -1 dBFS: < -110 dB, < 0.00032 %
- Channel separation: > 110 dB
- Maximum input level: +19 dBu
- Input: 6.3 mm TRS jack, electronically balanced
- Input impedance @ 1 kHz: 10 kOhm unbalanced, 10.6 kOhm balanced
- Input sensitivity switchable between Lo Gain and +4 dBu
- Input level for 0 dBFS @ Lo Gain: +19 dBu
- Input level for 0 dBFS @ +4 dBu: +13 dBu
- Variable digital gain: 0 to +12 dB
- Minimum level for 0 dBFS: +1 dBu, -1.2 dBV

Microphone In 9-12, front:

As above, but:

- Input: XLR, electronically balanced
- Input impedance: 3.4 kOhm
- Signal to Noise ratio (SNR): 113 dB RMS unweighted, 116 dBA
- Gain range: 54 dB
- Maximum input level, Gain +6 dB: +10 dBu
- Maximum input level, Gain +60 dB: -44 dBu
- CLIP LED: 0 dBFS
- SIG LED: -42 dBFS

Instrument In 9-12, front :

As above, but:

- Input: 6.3 mm TS jack, unbalanced
- Input impedance: 1 MOhm
- Signal to Noise ratio (SNR): 113 dB RMS unweighted, 116 dBA
- Maximum input level, Gain +6 dB: +21 dBu
- Maximum input level, Gain +60 dB: -33 dBu
- Frequency response @ 44.1 kHz, -0.5 dB: 2.5 Hz – 20.8 kHz
- Frequency response @ 96 kHz, -0.5 dB: 2.5 Hz – 25 kHz
- Frequency response @ 192 kHz, -1 dB: 1.7 Hz – 36 kHz

AES/EBU:

- 1 x XLR, transformer-balanced, galvanically isolated, according to AES3-1992
- High-sensitivity input stage (< 0.3 Vpp)
- SPDIF compatible (IEC 60958)
- Accepts Consumer and Professional format
- Lock range: 27 kHz – 200 kHz
- Jitter suppression: > 50 dB (> 1 Hz)

ADAT Optical:

- 2 x TOSLINK, format according to Alesis specification
- Standard: 2 x 8 channels 24 bit, up to 48 kHz
- Double Speed (S/MUX): 2 x 4 channels 24 bit 96 kHz
- Quad Speed (S/MUX4): 2 x 2 channels 24 bit 192 kHz
- Bitclock PLL ensures perfect synchronisation even in varispeed operation
- Lock range: 31.5 kHz – 50 kHz
- Jitter suppression: > 50 dB (> 1 Hz)

SPDIF optical (ADAT 1/2):

- 2 x optical, according to IEC 60958
- Accepts Consumer and Professional format
- Lock range: 27 kHz – 200 kHz
- Jitter suppression: > 50 dB (> 1 Hz)

Word Clock:

- BNC
- Internal termination 75 Ohm switchable
- Automatic Double/Quad Speed detection and internal conversion to Single Speed
- SteadyClock guarantees super low jitter synchronization even in varispeed operation
- Not affected by DC-offsets within the network
- Signal Adaptation Circuit: signal refresh through auto-center and hysteresis
- Overvoltage protection
- Level range: 1.0 Vpp – 5.6 Vpp
- Lock Range: 27 kHz – 200 kHz
- Jitter suppression: > 50 dB (> 1 Hz)

MIDI:

- 1 x MIDI I/O via 5-pin DIN jacks
- Galvanically isolated by optocoupled input
- Hi-speed mode: Jitter and response time typically below 1 ms
- Separate 128 byte FIFOs for input and output

DA, Line Out 1-8, rear:

- Output: 6.3 mm TRS jack, servo-balanced
- Signal to Noise ratio (SNR) @ HiGain: 116.5 dB (AES17), 118.5 dBA
- Signal to Noise ratio (SNR) @ +4 dBu: 116 dB (AES17), 118 dBA
- Signal to Noise ratio (SNR) @ -10 dBV: 107 dB (AES17), 109 dBA
- Frequency response @ 44.1 kHz, -0.1 dB: 0 Hz – 20.2 kHz
- Frequency response @ 96 kHz, -0.5 dB: 0 Hz – 44.6 kHz
- Frequency response @ 192 kHz, -1 dB: 0 Hz – 77.5 kHz
- THD+N: < -110 dB, < 0.00032 %
- Channel separation: > 110 dB
- Output level switchable Hi Gain, +4 dBu, -10 dBV
- Output level at 0 dBFS @ Hi Gain: +19 dBu
- Output level at 0 dBFS @ +4 dBu: +13 dBu
- Output level at 0 dBFS @ -10 dBV: +2 dBV (+4.2 dBu)
- Output impedance: 75 Ohm

DA - Stereo Monitor Output Phones (9-12):

- Output: 2 x 6.3 mm TRS stereo jack, unbalanced
- Maximum output level at 0 dBFS: +17 dBu
- Max power per channel @ 32 Ohm load, 0.02% THD: 200 mW (2.5 Vrms, +10 dBu)
- Signal to Noise ratio (SNR): 116 dB (AES17), 118 dBA
- Output impedance: 2 Ohm

AES/EBU:

- 1x XLR, transformer-balanced, galvanically isolated, according to AES3-1992
- Output level Professional 4.2 Vpp, Consumer 2.4 Vpp
- Format Professional according to AES3-1992 Amendment 4
- Format Consumer (SPDIF) according to IEC 60958
- Single Wire mode, sample rate 28 kHz up to 200 kHz

ADAT:

- 2 x TOSLINK, format according to Alesis specification
- Standard: 2 x 8 channels 24 bit, up to 48 kHz
- Double Speed (S/MUX): 2 x 4 channels 24 bit 96 kHz
- Quad Speed (S/MUX4): 2 x 2 channels 24 bit 192 kHz

SPDIF optical (ADAT 1/2):

- Format Consumer (SPDIF) according to IEC 60958
- Sample rate 28 kHz up to 200 kHz

Word Clock:

- BNC
- Max. output voltage: 5 Vpp
- Output voltage @ 75 Ohm termination: 4.0 Vpp
- Output impedance: 10 Ohm
- Frequency range: 27 kHz – 200 kHz



EAN:	42 6012336 346 8
Weight:	Weight: 2.8 kg (6.2 lbs)
Dimensions:	(WxHxD): 436 x 44 x 235 mm (17.2" x 1.73" x 9.3") without rack ears/handles
Package dimensions	(WxHxD): 565 x 111 x 315 mm (22.2" x 4.37" x 12.4")
Package Contents:	<ul style="list-style-type: none"> - Fireface 802 FS - Cable USB 2.0, 1.8 m (6 ft) USB-A/B - Power cord - Manual - 1 optical cable (TOSLINK), 2 m (6.6 ft) - 4 rubber feet, self adhesive

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