ANALOG OUTPUT INTERFACE
AO-16 / AO-32

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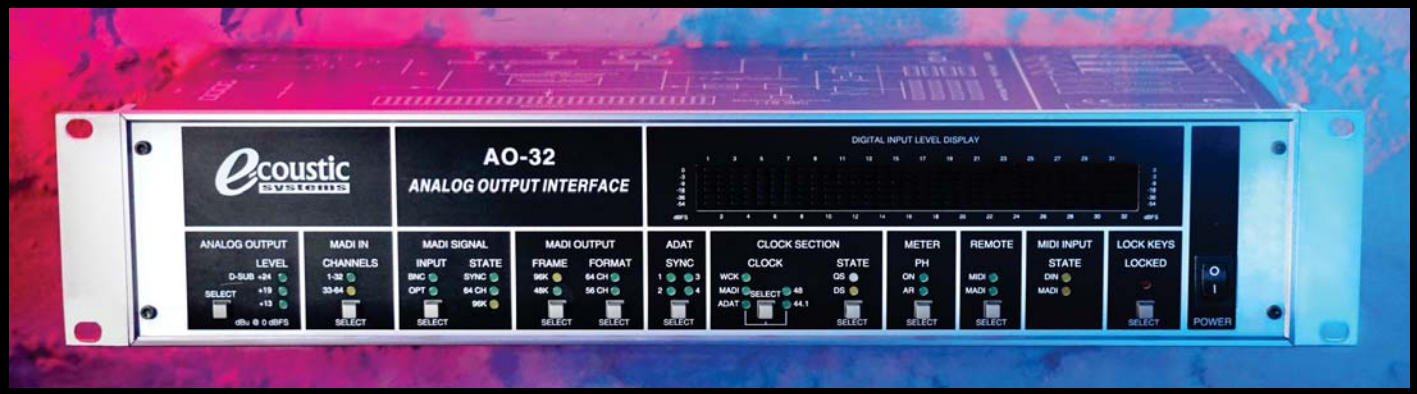
The E-coustic Systems AO-16 and AO-32 Analog Output Interface provide unparalleled sonic quality for the most critical and demanding Electronic Architecture applications. These systems provide analog conversion of 24 bit MADI digital audio signals (16 channels AO-16, or 32 channels AO-32) streamed from the E-coustic Systems Matrix Processor. Both utilize superior analog circuit designs that deliver reference quality conversion at output levels up to +24dBu, with dynamic range in excess of 114dB (unweighted). Font panel metering is provided for each channel, and both units feature two dedicated sets of outputs with isolated drivers and balancing circuits. Rear panel mounted sub-D connectors conforming to TASCAM wiring standard provide 8 channels of audio that connect directly to the E-coustic Systems AT-32 Analog Output Terminator. The AT-32 incorporates rear panel parallel wiring interconnectivity for amplifier and loudspeakers, as well as front panel listen points for each output channel. Each unit provides zero latency MADI pass through, and selectable channel assignments. These units provide twice the channel capacity in half of the space of our previous generation hardware. They also draw less current and generate less heat which saves cost - both in fabrication, as well as every day operation.



SPECIFICATIONS

Digital Inputs

MADI In
- Coaxial via BNC, 75 Ohm according to AES10-1991
- High-sensitivity input stage (< 0.2 Vpp)
- Optical via FDDI duplex SC connector
- 62.5/125 and 50/125 compatible
- Accepts 56 channel and 64 channel mode, and 96k frame
- Single Wire: up to 64 channels 24 bit 48 kHz
- Double Wire / 96k frame: up to 32 channels 24 bit 96 kHz
- Quad Wire: up to 16 channels 24 bit 192 kHz
- Lock range: 28 kHz – 54 kHz
- Jitter when synced to input signal: < 1 ns
- Jitter suppression: > 30 dB (2.4 kHz)

ADAT Optical
- 4 x TOSLINK, according to Alesis specification
- Standard: 32 channels 24 bits, up to 48 kHz
- S/MUX: 16 channels 24 bits 96 kHz
- S/MUX4: 8 channels 24 bits 192 kHz

Word Clock In
- BNC, not terminated (10 kOhm)
- Switch for internal termination 75 Ohm
- Automatic Double/Quad Speed detection and internal conversion to Single Speed

Digital Outputs

MADI Out
- Coaxial via BNC, 75 Ohm according to AES10-1991
- Output voltage 600 mVpp
- Cable length coaxial: up to 100 m
- Optical via FDDI duplex SC connector
- 62.5/125 and 50/125 compatible
- Cable length optical up to 2000 m
- Generates 56 channel and 64 channel mode, and 96k frame
- Single Wire: up to 64 channels 24 bit 48 kHz
- Double Wire / 96k frame: up to 32 channels 24 bit 96 kHz
- Quad Wire: up to 16 channels 24 bit 192 kHz

Word Clock Out
- BNC
- Max. output voltage: 5 Vpp
- Output voltage @ 75 Ohm: 4.0 Vpp
- Impedance: 10 Ohm
- Frequency range: 27 kHz – 200 kHz

Digital
- Clocks: Internal: ADAT In, MADI In, Word Clock In
- Low Jitter Design: < 1 ns in PLL mode, all inputs
- Internal clock: 800 ps Jitter, Random Spread Spectrum
- Jitter suppression of external clocks: > 30 dB (2.4 kHz)
- Effective clock jitter influence on DA-conversion: near zero
- PLL ensures zero dropout, even at more than 100 ns jitter
- Supported sample rates: 28 kHz up to 200 kHz

Analog

DA-Conversion
- Resolution: 24 bit
- Signal to Noise ratio (SNR) @ +24 dBu, 44.1 kHz: 115 dB RMS unweighted, 118 dBA
- Frequency response @ 44.1 kHz: -0.5 dB: 5 Hz – 22 kHz
- Frequency response @ 96 kHz: -0.5 dB: 5 Hz – 34 kHz
- Frequency response @ 192 kHz: -1 dB: 5 Hz – 50 kHz
- THD: < - 104 dB, < 0.00063 %
- THD+N: < -100 dB, < 0.001 %
- Channel separation: > 110 dB

Analog Line Out, D-Sub
- Maximum output level: +27 dBu
- Output impedance: 150 Ohm
- Output level switchable: +13 dBu, +19 dBu, +24 dBu @ 0 dBFS

General

MIDI
- 16 channels MIDI
- 5-pin DIN jacks

Power
- Power supply: Internal switching PSU, 100 - 240 V AC, 40 Watt

Dimensions
- Dimensions including rack ears (WxHxD): 19" x 3.46" x 9.5") (483 x 88 x 242 mm)
- Weight: 3 kg (6.6 lbs)

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