Inovonics

Omega_FM

A Digital FM Broadcast Processor

THIS SOFTWARE-BASED PROCESSING SYSTEM MAXIMIZES VERSATILITY THROUGH SIMPLICITY OF DESIGN

The hallmark of Inovonics' engineering philosophy is to achieve outstanding performance through design simplicity. Our Omega_FM continues this tradition, offering superb digital audio processing and baseband coding from a novel, straightforward product concept. Omega_FM is largely software-based, rather than relying on a large number of application-specific integrated circuits that can quickly pass into obsolescence.

Of particular significance is the Omega_FM's short program signal path. This helps keep program audio clean and assures negligible 'latency,' or audio delay, allowing direct studio monitoring of the off-air signal.

User interface has been simplified as well. Our 'no menu' front-panel setup buttons compliment many formats, or any PC can be connected for comprehensive control over all processing parameters.

• Gated, intelligent 'gain-riding' AGC erases input level variations; this is followed by multiband leveling to normalize program sources for a consistent tonal balance.

• Wide-range, triple parametric EQ and multiband compression help create and define the user's 'sonic signature'; split-spectrum final limiting assures optimum carrier deviation despite preemphasis restrictions.

• Fast boot-up and minimal program delay negate the primary disadvantages of digital audio processing.

GENERAL SYSTEM SPECIFICATIONS

Frequency Response: ±0.5dB, 20Hz-15kHz.
Distortion: <0.05%THD, 20Hz-4kHz;
<0.25%THD above 4kHz.
Noise: better than 75dB below full modulation.
Stereo Separation: better than 65dB.
Stereo Crosstalk (M/S or S/M): better than –65dB.
Preemphasis: 75µs, 50µs or 0 (flat).
Sampling Rate: 48kHz.
Latency (Program Signal Delay): <10ms.
Boot Time (Power-up to operate): <3sec.

(Measurements reflect the worst case of any in/out configuration: analog or digital inputs to analog, digital or composite/MPX outputs.)

ANALOG INPUTS

Left/Right XLRs, active-balanced, >10k-ohms bridging; accept nominal program levels between -20dBu and +20dBu.

DIGITAL INPUTS

AES/EBU balanced XLR; S/PDIF unbalanced BNC.

Rear view

ANALOG OUTPUTS

Left/Right active-balanced XLRs, <100-ohm source impedance; adjustable to deliver 0dBm to +15dBm into 600 ohms.

DIGITAL OUTPUT

AES/EBU balanced XLR; S/PDIF unbalanced BNC.

COMPOSITE/MPX OUTPUT

Unbalanced BNC, 50-ohm source impedance; adjustable between 0.5V p-p and 5.0v p-p. 19kHz stereo pilot injection nominally 9% relative to ±75kHz deviation.
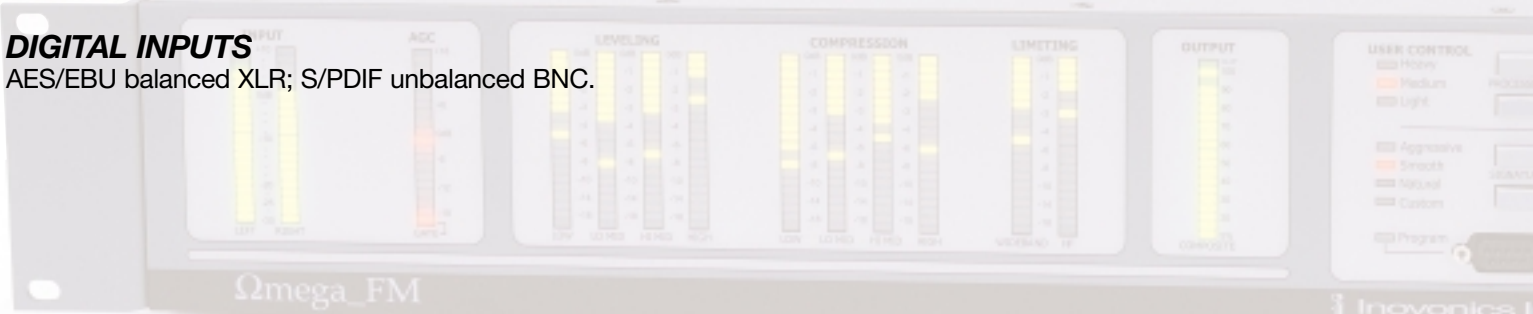
USER INTERFACE

Front-panel buttons select or alter 12 factory/user-programmed presets. Front- and rear-panel DB-9 ports afford RS-232 computer control over all parameters using any PC and supplied software. Front-panel LED bargraph metering accurately displays dynamic action of all processing stages.

POWER REQUIREMENTS

105-130VAC or 210-260VAC, 50/60Hz; 90W

SIZE AND SHIPPING WEIGHT

3-1/2"H x 19"W x 12"D (2U); 13 lbs.