Inovonics **WebCaster**

Internet Audio Processor

CONDITIONS AUDIO PROGRAM SIGNAL FOR OPTIMUM QUALITY IN LIMITED-BANDWIDTH "STREAMING APPLICATIONS

"Broadcasting" audio programs in real time over the Internet implies a unique set of technical issues. With most computer users connected to the Internet through a modem using standard dial-up telephone facilities, the overall data throughput rate has a fixed limit which requires aggressive data compression and coding schemes to give the listener acceptable sound quality.

Appropriate pre-processing of the audio signal prior to encoding can materially improve the subjective quality of the program at the receiving end. The WebCaster offers automatic gain-riding, dynamic range control in three, discrete frequency bands, flexible frequency response equalization, and aggressive bandwidth-protection filtering. The WebCaster can compensate not only for the obvious and unavoidable system limitations, but also for the marginal performance of most computer sound cards and speaker systems.

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Features & Specifications

Rear view

• The slow, "gain-riding" Gated AGC function erases long-term input level variations and corrects loudness differences between diverse program sources.

• A 3-band Compressor/Equalizer optimizes "spectral density" to yield a more uniform program timbre, improved intelligibility and long-term listenability.

• A sophisticated Peak Controller tames instantaneous "audio surges" which, unchecked, can cause severe program distortion.

• The built-in RS-232 control bus allows computer selection of all processing parameters if desired.

FREQUENCY RESPONSE
±1dB, 50Hz–4.9kHz. High-frequency cutoff is fixed by an overshoot-compensated multipole low-pass filter appropriate to Internet audio frequency limitations.

DISTORTION
Typically under 1% THD at any PROGRAM DENSITY setting, and at PEAK PROCESSING settings which maintain negligible clipping depth.
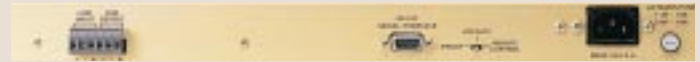
NOISE
Better than 60dB below the fully-limited output level.

VARIABLE EQUALIZATION
HF: –6dB, –3dB, 0dB (flat), +3dB, +6dB.
LF: –6dB, –3dB, 0dB (flat), +3dB, +6dB.

PROCESSING VARIABLES
PROGRAM DENSITY controls "blending" within the tri-band dynamic range compression section, as well as the compression release characteristic. Eight incremental settings range from a slow, blended (single-band) function to fast, fully-independent 3-band operation.
PEAK PROCESSING programs the action and interrelation of the program peak limiter and clipper circuits in eight MIN to MAX increments.

INPUT
Active-balanced, bridging; accepts nominal program line levels between –15dBu and +15dBu.

OUTPUT
Active-balanced, 200-ohm resistive source; delivers 0dBm to +15dBm into 600-ohms.

REMOTE CONTROL PROVISION
An RS-232 serial data port (DB9 connector) allows all processing presets to be programmed by an IBM-compatible computer, directly or via modem. Supplied software runs under Microsoft Windows® 95/98.

POWER REQUIREMENT
105–130VAC or 210–255VAC, 50/60Hz; 15W

SIZE AND WEIGHT
$1^{3}/_{4}$"H x 19"W x 10"D (1U); 10 lbs