

INOmini 223

Multimode Audio Processor



Inovonics' INOmini 223 is an audio processing powerhouse in a deceptively small package. Its versatile DSP-based design is user-programmable to serve multiple broadcast applications without compromising any single one. The unit addresses the needs of NRSC-compliant AM broadcasting with a range of cutoff frequencies, TIS (Traveler's Information Service) advisories, monaural LPFM transmission, and analog SCA subcarriers. A full-range 'Studio' mode satisfies mic processing and general production needs.

The INOmini 223 features gated and windowed gain-riding AGC, 3 bands of adjustable dynamic range compression with selectable crossovers and variable EQ, and tight 'lookahead' peak control. Pre-emphasis, with its own protection limiting, and overshoot-controlled output filtering are individually and specifically tailored to the service selected.



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FEATURE HIGHLIGHTS

- Ideal for: US/NRSC AM, Worldwide AM, Shortwave, US/Euro Monaural FM, TIS, and analog SCA
- Easy menu / jog-wheel setup from the front panel
- Performs AGC, 3-Band Compression, Peak Control, and Output Filtering specific to the selected application
- User-adjustable compression, EQ, limiting, and program density
- DSP 'lookahead' limiting offers tight peak control without clipping
- USB connector enables fast firmware updates in the field

SPECIFICATIONS

Operating Modes:

- NRSC-compliant asymmetrical AM processing with 10kHz, 9kHz, 7kHz, and 5kHz (9-pole Cauer) cutoffs
- TIS asymmetrical AM processing with 5kHz (9-pole Cauer) cutoff
- FM processing (monaural) with 75µs/50µs pre-emphasis and 15kHz (7-pole Cauer) cutoff
- SCA processing with smooth 5kHz (6th order Butterworth) cutoff

Frequency Response:

20Hz – 20kHz, ±0.1dB in PROOF and Studio modes; all specialized applications conform to specified cutoff characteristics.

Distortion:

<0.02% THD in PROOF mode

Signal-to-Noise:

Better than 72dB below the limited ceiling level measured through an appropriate de-emphasis network

Program Line Input:

Active-balanced (XLR) analog input, accepts nominal line levels between -20dBu and +20dBu

Program Line Output:

Active-balanced (XLR) delivers output levels between -15dBu and +12dBu corresponding to 100% modulation; 200-ohm resistive source. A switch under the top cover inserts a 20dB pad in the output for transmitters requiring a low level input.

Latency:

3.5ms – 4.5ms, depending on selected application

Headphone Jack:

Front-panel (TRS) 3.5mm

USB Port:

Front-panel connection for firmware updates

Metering:

Input / Output / AGC Gain / Compression / Limiting

Alarms:

Flashing front-panel indication of audio loss and AGC out-of-range

Power Requirement:

12VDC at 200mA (2.1mm x 5.5mm coaxial); inline switchmode power supply included.

Mounting Options:

An optional rack adapter mounts one, two, or three INOmini format units in a standard 19-inch, 1U rack space.

Size and Weight:

1.6"H x 5.5"W x 5.5"D
4 lbs. shipping weight



(optional rack adapter)



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