Inovonics 222

An economical AM Processor for NRSC compliance

INCORPORATES TIGHT PEAK CONTROL, ADAPTIVE PRE-EMPHASIS AND LOW-PASS FILTERING

Inovonics' 222 offers a low-cost means of conforming to NRSC transmission standards which have been mandated for all AM broadcasting in the United States. Moreover, the 222 is optionally available in various alternative versions to serve European medium-wave and international short-wave broadcasting needs.

Adaptive pre-emphasis enhances signal intelligibility, and the sharp-cutoff low-pass function eliminates interference to adjacent channels. With its built-in asymmetrical peak controller, the 222 is effective as a "stand alone" processing system, or it may be combined with pre-processing devices to create a transmission "signature."

Inovonics
1305 Fair Ave. • Santa Cruz, CA 95060
TEL: (831) 458-0552 • FAX: (831) 458-0554
www.inovon.com • e-mail: info@inovon.com

Inovonics 222

Features & Specifications

- **The built-in Peak Controller can enhance or replace existing limiters to maintain the asymmetrical AM modulation advantage.**

- **A separate pre-emphasis protection limiter independently controls high frequency program energy for best utilization of the NRSC (or other) transmission characteristic.**

- **Feedforward pulse-width-modulation (PWM) techniques are utilized in limiter and adaptive pre-emphasis stages for colorless, quasi-digital control of the program signal.**

- **Active multipole low-pass filtering exceeds requirements for adjacent-channel protection, even under adverse conditions. A proprietary overshoot compensator eliminates any need for splatter-generating clippers to assure full modulation.**

FREQUENCY RESPONSE
(pre-emphasis defeated):
"PROOF" mode: ±0.5dB, 10Hz–15kHz
222-00 (NRSC): ±1dB, 10Hz–9.7kHz
222-01 (Euro MW): ±1dB, 10Hz–8.7kHz
222-02 (US SW): ±1dB, 10Hz–6.2kHz
222-03 (Int'l SW): ±1dB, 10Hz–4.85kHz

DISTORTION
Less than 0.2% THD, 10Hz–cutoff with Peak Limiter OFF.
Less than 1% THD, 200Hz–cutoff with Peak Limiter ON.

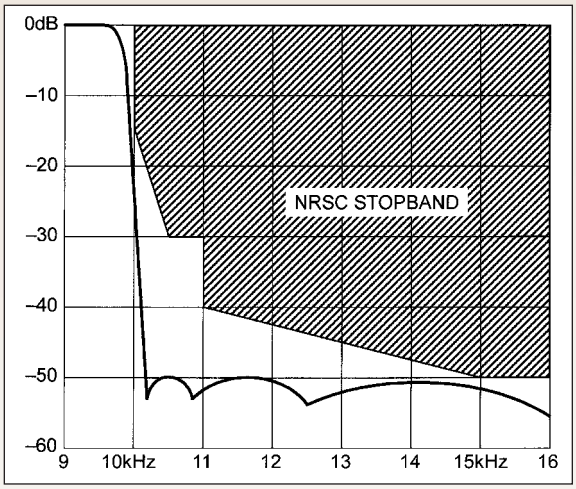
NOISE
Better than 75dB below full carrier modulation (assuming NRSC de-emphasis).

FIXED PRE-EMPHASIS
The US version follows the "truncated" 75µs curve specified by the NRSC transmission standard. Alternative versions employ pre-emphasis appropriate to the service and the cutoff frequency.

Rear view

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

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



Filter Stopband Response - NRSC Version

OUTPUT ASYMMETRY
Positive peak amplitude is continuously variable between +100% and +130% of the negative peak value.

POWER REQUIREMENT
105–130VAC or 210–255VAC, 50/60Hz; 8W.

SIZE AND WEIGHT
1¾"H x 19"W x 7"D (1U); 7 lbs.

Inovonics
1305 Fair Ave. • Santa Cruz, CA 95060
TEL: (831) 458-0552 • FAX: (831) 458-0554
www.inovon.com • e-mail: info@inovon.com

printed in the USA 4/99