

# 272

## FM Audio Processor / StereoGen / RDS



The Inovonics NOVA series offers a compact, economical solution to a host of broadcast audio processing requirements.

The NOVA 272 is a comprehensive FM airchain processor and includes the stereo-multiplex generator and a full-function RDS/RBDS RadioData encoder.

Processing combines 'gain-riding' AGC, r.m.s. leveling, parametric EQ, enhanced bass 'punch,' multiband compression, wideband and independent high frequency final limiting and composite clipping.

The internal RDS/RBDS encoder is compatible with common playout systems to present dynamic song title and artist information.

In addition to quick and easy front-panel setup, an IP interface enables total remote control of the NOVA 272 using any PC or mobile device. This interface also accepts streamed program sources, allows remote audio monitoring and provides full SNMP support.

Program audio failure alarms trigger local tally closures and instantly dispatch SMS/email notifications to selected personnel. Alarms are also logged for later analysis.

Setup and operation are simplified with 10 factory processing presets, and 10 additional presets may be user-defined. An internal scheduler is included for dayparting.

(optional rack adapter)



5805 Hwy 9, Felton CA 95018  
www.inovonicsbroadcast.com  
sales@inovonicsbroadcast.com  
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## FEATURE HIGHLIGHTS

- All-digital, DSP-based design; internal scheduler, instant boot, non-volatile preset memories
- Accepts analog, AES-digital and streaming program inputs; streams processed audio for remote monitoring and program verification
- Failover feature may be programmed to switch to alternate sources when audio is lost
- Assignable GPIOs plus full IP connectivity for remote control, SNMP and streaming I/O
- Gated and 'windowed' AGC and 'syllabic' leveling for program consistency; parametric EQ, adjustable bass 'punch' enhancement and 3-band compression with selectable crossovers
- Tight broadband peak control and independent pre-emphasis protection limiting
- Built-in stereo-generator includes full-featured RDS/RBDS encoding compatible with virtually any station automation system
- A wide range of factory processing presets plus programmable custom user-presets

## SPECIFICATIONS

### Frequency Response:

20Hz-15kHz,  $\pm 0.25$ dB  
(with an appropriate de-emphasis network)

### Distortion:

<0.02% THD in PROOF mode

### Signal-to-Noise:

**Analog In:** >82dB  
**AES Digital In:** >90dB  
(with an appropriate de-emphasis network)

### Pre-Emphasis:

75 $\mu$ s or 50 $\mu$ s menu-selectable

### Program Line Inputs:

**Analog:** active-balanced (XLR) accepts line levels between -15dBu and +15dBu; +24dBu clipping  
**AES Digital:** (XLR) accepts line levels between 0dBFS and -30dBFS at sampling rates between 32kHz and 96kHz  
**IP Streaming:** accepts Icecast/SHOUTcast MP3, Ogg and AAC streams

### Composite/MPX Output:

75 $\Omega$  (BNC); adjustable between 1V p-p and 6V p-p;  
6% - 12% stereo pilot injection; 3% - 8% RDS/RBDS subcarrier injection

### Program Signal Latency (Delay):

Approx. 3.75ms

### Network Port:

TCP/IP network connection (RJ45) for remote setup/operation and in/out audio streaming; full support for SNMP control

### GPIO Ports:

3 GPI, 3 GPO with assignable functions and logic polarity

### Headphone Jack:

Front-panel (TRS) 3.5mm

### Internal Test Tone Generator:

20Hz-20kHz; variable frequency and amplitude

### Alarms:

Local (GPIO) closures, browser interface, SNMP and SMS/email alarms for analog, digital and stream audio loss; maintains daily, weekly, monthly logs

### Scheduler:

Dayparting is simplified with an onboard real-time clock and preset-selection programming

### Audio Processing:

**AGC:**  $\pm 15$ dB capture range; gated with dual-rate 'windowed' operation  
**Leveling:** variable 'syllabic' 2:1 compression  
**EQ:** 4-sections of parametric equalization  
**Bass 'Punch':** variable bass enhancement  
**Compression:** 3-bands with selectable crossovers, variable master and individual band drive controls, plus r.m.s./peak 'density' adjustment  
**Final Peak Control:** no-clip feed-forward wideband limiting and independent FM pre-emphasis protection limiting  
**Composite Clipping:** 0dB - 3dB adjustable MPX clipping depth (exclusive of stereo pilot and RDS/RBDS subcarrier)

### RDS/RBDS:

Static & dynamic support for artist and song title display in PS and RT fields

### Power Requirement:

12VDC at 400mA (2.1mm x 5.5mm coaxial); inline switchmode power supply included

### Mounting Options:

An optional rack adapter mounts one or two NOVIA or other Inovonics half-rack units in a standard 19-inch, 1U rack space

### Size and Weight:

1.6"H x 8"W x 6"D; 5 lbs shipping weight

