

677

AM | FM | NOAA | Triple Tuner



Inovonics' 677 Triple Tuner incorporates the latest DSP-based technology for a fresh new design in EAS Receiver Monitors. The all-digital 677 has three discrete and independent receivers for any combination of AM, FM, or WB (Weather Band) reception and monitoring.

With primary utility as an off-air monitor receiver for EAS and NOAA emergency broadcasts, the 677 responds to the emergency alert tones as defined by the US Emergency Alert System and the US National Weather Service.

NOTE: The 677 does not respond to or decode the characteristic SAME "chirps-and-screeches"; that is, the digitally-encoded data associated with the specific alert. It does, however, function as a stable and dependable radio receiver and audio source for connected equipment that does decode and interpret these digital data.

FEATURE HIGHLIGHTS

- Three sensitive DSP-based (SDR) tuners that stay on-frequency through signal and power interruptions.
- Easy initial, local setup using the OLED menu and jog-wheel. In addition, Internet access via the internal Webserver provides expanded remote setup and operation control, SNMP implementation and remote audio monitoring.
- Front-panel alarms with assignable rear-panel GPO tallies for Alert Tones, Low Signal, Audio Loss and RDS PI mismatch. All alarms are logged and can dispatch individually-directed emails or SMS texts to appropriate station personnel.
- Precise metering of RF signal and audio levels, including graphic history plots of RF and audio levels for all three tuners for later diagnostic analysis.
- Independent balanced analog monaural outputs from each tuner with adjustable audio levels.
- Front-panel headphone jack with volume control can monitor any of the three program sources.
- When issued, free firmware updates are quickly and easily installed in the field.

(optional rack adapter)



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SPECIFICATIONS

Reception Modes:

AM and FM per worldwide broadcast practices. WB (Weather Band) conforms to the US National Weather Service Instruction 10-1712 (April 20, 2022)

Antenna Input: Separate 'F' connectors for each tuner; input characteristics per reception mode as follows:

FM: 50Ω; usable for both 50Ω and 75Ω antenna feeds
AM: High impedance; suitable for local short wire antenna or a 50Ω 'house' feed with an external terminator (if required).
WB: 50Ω; suitable for a local whip antenna or 50Ω and 75Ω antenna feeds.

Tuning Ranges:

FM: 64.0MHz-108.0MHz in 100kHz steps.
AM: 520kHz-1710kHz in 10kHz steps or 522kHz-1692kHz in 9kHz steps.
WB: 162.40MHz-162.55MHz in 25kHz steps.

Receiver Sensitivity and Noise (with IF and audio bandwidth mitigation set to Auto):

FM: 3dBμV for 50dB monaural SNR
AM: 40dBμV for 50dB SNR.
WB: -3dBμV for 40dB SNR (Re: ±5kHz carrier deviation).

Audio Squelch:

Selectable Auto-Mute function can silence the audio output during a Low Signal Alarm condition.

Audio Bandwidth (with IF and audio bandwidth settings at maximum values):

FM: 20Hz-15kHz, ±1dB; normalized for either 50μs or 75μs de-emphasis.
AM: 50Hz-6.5kHz; normalized for NRSC de-emphasis and measured per NRSC-1-C Standard, ¶6.3.
WB: 100Hz-3kHz, ±1dB (normalized for de-emphasis per NWSI 10-1712).

Audio De-Emphasis:

FM: 75μs or 50μs (selectable).
AM: NRSC 'truncated' 75μs per NRSC-1-C (fixed).
WB: Per NWSI 10-1712 (fixed).

Reception Optimization:

Each tuner performs RF signal-quality assessments and can offer bandwidth-constraint settings for each reception mode. The factory-default is 'Auto', although user-selectable settings for IF and audio passbands are available.

Program Audio Outputs:

Balanced Analog: (XLR) balanced, monaural for each of three tuners; level adjustable between -15dBu and +15dBu in 0.1dB steps relative to 100% carrier modulation.

Front-Panel Headphone Jack: (3.5mm TRS) with adjustable listening volume.

Audio Streaming: Any one of the three tuners may be selected to stream an HTTP Icecast and an independent UDP stream. The Icecast stream may be monitored by up to ten listeners concurrently, including using the internal Webserver for audio monitoring through any Web browser on any device.

Alarms:

Audio Loss: Alarm trigger/reset thresholds and on/off delay intervals are independently programmable. Levels are set with reference program audio quasi-peak values.

Low Signal: Alarm trigger/reset thresholds and on/off delay intervals are independently programmable. Levels are set with reference to the incoming RF level (RSSI).

PI Error: An RDS PI alarm is triggered either by loss of the PI identifier or by a mismatch between the expected PI code and the code received off-air.

Alert Tone: This alarm responds to the 853Hz/960Hz tone pair (AM/FM) or the 1050Hz Warning Alarm Tone (WB).

General Purpose Outputs (GPOs):

Six individual open-collector NPN transistor closures to ground have programmable logic polarity and serve as alarm 'tallies.' Each may be individually assigned to any single alarm function of any tuner. GPOs can sink 200mA at a maximum of +24VDC.

LAN Port:

(RJ45) The 677 interfaces with the Internet via a Local Area Network.

Power Requirement:

+12VDC at 750mA. A universal 100-240VAC inline switching power supply is supplied.

Mounting Options:

An optional rack adapter accepts one or two half-rack modules in a 1U, 19-inch rack space.

Size and Weight: 1.6"H x 8"W x 6.5"D;
4 lbs. shipping weight.

Operating Environment:

32°F/0°C-122°F/50°C; 0%-95% non-condensing relative humidity; 10,000ft/3048m.

Conformances:



EN50081-1 / EN50082-1
93/68/EEC



2002/95/EC



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