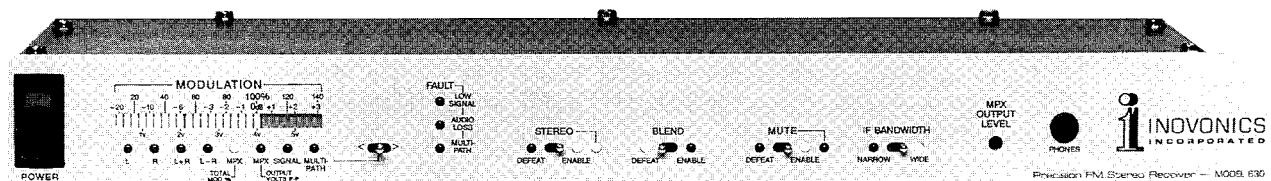


# An FM "relay" receiver for critical broadcast applications.



## A SINGLE-CHANNEL, FREQUENCY-AGILE RE-BROADCAST RECEIVER

Inovonics introduces the Model 630: a precision receiver for FM-relay (translator) service and other broadcast applications which demand superior off-air reception and accurate carrier demodulation.

Developed exclusively for professional use, the 630 incorporates important fea-

tures which are not found in even the most esoteric consumer-grade FM tuners.

Crystal-controlled, synthesized tuning, comprehensive front-panel metering, local and remote alarms, and remote control of operating options make the 630 the pre-eminent choice for critical, off-air program feeds.

# ...The 630 - by Inovonics



# 630 Features and Specifications

**Composite (MPX) and Stereo Audio Outputs.**  
Accurate front-panel metering displays MPX and audio levels, incoming RF level and multipath distortion.

**Selectable IF Bandwidth,** an advanced Walsh-function demodulator and a proportional stereo "blend" feature ensure optimum reception under all signal conditions.

**Remote Control** of the selectable operating parameters.

**Auto-Mute Log** and a composite over-deviation limiter protect the re-broadcast signal.

- **Local and Remote Alarms** indicate reception problems.
- **Easy to Set-Up, Easy to Use.** "Generic" components used throughout for ease in servicing, anywhere in the world.

— **TUNING RANGE:**

DIP-switch programmable; 87.9MHz to 108.1MHz in 100kHz increments.

— **ANTENNA INPUT:**

75-ohm "F" connector.

— **RECEIVER SENSITIVITY:**

10uV for 50dB mono SNR with WIDE IF.

— **RECEIVER SELECTIVITY:**

WIDE IF: -6dB at +/-150kHz  
NARROW IF: -6dB at +/-75kHz

— **STEREO SEPARATION:**

WIDE IF: >45dB (typically 50dB), 20Hz-15kHz.  
NARROW IF: typically 20dB, 20Hz-15kHz.

— **DISTORTION (in MPX or demodulated audio):**

WIDE IF: <0.3% THD.  
NARROW IF: <3% THD.

— **COMPOSITE BASEBAND (MPX) OUTPUT:**

Unbalanced output with 75-ohm source impedance is adjustable between 2V p-p and 5V p-p at +75kHz carrier deviation.

— **OUTPUT MUTE FUNCTION (defeatable):**

MPX and program audio outputs are muted when the incoming RF carrier level falls below 10uV

— **STEREO "BLEND" FEATURE (defeatable):**

Circuitry integral to the stereo decoder monitors noise in the upper baseband spectrum. Stereo program audio is proportionally blended to mono, minimizing noise in the demodulated left/right program audio output. (Does not affect the composite MPX output signal.)

**OVERDEVIATION LIMITER:**

An internal clipping circuit limits the MPX output to a maximum level equivalent to +/-100kHz carrier deviation.

— **PROGRAM LINE OUTPUTS:**

Left and right channel active-balanced outputs deliver 0dBm into 600 ohms at +75kHz carrier deviation

— **FREQUENCY RESPONSE (program audio output):**

+0.5dB, 20Hz-15kHz. De-emphasis may be jumpered for 75uS or 50uS characteristic.

— **NOISE (program audio output):**

Better than 60dB below +75kHz deviation with 1mV or greater RF input.

— **REMOTE CONTROL LOGIC:**

Independent contact closures to ground will initiate forced-mono reception, select the narrow IF bandwidth, defeat the output muting feature, and defeat the "blend" function.

— **FAULT INDICATORS:**

Front-panel indication of a low signal (mute level) condition, loss of program audio, and excessive multipath distortion in the received signal.

— **REMOTE ALARM PROVISION:**

Open-collector NPN transistor switches saturate to ground for a low signal condition and for loss of program audio.

— **POWER REQUIREMENT:**

105-130VA @ 210-255VAC, 50/60Hz; 20W.

— **SIZE AND SHIPPING WEIGHT:**

1 3/4"H x 19"W x 6"D (1U): 7 lbs.



Rear View



**Inovonics Inc.**

1305 Fair Ave. • Santa Cruz, CA 95060  
Tel: (408) 458-0552 • Fax: (408) 458-0554