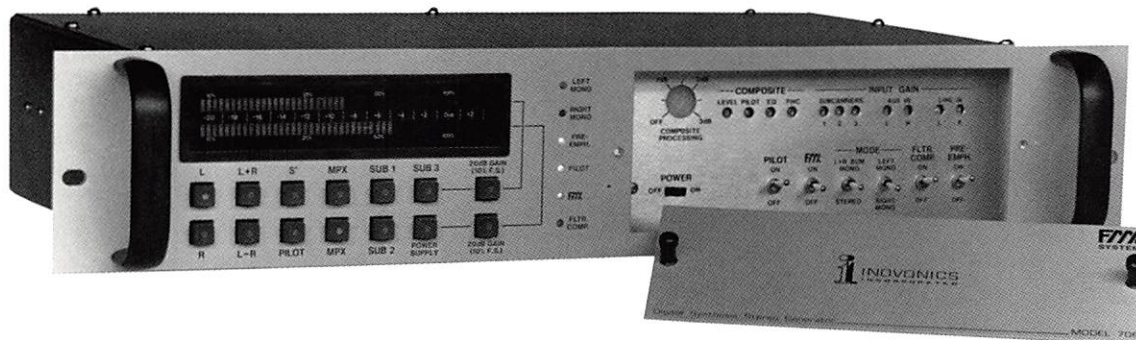


# FM/FMX™ Stereo Generator

Model 706



The Inovonics Model 706 is a "second generation" FM Stereo Generator of advanced features and performance. In addition to progressive circuit designs for best handling of audio signals in the analog domain, the 706 makes extensive use of digital techniques in generating the composite multiplex output. The result is a Stereo Generator of truly outstanding quality.

The 706 incorporates the FMX™ Coverage Extension Transmission System as a field-installable plug-in option. The patented FMX™ System has been proven fully compatible with worldwide FM-Stereo broadcasting standards and practices. In conjunction with FMX™ Stereo receivers now available, FMX™ Stereo transmissions will give the broadcaster substantial increase in his noise-free stereo coverage area.

## FEATURES

## BENEFITS

**Digital synthesis of composite signal**

Assures optimum performance and drift-free, adjustment-free operation

**Patented filter overshoot compensation**

Yields optimum carrier modulation, even without composite processing

**Accurate metering of important internal signal levels**

Facilitates setup and verifies performance

**Internal combining circuitry for up to three SCA or RDS channels**

Utilizes metering facility to relate insertion level to 100% modulation for easy adjustment

**Separate 19kHz TTL Output**

Provides positive phase sync for 57kHz RDS carrier to eliminate crosstalk

**Built-in Composite Processor**

Enables variable clipping depth without affecting pilot signal

**Remote control of input selection**

Allows emergency MONO switching and FMX™ System ON/OFF function

**Fully compatible with all Inovonics and most other audio processing systems**

Ultimate sonic flexibility. Unit includes a separate dedicated input specifically matched to accept processed audio from popular processor/generator combination units

Inovonics, Inc.

Audio Recording, Signal Processing and Instrumentation

Inovonics

**Frequency Response:**

$\pm 0.25$ dB, 25Hz-16kHz; -25 or better at 10Hz,  
-60 or better at 19kHz.

**Stereo Separation:**

>70dB, 25Hz-10kHz;  
>60dB, 10kHz-16kHz (L/R, or R/L)

**Crosstalk:**

Main-to-Sub, -70dB or better;  
Sub-to Main, -65dB or better.

**Distortion:**

<0.05% THD in demodulated audio 1dB or more  
below 100% modulation; Mono or Stereo mode,  
25Hz-16kHz

**Noise:**

Better than 85dB below 100% modulation in  
demodulated audio, Mono or Stereo; "spectral" noise  
components in composite output better than 75dB  
below 100% modulation, 25Hz-1MHz.

**Preemphasis:**

50 $\mu$ s or 75 $\mu$ s, user-selectable;  $\pm 0.5$ dB over curve.

**Stereo Pilot:**

19kHz,  $\pm 1$ Hz; injection level adjustable between  
6% and 12% relative to 100% modulation. Pilot  
distortion <0.5% THD.

**Program Inputs:**

"Main" Left and Right program inputs are active-  
balanced, bridging; accept line input levels between  
-10 and +15dBu. (0dBu=0.775V r.m.s.) Alternate,  
single-ended inputs bypass preemphasis and input  
conditioning circuits.

**Input Filtering:**

7-pole, phase-corrected, active-elliptic "FDNR"  
low-pass; third-order Chebyshev high-pass.

**Overmodulation Protection:**

Integral part of input filter overshoot control circuit;  
defeatable with same.

**SCA/RDS Inputs:**

Single-ended; accept input levels between -5 and  
+10dBu for 10% modulation.

**Composite Outputs:**

Two independent single-ended "zero impedance"  
outputs; adjustable between -5 and -12dBu (0.5 to  
3V r.m.s. or 1.2 to 8V p-p).

**Pilot Output:**

TTL-level symmetrical squarewave in phase with  
19kHz Stereo Pilot.

**Remote Control:**

Requires momentary contact closures to ground to  
switch FMX™ System ON or OFF, or to switch to  
MONO operation from Left or Right or L+R, or to  
return to STEREO mode. Generator defaults or  
"wakes up" to STEREO mode with FMX™ System  
ON.

**Digital Synthesis Sampling Rate:**

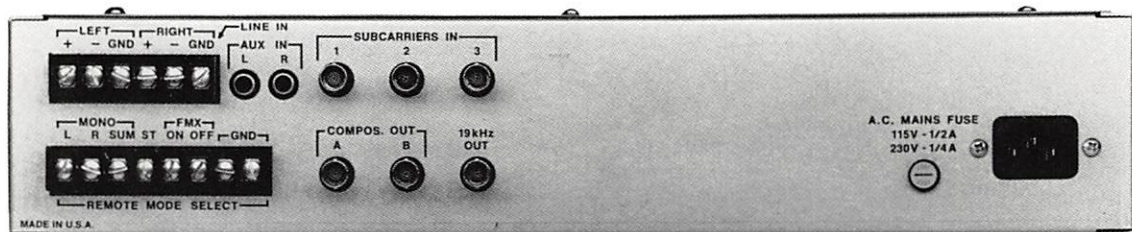
608kHz (16X subcarrier oversampling).

**Power Requirement:**

105-130VAC or 210-255VAC, 50/60 Hz; 8 watts.

**Size and Shipping Weight:**

3-1/2"H x 19"W x 10"D (2U); 10 lbs.



Rear View