

Long-Term Reliability

Advanced Technology

System Versatility

Modular Design

24-Hour Support

3-Year Warranty

**Rapid Customer
Response**



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FM30 BROADCAST TRANSMITTER

Innovative Technology for Broadcast Confidence



The FM30 is an economical stand-alone transmitter that delivers the high level of performance required for today's demanding broadcast needs. Continuing the Crown reputation for high quality and reliability, the FM30 achieves versatility without compromising operating parameters.

The FM30 is available in three configurations: The FM30E is a basic exciter for broadcasting composite audio and SCA signals. For a transmitter with high quality stereo generation, audio processing and peak-limiting, choose the FM30T. For operation as a translator, the FM30R includes a high sensitivity receiver with composite output to drive the exciter. The receiver includes automatic gain control in the mixer stage to maintain maximum signal-to-noise ratio and selectable band-pass ceramic filters for adjacent channel rejection.

The unique Automatic Level Compensation (ALC) circuit protects the FM30 from voltage, temperature, and VSWR variations. If operating parameters move outside the safe operating range of transmitter components, the ALC automatically reduces output power to safe limits until normal conditions are restored. A summary of fault conditions and all metered conditions are available at the rear panel for remote monitoring. Key internal operating parameters are displayed on a front panel digital meter for rapid verification of the transmitter condition.

Reliable operation is a major design criterion in the FM30. With Teflon circuit boards and copper heat spreaders in the RF chain, the unit functions with less heat and improved life span. A power supply, with switching voltage and power regulators for ac or dc operation, provides stability, flexibility, and reliability even when primary power fluctuates.

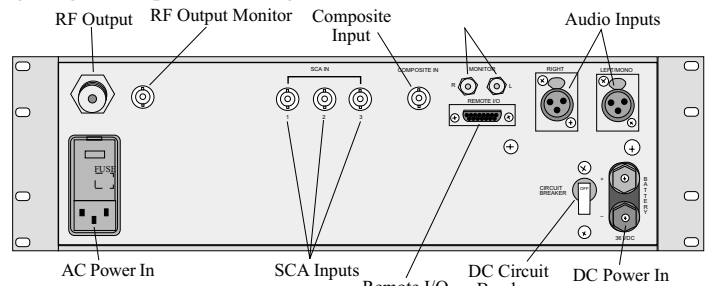
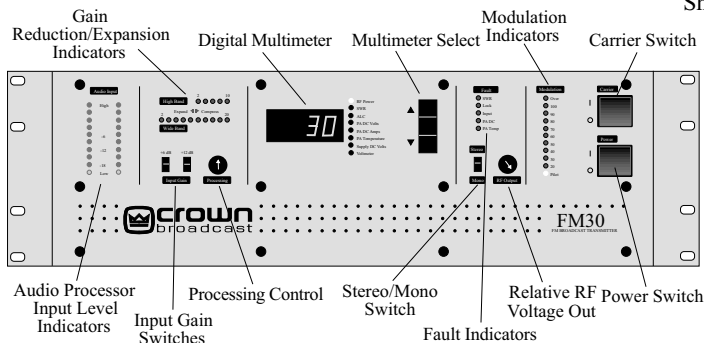
Call Us!

Call us, visit our web site or send us e-mail for more information about the versatile transmitters from Crown Broadcast.

Specifications

General

Frequency Range.....	87 to 108 MHz (75 to 90 MHz Option Available)
RF Power.....	6 to 30 watts with front panel adjustment
RF Output Impedance.....	50 Ohms unbalanced
VSWR.....	1.7:1 Maximum with automatic fold-back at higher VSWR
Frequency Stability.....	Less than +/-250 Hz over operating temperature range
Modulation Type.....	Direct Frequency Modulation of Carrier
Modulation Capability.....	Greater than +/-200 KHz
Modulation Indication.....	LED Indicators with Peak indicators
FM S/N Ratio (FM Noise).....	Better than 60 dB (70 to 80 dB typical)
Asynchronous AM S/N Ratio.....	Better than 55 dB with 100% modulation @ 400 Hz, no de-emphasis, no fm modulation (typically > 60 dB)
Synchronous AM S/N Ratio.....	Better than 55 dB with 100% modulation @ 400 Hz, no de-emphasis, FM modulation = 75 KHz @ 400 Hz (typically > 60 dB)
RF Harmonics/Spurious Products.....	Better than -70 dB (-80 dB typical)
RF Bandwidth.....	+/-120 KHz, better than -35 dB; +/-240 KHz, better than -45 dB
Operating Environment.....	Temperature: 0 to 50 degrees C Humidity: 0 to 80% @ 20 degrees C (noncondensing) Maximum Altitude: 3000 meters
AC Power.....	100 to 120 or 220 to 240 volts AC +/-10%, 50 to 60 Hz
Power Factor.....	Greater than 96% (lagging)
DC Power.....	24 to 36 Volts (28 Volts required for full output)
Power Consumption.....	115 VA @ rated RF power output
Regulatory Type Notification for FCC part 73 & 74.....	Meets FCC, DOC, and CCIR requirements
RF Output Connector.....	Standard Type N, 50 Ohm
Chassis Dimensions.....	5.25 x 16.5 x 17.5 inches (13.5 x 41.9 x 44.5 cm) exclusive of rack mounts, but inclusive of connectors
Weight.....	25 pounds (11.34 Kg) Shipping weight = 31 pounds (14 Kg)



Wide-band Composite Operation

Composite Inputs.....	1
Composite Input Level.....	3.5 Vp-p for +/-75 KHz deviation
Composite Total Harmonic Distortion + Noise.....	Less than 0.05% from 50 Hz to 15 KHz (0.03 typical)
Subcarrier Inputs.....	3
Subcarrier Input Level.....	3.5 Vp-p for 7.5 KHz deviation
Subcarrier Amplitude Response.....	+/-0.3 dB from 40 Hz to 100 KHz

Monaural Operation with Built-in Audio Processor

Audio Input Impedance.....	50 Kohms bridging, balanced
Audio Input Level.....	-10 dBm to +10 dBm selectable for 75 KHz deviation @ 400 Hz
Audio Frequency Response.....	Conforms to 75 uS pre-emphasis curve for +/-0.25 dB from 50 Hz to 15 KHz
Preemphasis.....	Selectable for 25, 50, 75 uS, or Flat

Stereo Operation with Built-in Audio Processor & Stereo Generator

Audio Input Impedance.....	50 Kohms bridging, balanced
Audio Input Level.....	-10 dBm to +10 dBm selectable for 75 KHz deviation @ 400 Hz
Frequency Response.....	+/-0.3 dB from 50 Hz to 10 KHz, +/-1.0 dB from 10 Hz to 15 KHz
Total Harmonic Distortion + Noise.....	0.4% or less @ 15 KHz (0.2 typical)
Stereo Separation.....	Better than 40 dB from 50 Hz to 15 KHz
Linear Cross Talk.....	Main to Sub and Sub to Main, -40 dB or better from 50 Hz to 15 KHz
38 KHz Subcarrier Suppression.....	50 dB down +/-75 KHz deviation
Pilot Stability.....	+/-0.5 Hz @ 9% modulation

The FM30 complies with FCC part 73 and part 74 operation and has built in FSK keying for unattended operation