

XE10

10W FM Exciter/Transmitter

The XE10 is an advanced, fully featured broadcast FM exciter that is also ideally suited for use as a low power stand alone transmitter.

Overview

Use of wideband design techniques means that the frequency setting is easily achieved using easily accessible switches with no further tuning required. The XE10 uses a unique ultra linear modulator to give superb sound reproduction with freedom from overshoots and artefacts. The modulator also features a precision TCXO for exceptional frequency stability.

Operation/Control

The XE10 will operate into any load without damage thanks to its VSWR cut back circuit that protects the power amplifier stage from adverse operating conditions. The XE10 front panel LCD metering allows selection of output forward and reverse power, frequency, heat sink temperature and any optional baseband input module settings. Selected screen also shows any relating fault or condition ('Low', 'High', 'Muted', 'Interlock', 'Phase Lock Fail', 'Fan Fail' etc).

Also provided are: green/red pass/fail led indicators of system normal and CPU status plus a green/red/amber indicator of mute/interlock status. A front panel monitor point for RF output is provided. The rear panel includes a remote control/monitoring socket that allows carrier muting and status signalling to an external system. Additionally TCP/IP, (option /T) or RS232, (option /A) interfaces are available. Conservatively rated components are used to ensure extremely high reliability and to give good efficiency. Variants of the XE10 are available with the choice of Universal AC, 12VDC, 24VDC, or 48VDC supply input. The XE10 comes as standard with a composite and SCA/RDS with a further comprehensive range available.



Specifications

Frequency Range	87.5 to 108MHz in 50kHz steps
Frequency Stability	< $\pm 200\text{Hz}$
Power Output	3W to 10W adjustable
Harmonic and spurious output	< -75dBc (9kHz to 1GHz)
Spurious outputs	< -85dBc (87.5MHz to 137MHz @ greater than 500kHz removed from carrier)
Synchronous Noise	0.3% @ $\pm 40\text{kHz}$ deviation (excluding pilot) at a modulation frequency of 400Hz
Input sensitivity	+ 8dBu (adjustable) for $\pm 67.5\text{kHz}$ deviation: 5.5V peak to peak
MPX Response	< $\pm 0.2\text{dB}$ (5Hz - 15kHz)
AF THD (multiplex version) Power Supply (AC)	< 0.1% @ $\pm 67.5\text{kHz}$ deviation over 40Hz to 10kHz
Power Supply (AC)	88- 264VAC, 47 - 63Hz
Power Supply (DC)	Options for nominal 12VDC, 24VDC and 48VDC.
Dimensions	1U with 500mm intrusion to rack (incl. connectors)
Specification subject to change	

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