

XE300

300W FM Exciter/Transmitter

The XE300 is an advanced, fully featured broadcast FM exciter that is also ideally suited for use as a low power stand alone transmitter.

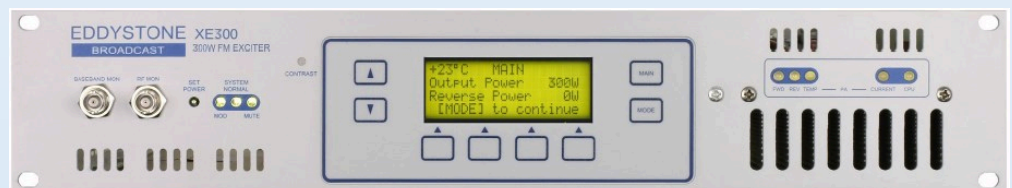
Overview

Use of wideband design techniques means that frequency setting is easily achieved from soft keys on the front panel with no further tuning required. The frequency can also be remotely controlled via the RS232 or TCP/IP ports on the rear of the unit. The XE300 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

It 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 XE300 front panel LCD metering shows forward and reflected power together with internal voltages, temperature and the modulation level. Quick view LED's show advanced status information including CPU ok, system normal, modulation status and external mute. The PA section also has LED's which show forward, reverse, temperature and CPU status. The addition of the unique modulation alarm, gives broadcasters alarm status outputs and indications that will show loss of audio or over modulation.

A front panel monitor point for RF output is provided, as is a fully buffered baseband monitor for accurate monitoring of the modulator input. The rear panel includes a remote control/monitoring socket that allows carrier muting and status signalling to an external system, additionally data sockets are provided for use with systems that have the ability to control excitors via RS232 or TCP/IP. The XE300 is fully compatible with N+1 systems, with remote frequency selection being achieved by either RS232/TCP/IP interface or rear panel logic selection of up to 6 preset frequencies. Very conservatively rated components and a switch mode power supply are used to ensure extremely high reliability and to give good efficiency. A comprehensive range of input options is available.



Specifications

Frequency Range	87.5 to 108MHz in 50kHz steps
Frequency Stability	< $\pm 200\text{Hz}$
Power Output	>300W (adjustable)
Harmonic and spurious output	< -70dBc (30MHz to 1GHz)
Spurious outputs	< -100dBc (87.5MHz to 137MHz @ $f_c \pm 0.5\text{MHz}$)
AM Noise	0.5% @ $\pm 40\text{kHz}$ deviation
Input sensitivity	+ 8dBu (adjustable) for $\pm 75\text{kHz}$ deviation
MPX Response	< $\pm 0.5\text{dB}$ (5Hz - 100kHz)
AF THD (multiplex version)	< 0.15% @ $\pm 75\text{kHz}$ deviation
Power Supply (AC)	90 - 264v, 47 - 63Hz
Dimensions	2U with 550mm intrusion to rack (inc. connectors)
Specification subject to change	