

WV Communications



Model EX2001 - Quad-Mode Command Exciter/Encoder

DESCRIPTION

WV Communications has designed, manufactured and tested the industry's first Quad-Mode Command Exciter /Encoder capable of supporting all four FTS formats; EFTS, IRIG, FSK, & Secure Tone (High Alpha). This Command Exciter/Encoder provides test ranges around the world with the flexibility of supporting numerous customers without incurring costs associated with reconfiguring the range's FTS assets. WV designs incorporate the latest engineering designs using SOC, DDS, DSP and FPGA technologies that provide for the highest performance and reliability on the market today. That design heritage along with WV Communications commitment to quality and customer support, makes WV Communications the answer to all your FTS requirements.

SPECIFICATIONS

EXCITER

Frequency Range:	370.0-450.0MHz, in 1.0kHz Steps
RF Output Power:	-5dBm to +10dBm, in 0.5dB Steps
Carrier Frequency Stability:	±0.0005% Maximum over operating environment
RF Output Impedance:	50Ω Nominal
RF Output VSWR:	2.0:1 Maximum
Deviation Level:	IRIG/FSK/HA: ±30kHz/Tone Nominal Adjustable EFTS: ±50kHz Adjustable
RF Output Harmonics/Spurious:	60dBc Minimum
FM Deviation Response:	±0.5dB Maximum from 5-75kHz Tones



ENCODER

Modulation Types:	IRIG, FSK, Secure (High Alpha) & EFTS
Number of Tones:	IRIG: 20 Tones, Up to 6 Simultaneous Secure: 2 Tones (pairs) out of 8 Tones
Tone Frequency Stability:	± 0.01% Maximum
Tone Turn-On Stability:	Frequency Stable within 0.1% after 1 second
Tone Monitor Output Level:	1V Pk-Pk /30kHz Pk Deviation
Tone Amplitude Variation:	15% Maximum
Tone Distortion:	1% Maximum with any Tone Enabled
Tone Output Signal Delay:	5mSec Maximum from ACS to Stable Output, ± 0.1% sec.
Tone Monitor Impedance:	50Ω Nominal
EFTS Command Format:	64-bit Digital word per RCC 208-06
EFTS Message Format:	144-bit message frame per RCC 208-06
EFTS Bit & Message Rate:	50 messages per second
EFTS Encoding:	Manchester Bi-Phase Level Encoding per IRIG 106
EFTS Pre-Modulation Filtering:	4-pole linear phase filter with a bandwidth of 14.4kHz at the -3 dB points
EFTS Bit Rate Stability:	1,000 ppm Maximum
Encryption Device:	Triple Data Encryption Standard (DES) Unit (TDU)
Status & Control:	Local via Color LCD Touchscreen Remote via USB & Ethernet UDP/IP
Operating Temperature Range:	0-50°C
Operating Relative Humidity:	0-95% Non condensing
Operating Altitude:	0-10,000 Feet
AC Input Power:	115/230 ±10% VAC, 1Ø, 47-63 Hz, Auto Select, at 2/1 Amp Maximum

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