



DIGITAL BROADCAST

TV

CTX Series



CTX Series

Analog TV Multistandard Exciter VHF / UHF Band

CTX Series Specifications



The CTX Analog TV Multistandard Exciter has top class performances in Analog TV modulation to be perfectly used as a stand alone low power compact transmitter or as an exciter for higher power analog TV transmitters.

Graphic LCD Control

All CTX exciters are equipped with a powerful Graphic LCD Control system. Front panel instant frequency programmability, RF power settings, audio settings, deviation controls, alarms status are only some of the main facilities available in the graphic display.

5-10-20 Wps

The CTX exciters are available with 5-10-20 Wps maximum output power. The output RF level is continuously adjustable from 0 to full nominal power simply using the LCD front control panel.

High frequency stability

High frequency stability in short and long terms is assured by Digital Phase Locked Loop circuits with extremely low drift oscillators.

Precision Offset

Precision offset facility down to 1 Hz in the CTX exciter using the DDS technology is available as option. Offset setting available from front panel LCD graphic display.

Ultra High Performance Precorrector

Ultra High Performance Precorrector with quadrature (I/Q) corrections and 12 specific non-linearity adjustments to easily optimize intermodulations and proper sync level. White-Gray-Black-Sync. very high performances pre-correction to be able to get perfect modulation also with class AB non linear high power amplifiers.

Dual-Cast Ready and Digital Ready

The CTX exciter is suitable to work in dual cast systems thanks to its internal ADC switching system with possibility to integrate external digital modulation units with direct front panel management.

Electronic protections

The CTX exciters are automatically protected in case of load mismatching (VSWR) or transmitting frequency error (Unlocked oscillator) or over temperature. Every alarm event is displayed by front panel ALARM led for immediate indication: more details on the occurred alarm are available in the LCD graphic front panel display or remotely (Remote Control option).

Output band pass filter (optional)

When CTX exciters are used as stand alone TV transmitters a highly selective output channel filter is needed. It assures a pure RF spectrum, according to the all international standards and requirements. This filter is available as option.

Power supply

High efficiency switching mode power supply gives greater reliability and reduces the power consumption.

Stereo or Dual Sound

CTX exciters are available with internal dual-sound configuration (optional) suitable for stereo operation or for NICAM insertion.

Meets or exceeds all international standards

For safety and electrical specifications.

TECHNICAL SPECIFICATIONS

AC POWER REQUIREMENTS

AC input voltage	115 / 230 VAC ± 15%, single phase
AC supply frequency	50 Hz or 60 Hz, ±5%

ENVIRONMENT

Cooling	Forced air
Service	Continuous 24/24h
Operating temperature	-5°C to +45°C Derate 3°C per 500mt above 2000mt asl
Relative humidity	Up to 95%

AVAILABLE OPTIONS

/PR-OFFST	Precision offset module for CTX exciters
/HFS-TT	High stability external frequency reference for CTX exciters (< 0.1ppm)
/C-NCM	NICAM Professional Stereo Encoder
/C-BTSC	BTSC Professional Stereo Encoder
/C-IRT	IRT Professional Stereo Encoder
/GPS-CLK-TT	GPS clock receiver for CTX synchronization. 10 MHz and 1pps outputs

● **Small dimensions**

Very small dimensions and low weight to reduce transport costs and to simplify logistics.

● **Protection against shocks**

Mechanically designed to prevent damage to connectors, fans, and all the parts that typically may be damaged during transport or installation.

● **Air filter**

Available as an option on all transmitters.



Available with internal dual-sound configuration (optional) suitable for stereo operation or for NICAM insertion.

Digital TV



DVB T / T2

ISDB-T

DTMB

Analog TV

NTSC

PAL

Secam



RF SIGNAL

Operating frequency range	VHF – Band I (40-90MHz) VHF – Band III (174-240MHz) UHF – Band IV & V (470-860MHz)
TV Standards	B, G, D, K, M, N, I
Frequency setting	1 Hz step

VIDEO PARAMETERS

Input connector	75Ω, BNC
Input return loss	> 35dB (from 0.25 to 6 MHz)
Video input level	1Vpp ± 6dB adjustable
DC restoration circuit	at black porch
Amplitude / frequency response	± 0,5dB (within the video band)
Differential gain at nominal power	< 4%
Differential phase at nominal power	< ± 2°
2TK factor	< 1,5%
Group delay PV 0.75/5 MHz	< ± 30ns (within the video band)
Sync pulse compression at nominal power	< 3%
In-band intermodulation (ref. to nominal power with 3 tones method Vc -5dB; Sc -10dB; Cc -17dB)	< -60dB
Off-band spurious radiation	< -60dB
S/N ratio (weighted)	> 60dB
External reference frequency input	5 or 10MHz
Local oscillator stability (0 – 50 °C)	< 2.5 ppm/year
(with high frequency stability option)	< 0.5 ppm/year
L.O. frequency resolution	50kHz steps (standard version) 1Hz steps (with DDS precision offset option)

AUDIO PARAMETERS

Input connector	XLR
Input impedance	600 Ω balanced
Input level	6dBm ± 6dB (for ± 50kHz frequency deviation)
Modulation	FM with maximum deviation ±50kHz
Pre-emphasis	50 / 75 μs
Amplitude / frequency response	± 0,5dB (30Hz ± 15kHz)
Harmonic distortion	< 0,1% (30Hz ÷ 15kHz by ± 50kHz deviation)
Intermodulation	D2 < 0,3%, D3 < 0,5% between 15kHz and 100kHz at ± 50kHz total deviation
S/N ratio	> 65 dB
Separation between channels	> 75 dB
Common mode rejection ratio of audio inputs (balanced mode)	> 56 dB

All specifications are subject to change without notice

Contact Information

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