

PROFESSIONAL FM STEREO EXCITER

COLOBRI' 30 - 50 - 150 - 300 WATT



GENERAL FEATURES

- **HIGH QUALITY PROFESSIONAL EXCITER:** STATE OF THE ART OF PERFORMANCES
- **NOMINAL RF POWER:** 30W, 50W, 100W, 150W, 300W
- **COMPACT SIZE:** ONLY ONE 19" RACK UNIT CABINET (for all versions)
- **VERY LOW SIGNAL TO NOISE:** TYP. 85 dB
- **HIGH STEREO SEPARATION:** TYP. 70 dB
- **LOW DISTORTION:** THD, IMD & TIM TYP. 0,03%
- **TOTAL SPECTRAL PURITY:** > -100 dBc SPURIOUS, > - 75 dBc HARMONICS
- **SEVEN SELECTABLE COMPLETE SET-UP:** READY FOR USE IN 7+1 SYSTEM
- **REMOTE CONTROL:** TWO INDEPENDENT RS 485 PORTS
- **FULL - RANGE POWER SUPPLY:** 90-260 VAC MAINS VOLTAGE
- **COMPLIANT WITH ALL THE STANDARD:** ETSI - CCIR - FCC

OPTIONS

- **FULL FEATURES RDS / RBDS CODER:** EASY PROGRAMMABLE BY PC
- **DIGITAL AUDIO INPUTS:** AES/EBU & OPTICAL TOS-LINK
- **WEB- TELEMETRY INTERFACE:** TELEMETRY OVER IP
- **EXTERNAL SYNCHRONISATION:** FOR SFN APPLICATIONS
- **OIRT & JPN FREQUENCY BAND:** VERSION
- **LPFM CODE STATION:** FCC IDENTIFICATIONS CODE

COLIBRI' 30 - 50 - 150 - 300 Watt

GENERAL

Power Output: 30-50-100-150-300 W continuously adjustable from front panel.
RF Output Impedance: 50 ohm.
RF Output Connector: "N" type.
Monitor RF: -54 dBc, BNC connector
VSWR: 1.5:1 Maximum with automatic fold-back at higher VSWR
Frequency Range: 87.5 ÷ 108.00 MHz, on request 66 ÷ 74 MHz (OIRT), 76 ÷ 90 MHz (JPN) Programmable in 10 KHz steps.
Frequency Stability: ±1 ppm from -5 to 50°C.
Reference: can be external synchronized with 1-2-2.5-5-10 MHz with self selection.
Frequency Control: Synthesizer μ processor control.
Type of Modulation: Direct frequency modulation of carrier frequency, F3E stereo and mono.
Lock in Time: Typ. 4 second.
Off Lock Attenuation: ≥ -80 dBc.
Modulation Capability: ±150 KHz, other on request
Modulation Mode: Mono, Stereo, Multiplex, SCA, RDS, Aux.
Preamphasis: Flat/50/75 μ s selectable from front panel.
Asynchronous AM S/N Ratio: -70 dB below reference carrier with 100% AM modulation @ 400 Hz, without FM modulation.
Synchronous AM S/N Ratio: -65 dB below reference carrier 100% AM modulation @ 400 Hz with FM modulation ±75 KHz @ 400 Hz.
RF Harmonics: Exceeds ETSI/CCIR/FCC requirements.
RF Spurious: Exceeds ETSI/CCIR/FCC requirements.

MONAURAL OPERATION

Audio Input Impedance: 600 ohm balanced, 10 Kohms unbalanced.
Audio Input Level: -12 to +12 dBm.
Input Connector: XLR female.
Audio Frequency Response: ±0.15 dB, 30 Hz to 15 KHz.
Total Harmonic Distortion + Noise: 0.03% @ 400 Hz
Intermodulation Distortion: 0.03%, 1 KHz/1.3 KHz, 1:1 ratio
Transient Intermodulation Distortion: 0.03%, 2.96KHz square wave and 14 KHz sine wave.
Distortion: 0.03%, 2.96KHz square wave and 14 KHz sine wave.
FM S/N Ratio: -89 dB RMS detector, -85 dB below ±75 KHz deviation, 50 μ s de-emphasis, weighted.

MULTIPLEX OPERATION

Composite Input Impedance: 1.2 Kohm unbalanced.
Composite Input Level: -12 to +12 dBm
Input Connector: BNC female.

Composite Amplitude Response: ±0.2 dB, 30 Hz to 100 KHz.
Total Harmonic Distortion + Noise: 0.03% @ 400 Hz
Intermodulation Distortion: 0.03%, 1 KHz/1.3 KHz, 1:1 ratio
Transient Intermodulation Distortion: 0.03%, 2.96 KHz square wave and 14 KHz sine wave.
FM S/N Ratio: -89 dB RMS detector, -85 dB below ±75 KHz deviation, 50 μ s de-emphasis, weighted.

STEREO OPERATION

Audio Input Impedance: 600 ohm balanced, 10 Kohm unbalanced.
Audio Input Level: -12 to +12 dBm.
Input Connector: XLR female.
Audio Frequency Response: ±0.15 dB, 30 Hz to 15 KHz.
Total Harmonic Distortion + Noise: 0.03% @ 400 Hz
Intermodulation Distortion: 0.03%, 1 KHz/1.3 KHz, 1:1 ratio
Transient Intermodulation Distortion: 0.03%, 2.96 KHz square wave and 14 KHz sine wave.
FM S/N Ratio: -79 dB RMS detector, -75 dB below ±75 KHz deviation, 50 μ s de-emphasis, weighted.
Stereo Separation: 30÷80 Hz ≥ -53 dB, 80Hz±15 KHz ≥ -65 dB (Typ. 70 dB).
Crosstalk attenuation: Main to Sub -40 dB 30 Hz to 15 KHz (typ. -55 dB 100 Hz to 8 KHz).
38 KHz Suppression: ≥ -70 dB (typ. -85 dB).
Pilot Frequency: 19 KHz ± 1 Hz
Output Pilot: 1 Vpp., BNC female
Audio Filter Attenuation: ≥ -55 dB @ 19 KHz, > -45 dB 20 KHz to 100 KHz.
Modes: Stereo, Mono L+R, mono L, mono R.

AES/EBU OPERATION

Input Connector: XLR female, optical TOS-LINK.
Data Format: S/PDF, AES/EBU, IEC958, EIAJCP340/1201.
D/A Converter: 24 bit.
Sampling Frequency: from 32 to 96 KHz.

SCA, RDS, AUX OPERATION

Input Impedance: 3 Kohm.
Input Level: -3 to +6 dBm.
Frequency Response: ±0.2 dB, 40 KHz to 100 KHz.
Input Connector: BNC female. Most SCA, RDS, AUX, performance parameters are determined primarily by the generator used.

AUXILIARY CONNECTIONS

USB: connector Type B female front panel.
N°2 RS485: Serial Interface connector RJ45 back panel.
Telemetry Interface: connector DB25F back panel.
External Clock: connector SMA female (optional).

OPTIONS

External clock: for PLL synchronizing purpose 1-2-2.5-5-10 MHz external reference oscillator with self selection of the incoming frequency.

- FULL FEATURES RDS / RBDS
- DIGITAL AUDIO INPUTS
- WEB- TELEMETRY INTERFACE
- EXTERNAL SYNCHRONISATION
- OIRT & JPN FREQUENCY BAND
- LPFM CODE STATION

ELECTRICAL

AC Input Power: 90÷260 VAC 50/60 HZ single phase.
AC Apparent Power Consumption: 70VA @ 30W, 90VA @ 50W, 220VA @ 100W, 280VA @ 150W, 380VA @ 300W
Cos Φ > 0.98
Cooling: Forced air with internal long life brushless ball bearing fan.
Acoustic noise: < -56 dBa @ 1 meter.

ENVIRONMENTAL

Operating temperature: -5°C to +50°C.
Max Operating Altitude: 2000 mt.
Relative Humidity Range: 0 to 95% non condensing.

PHYSICAL DIMENSION

Mounting: Standard 19" chassis 1 U rack.
Size: 485 mm. W x 385 mm. D x 44 mm. H.
Weight: ~ 4,0 Kg.
Features and specifications are subject to change without notice