

POP30

30 W BASIC FM EXCITER



Main Features

- **HIGHT PERFORMANCE:** TOP QUALITY AT REASONABLE PRICE
- **NOMINAL RF OUTPUT POWER:** 30 W
- **COMPACT SIZE:** ONLY ONE 19" RACK UNIT CABINET
- **VERY LOW SIGNAL TO NOISE:** TYP. 80 dB
- **HIGH STEREO SEPARATION:** TYP. 65 dB
- **LOW DISTORTION:** THD, IMD & TIM TYP. 0,05%.
- **TOTAL SPECTRAL PURITY:** > -100 dBc SPURIOUS, > - 75 dBc HARMONICS
- **REMOTE CONTROL:** DB9 TELEMETRY PORT
- **FULL – RANGE POWER SUPPLY:** 90-260 VAC MAINS VOLTAGE
- **COMPLIANT WITH ALL THE STANDARD:** ETSI – CCIR - FCC.

Options

- **DIGITAL STEREO CODER:** SUPERIOR STEREO QUALITY
- **FULL FEATURES RDS/RBDS CODER:** EASY PROGRAMMABLE BY PC
- **OIRT & JPN:** FREQUENCY BAND VERSION
- **LPFM CODE STATION:** FCC IDENTIFICATIONS CODE

STEREO CODER
OPTIONAL

INTERNAL RDS
OPTIONAL



POP Exciter Family is a compact FM Exciter with very good performance at low-cost designed for cost-effective applications as low power station as well as driver for low and medium power Trasnmitters. It is realized in the output power sizes from 30 W and 50W and it is housed into an ultra-compact cabinet of only one unit height. POP is available also in JPN and OIRT frequencies. Its output power can be easily set from 0 to the nominal power.

To optimize to the maximum the price the POP is available in two version: MONO/MPX and STEREO. The Stereo Coder can be easy upgraded on site also after the first installation.

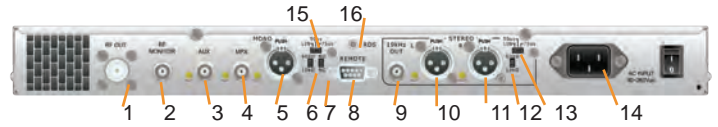
POP allows the possibility to be easily upgraded with useful options, in order to meet all the customer needs, like on- site integrated RDS Encoder and FCC station coding.

The POP's integrated CPU card allows a large number of monitoring parameter. An user-friendly menu visualized in a clear LCD display allows the configuration and setting of all the working parameters and the monitoring of the operating values.

**Front Panel**

1. LCD Display
2. Encoder

Two-row, sixteen-character LCD Display
Rotary encoder

**Rear Panel Connectors**

- | | |
|--------------------------------|--|
| 1. RF OUT | RF Output. N (50 Ohm) type connector |
| 2. RF Monitor | RF Output Monitor. BNC (50 Ohm), female. |
| 3. AUX Input | RDS/SCA Input. BNC female connector. |
| 4. MPX Input | Unbalanced Input. BNC female |
| 5. MONO Input | Analog Audio Input |
| 6. IMPEDANCE Audio Setting | 600 / 10K |
| 7. Interlock | NO. NC |
| 8. Remote Connectors | 1 DB9 for remote control. |
| 9. 19 kHz Output (Optional) | 19 kHz Pilot Output. BNC female connector. |
| 10. Left (Optional) | Stereo Analog Audio Input |
| 11. Right (Optional) | Analog Audio Input |
| 12. IMPEDANCE Audio Setting | 600/10K |
| 13. Preemphasys setting | Lin / 50uS / 75uS |
| 14. AC Mains | AC Main Source. VDE Mains socket. |
| 15. Audio mode | Lin / 50uS / 75uS |
| 16. RDS Programming (OPTIONAL) | Plug Jack st 3.2mm |

TECHNICAL SPECIFICATIONS**GENERAL**

Power Output: 30 W adjustable from front panel.
 RF Output Impedance: 50 ohm.
 RF Output Connector: "N" type.
 Monitor RF: -46 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.
 Frequency Control: Synthesizer µprocessor control.
 Type of Modulation: Direct frequency modulation of carrier frequency, F3E stereo and mono.
 Lock in Time: Typ. 4 second.
 Off Lock Attenuation: ≥ -60 dBc.
 Modulation Capability: ±150 KHz.
 Modulation Mode: Mono, Stereo, Multiplex, Aux.
 Preemphasis: Flat/50/75µs selectable internal jumper.
 Asynchronous AM S/N Ratio: -80 dB below reference carrier with 100% AM modulation @ 400 Hz, without FM modulation.
 Synchronous AM S/N Ratio: -65 dB below reference carrier with 100% AM modulation @ 400 Hz with FM modulation ±75 KHz @ 400 Hz.
 RF Harmonics: Exceeds EBU/CCIR/FCC requirements.
 RF Spurious: Exceeds ETSI/CCIR/FCC requirements.

MONAURAL OPERATION

Audio Input Impedance: 600 ohm balanced, 10 Kohms unbalanced.
 Audio Input Level: -3 to +9 dBm.
 Input Connector: XLR female.
 Audio Frequency Response: ±0.1 dB, 30 Hz to 15 KHz.
 Total Harmonic Distortion + Noise: 0.05% @ 400 Hz
 Intermodulation Distortion: 0.05%, 1 KHz/1.3 KHz, 1:1 ratio
 Transient Interm. Dist.: 0.05%, 2.96 KHz square wave and 14 KHz sine wave.
 Distortion: 0.05%, 2.96KHz square wave and 14 KHz sine wave.
 FM S/N Ratio: -82 dB RMS, -80 dB at ±75 KHz dev., 50 µs de-emphasis, weighted.

MULTIPLEX OPERATION

Composite Input Impedance: 1.2 Kohm unbalanced.
 Composite Input Level: +6 to +12 dBm
 Input Connector: BNC female.
 Composite Amplitude Response: ±0.2 dB, 30 Hz to 100 KHz.
 Total Harmonic Distortion + Noise: 0.05% @ 400 Hz
 Intermodulation Distortion: 30 Hz to 15 kHz * 0.05% @ 400 Hz
 Transient Interm. Dist.: 0.05%, 2.96 KHz square wave and 14 KHz sine wave.
 FM S/N Ratio: -83 dB RMS detector, -80 dB AT ±75 KHz dev., 50 µs de-emphasis, weighted.

STEREO OPERATION

Audio Input Impedance: 600 ohm balanced, 10 Kohm unbalanced.
 Audio Input Level: -3 to +9 dBm.
 Input Connector: XLR female. Audio Frequency Response: ±0.1 dB, 30 Hz to 15 KHz.

Total Harmonic Distortion + Noise: 0.05% @ 400 Hz
 Intermodulation Distortion: 0.05%, 1 KHz/1.3 KHz, 1:1 ratio
 Transient Interm. Dist.: 0.05%, 2.96 KHz square wave and 14 KHz sine wave.
 FM S/N Ratio: -73 dB RMS, -71 dB at ±75 KHz dev., 50 µs de-emphasis, weighted.
 Stereo Separation: 30+80 Hz ≥ -50 dB, 80Hz+15 KHz ≥ -60 dB (Typ. 65 dB).
 Crosstalk attenuation: Main to Sub -50 dB 30 Hz to 15 KHz
 (typ. -55 dB 100 Hz to 8 KHz).
 38 KHz Suppression: ≥ -65 dB
 (typ. -80 dB).
 Pilot Frequency: 19 KHz ± 1 Hz
 Output Pilot: 1 Vpp., BNC female
 Audio Filter Attenuation: ≥ -44 dB @ 19 KHz, > -27 dB 20 KHz to 100 KHz.
 Modes: Stereo, Mono

AUXILIARY INPUT

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.

TELEMERTY CONNECTOR

DB9: female connector back panel for remote connections.

OPTIONS

DIGITAL STEREO CODERY
 RDS/RBDS CODER PROGRAMMABLE BY PC
 OIRT & JPN VERSION
 LPFM CODE STATION

ELECTRICAL

AC Input Power: 90÷260 VAC 50/60 HZ single phase.
 AC Apparent Power Consumption: 70 VA @ 30W.
 Active power Consumption: 60W @ 30W.
 Cooling: Forced air with internal long life brushless ball bearing fan.
 Acoustic noise: < -56 dBA @ 1 meter.

ENVIRONMENTAL

Operating temperature: -10°C to +50°C.
 Max Operating Altitude: 3000 mt.
 Relative Humidity Range: 0 to 95% non condensing.

PHYSICAL DIMENSION

Mounting: Standard 19" chassis 1 U rack.
 Size: 485 mm. W x 405 mm. D x 44 mm. H.
 Weight: ~ 4,0 Kg.

Packing single Unit: 560 W x 510D x 70mm. H, Weight: ~4.5 Kg.