

## VERY HIGH EFFICIENCY, MINIMAL SPACE, ECONOMIC AND POWERFUL LATEST TECHNOLOGY IN FM TRANSMITTERS



### MAIN FEATURES OF THE BLUE PLUS 1000 LCD TRANSMITTER:

- LCD COLOR TOUCH SCREEN FOR EASY DEFINITION OF ADJUSTMENT AND READING PARAMETERS
- EXTREMELY LOW DISTORTION: THD, IMD AND TIM
- HIGH STEREO CHARACTERISTICS: TYP. SEPARATION 60 DB
- INPUTS L /R, RDS/SCA, AUX, MPX, AES-EBU (XLR AND OPTICS), AUDIO IP
- SIX MEMORIES OF AVAILABLE PARAMETERS (FREQUENCY, SENSITIVITY, POWER, ETC.) THAT ALLOWS STORING DIFFERENT CONFIGURATIONS
- READY FOR N + 1 SYSTEMS
- COMPLETELY BROADBAND
- REMOTE CONTROL FOR SUPERVISION AND TELEGESTION VIA LAN, RS485
- RF AMPLIFIER USING THE LATEST GENERATION OF LD MOS RF POWER SEMICONDUCTORS
- AUTOMATIC POWER CONTROL (APC) ALLOWS TO MAINTAIN STABLE RF POWER PRESETED UP TO ROE 1.5: 1. HIGHER VALUE ROE CAUSES POWER REDUCTION
- NOMINAL RF OUTPUT POWER OF 1000 W. ADJUSTABLE FROM 0 TO 1000 W
- INCLUDES FILTERS OF RF HARMONICS AND POWER METER
- HIGH SPECTRAL PURITY
- COMPLIES WITH CCIR AND FCC REGULATIONS

## GENERAL

**Power Output:** 1000W adjustable from front panel.  
**RF Output Impedance:** 50 ohm.  
**RF Output Connector:** "N" type.  
**Monitor RF:** BNC connector.  
**VSWR:** 10:1  
**Frequency Range:** 87.5 ÷ 108.00 MHz.  
Programmable in 10 kHz steps.  
**Frequency Stability:** ±1 ppm from -5 to 45°C.  
**External Reference:** 10 MHz BNC connector back panel.  
**Type of Modulation:** analog synthesis.  
**Off Lock Attenuation:** ≥ -80 dBc.  
**Modulation Capability:** ±150 KHz.  
**Limiter built in**  
**Power Good Detector:** adjustable from 20÷90% of the power.  
**Audio Presence Detector:** adjustable time from front panel.  
**External AGC:** Automatic, with fine ADJ from front panel.  
**Modulation Mode:** Mono, Stereo, Multiplex, SCA, RDS, Aux.  
**Preemphasis:** Flat/50/75µs selectable from front panel.  
**Asynchronous AM S/N Ratio:** -70 dB.  
**Synchronous AM S/N Ratio:** -65 dB .  
**RF Harmonics:** Exceeds EBU/CCIR/FCC requirements.  
**RF Spurious:** Exceeds EBU/CCIR/FCC requirements.

## MONAURAL OPERATION

**Audio Input Impedance:** 600 ohm - ≥10 Kohm balanced.  
**Audio Input Level:** -6 to +12 dBm  
**Input Connector:** XLR female.  
**Audio Frequency Response:** ±0.1 dB, 30 Hz to 15 KHz.  
**Total Harmonic Distortion + Noise:** 0.01% @ 400 Hz.  
**Intermodulation Distortion:** 0.01%, 1 KHz/1.3 KHz, 1:1 ratio.  
**Transient Intermodulation Distortion:** 0.01% 2.96KHz square wave and 14 KHz sine wave.  
**Distortion:** 0.01% 2.96KHz square wave and 14 KHz sine wave.  
**FM S/N Ratio:** -85 dB rms detector, -80 dB below ±75 KHz deviation.

## STEREO OPERATION

**Audio Input Impedance:** 600 ohm - ≥10 Kohm balanced.  
**Audio Input Level:** 6 to +12 dBm  
**Input Connector:** XLR female.  
**Audio Frequency Response:** ±0.1 dB, 30 Hz to 15 KHz.  
**Total Harmonic Distortion + Noise:** 0.01% @ 400 Hz.  
**Intermodulation Distortion:** 0.01%, 1 KHz/1.3 KHz, 1:1 ratio.  
**Transient Intermodulation Distortion:** 0,01% 2.96KHz square wave and 14 KHz sine wave.  
**FM S/N Ratio:** -85 dB rms detector, -80 dB below ±75 KHz deviation.  
**Stereo Separation:** -45 dB@30Hz ≥ -60dB@ Freq ≥ 100 Hz  
**Crosstalk attenuation:** ≥ 45 dB@15kHz.  
**38 KHz Suppression:** ≥ -85 dB.  
**Pilot Frequency:** 19 KHz ± 1 Hz  
**Output Pilot:** 2Vpp adjustable from front panel.

## MULTIPLEX OPERATION

**Composite Input Impedance:** 2 Kohm unbalanced.  
**Composite Input Level:** -6 to +18 dBm  
**Input Connector:** BNC female.  
**Composite Amplitude Response:** ±0.1 dB, 30 Hz to 100 KHz.  
**Total Harmonic Distortion + Noise:** 0.01% @ 400 Hz.  
**Intermodulation Distortion:** 0.01%, 1 KHz/1.3 KHz, 1:1 ratio.  
**Transient Intermodulation Distortion:** 0.01% 2.96KHz square wave and 14 KHz sine wave.  
**FM S/N Ratio:** -85 dB rms detector, -80 dB below ±75 KHz deviation

## AES/EBU OPERATION (optional Analog)

**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.

## AUDIO IP (optional)

**Lan:** Audio IP and Web interface to control and configure  
**Transport protocol:** RTP over UDP;  
**Protocols:** RFE Codec: Alaw, OGG VORBIS, MP3, AAC  
**SHOUTCAST/ICECAST Codec:** TX MP3, RX AAC, AAC+, MP3, OGG(icecast 2.x)

## SCA, RDS, AUX OPERATION

**Input Impedance:** ≥ 2 Kohm.  
**Input Level:** -6 to +12 dBm.  
**Frequency Response:** ±0.1 dB, 50 KHz to 100 KHz.  
**Input Connector:** BNC female.

## AUXILIARY CONNECTIONS

**RS485:** DB9 connector back panel.  
**CAN BUS (optional):** DB9 connector back panel.  
**Telemetry Interface:** connector DB25 back panel.  
**LAN:** RJ45 connector back panel  
**MPX OUT:** connector BNC back panel.

## OPTIONS

**RDS/RBDS Programmable Coder via PC.**  
**OIRT or JPN version.**  
**SNMP**  
**Audio Over IP**  
**AES/EBU (only analog)**

## ELECTRICAL

**AC Input Power:** 90÷260 VAC 50/60 HZ single phase.  
**AC Apparent Power Consumption:** 100VA @ 50W,  
**Cos Φ** > 0.98.  
**Cooling:** Forced air.  
**Acoustic noise:** < -56 dBA @ 1 meter.

## ENVIRONMENTAL

**Operating temperature:** -10°C to +50°C.  
**Max Operating Altitude:** 2000 mt.  
**Relative Humidity Range:** 0 to 90%.

## PHYSICAL DIMENSION

**Mounting:** Standard 19" chassis 2 U rack.  
**Size:** W x 483 mm. D x 470 mm. H x 88 mm.  
**Weight:** 15Kg.

## Software update

Core micro : Via Web