

JAZZ 500 2G

500 W PROFESSIONAL FM STEREO EXCITER

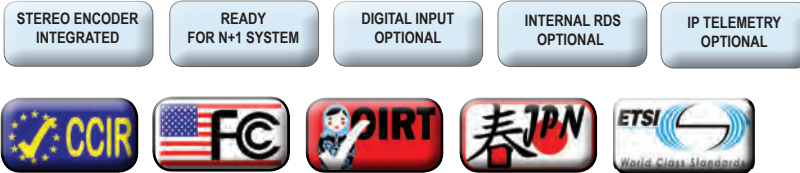


Main Features

- **HIGH QUALITY PROFESSIONAL EXCITER:** STATE OF THE ART OF PERFORMANCE
- **NOMINAL RF POWER:** 500W,
- **COMPACT SIZE:** ONLY ONE 19" RACK UNIT CABINET
- **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.
- **TCP/IP TELEMETRY INTERFACE**
- **FULL-RANGE POWER SUPPLY:** 90-260 VAC MAINS VOLTAGE
- **COMPLIANT WITH ALL THE STANDARD:** ETSI – CCIR - FCC.
- **DIGITAL STEREO CODER:** SUPERIOR STEREO QUALITY

Options

- **FULL FEATURES RDS / RBDS CODER:** 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



JAZZ Exciter is a Family of professional FM stereo exciters that guarantees a superior transmission quality and top performances. This family is realized in the output power sizes from 30 W to 500W and it is housed into an ultra-compact cabinet of only one unit height. JAZZ is available also in JPN and OIRT frequencies. Its output power can be easily set from 0 to the nominal power.

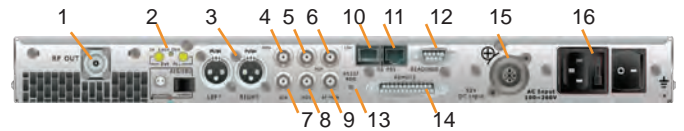
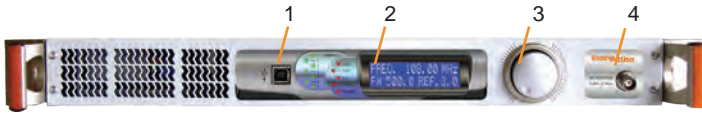
JAZZ is the ultimate solution for a clean sound with professional features and the possibility to be easily upgraded with useful options, in order to meet all the customer needs, like on-site AES/EBU digital audio input (also optical), integrated RDS Encoder, built-in TCP-IP Telemetry interface, FCC station coding.

JAZZ can be used as ultra-compact stand alone station, as well as driver in complex high power transmitters and N+1 systems. In any application JAZZ is the ultimate solution that meets the requirements of the most demanding customers and guarantees professional features at an affordable price

The JAZZ's integrated CPU card allows a large number of monitoring and telemetry possibilities of the single equipment or of the entire system in which the JAZZ Exciter is installed. 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.

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Technical Specifications



Front Panel

1. USB Port USB Connector for upgrade function.
2. LCD Display Two-row, sixteen-characters LCD Display
3. Encoder Rotary encoder
4. RF Monitor RF Output Monitor. BNC female (50 Ohm)

Rear Panel Connectors

- | | |
|-------------------------------|--|
| 1. RF OUT | RF Output. N (50 Ohm) type connector, female. |
| 2. AES/EBU Input (Optional) | Digital Input. Balanced BNC Plug (TOS optical Input) |
| 3. Right/Left - Mono Input | Analog Audio Input XLR (3 pins male connector) |
| 4. MPX Input | MPX Unbalanced Input. BNC female connector. |
| 5. AUX Input | BNC female connector. |
| 6. 19 kHz Pilot Output | BNC female connector. |
| 8. RDS/external Input | RDS Input. BNC female type connector. |
| 9 AF Monitor | BNC female Type connector |
| 10 WEB Telemetry (OPTIONAL) | RJ45 for Lan connection |
| 11 RS485 | RJ45 for RS485 connection. |
| 12 Reading | DB9 Female Connector |
| 13 RDS Programming (OPTIONAL) | Jack/ST/Female 6,3mm |
| 14 Telemetry | DB25 Female Connector |
| 15 DC Input (OPTIONAL) | Amphenol connector eco-mate serie C16-1 |
| 16. AC Mains | AC Main Source. VDE Mains socket. |

TECHNICAL SPECIFICATIONS

GENERAL

Power Output: 500W continuously adjustable from front panel.
 RF Output Impedance: 50 ohm.
 RF Output Connector: "N" type.
 Monitor RF: -44 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 ext. synchronized with 1-2-2.5-5-10 MHz with self selection.
 Frequency Control: Synthesizer µprocessor control.
 Type of Modulation: Direct frequency modulation of carrier, 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.
 Preemphasis: Flat/50/75µs 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, 15 Kohms unbalanced.
 Audio Input Level: -12 to +12 dBm. (Other range on request)
 Input Connector: XLR female.
 Audio Frequency Response: ±0.15 dB, 30 Hz to 15 KHz.
 Total Harmonic Distortion + Noise: 0.03% @ 400 Hz
 FM S/N Ratio: -89 dB RMS, -85 dB at ±75 KHz dev., 50 µs de-emphasis, weighted.

MULTIPLEX OPERATION

Composite Input Impedance: ~ 5 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 Interm. Dist.: 0.03%, 2.96 KHz square wave and 14 KHz sine wave.
 FM S/N Ratio: -89 dB RMS, -85 dB at ±75 KHz dev., 50 µs de-emphasis, weighted.

STEREO OPERATION

Audio Input Impedance: 600 ohm balanced, 15 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 Interm. Dist.: 0.03%, 2.96 KHz square wave and 14 KHz sine wave.
 FM S/N Ratio: -79 dB RMS, -75 dB at ±75 KHz dev., 50 µs 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

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

ELECTRICAL

AC Input Power: 90÷260 VAC 50/60 HZ single phase.
 AC Apparent Power Consumption: 820A @ 500W
 Cos Φ > 0.98
 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: ~ 8 Kg.

Packing single Unit: 560 W x 510 D x 70 mm. H, Weight: ~ 8.5 Kg.