

TALAR

FM Transmitter



The **TALAR** FM Stereo Radio Transmitter is a reference point for the global market of FM Transmitters.

The display board on the front panel can indicate and change frequency, forward and reflected power, amplifier temperature, modulation level, alarms level, emphasis, remote enable.

The rear panel contains XLR balanced inputs with input level controls, BNC for MPX output from internal stereo coder (if option is present), BNC for MPX input, 2xBNC for SCA operation. There is also a DB9 for wired external control and a DB9 for serial RS485 remote control.

As far as audio performances are concerned, only one word is needed: "transparent".

With a signal-to-noise ratio of 80dB, the whole dynamic of the modern digital audio sources are reproduced with high fidelity.

With a crosstalk of 60dB (with stereo option) there is no chance to "misunderstand" the source of the signals.

The RF output is via an N Female or 7/16" type connector.

The power amplifier is based on LDMOS devices. A fresh air tunnel through the transmitter keeps cool air running right through the heatsink. The amplifier is protected from damage by temperature control systems and antenna fault (SWR) monitoring. There is

an added control on reflected power and heatsink temperature, that is foldback thresholds that permits to stay on air at a reduced output power even if conditions are not optimal.

The switching-type power supply automatically adapts itself to any input voltage from 90 to 260V.

Neetra equipment is severely tested with highly accurate and professional laboratory testing instrumentation and is guaranteed by the ISO-9001 Quality Certification which ensures a perfectly managed production phase.

Neetra equipment for Radio and TV broadcasting is currently used by valuable worldwide customers, which is the best certification for in-field performance over different operating environments.

Models

TALAR50	50W
TALAR300	300W
TALAR500	500W
TALAR1000	1000W



Main characteristics

- Availability of 50 to 1000W with extremely simplified wiring
- Repeatability of the performances, guaranteed by the completely mechanized assembling
- Good values of distortion and high S/N ratio
- Analogic telemetry signals available on DB9
- RS485 connection for remote control
- Automatic output power level control
- Control of all the functions via 2Rx16C display
- All the final stages with LDMOS technology
- Stereo Coder can be integrated in the cabinet

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Technical characteristics

RF SECTION

Frequency Range	87.5 - 108MHz
Standard Stability	±2.5ppm (0° - 50°C)
High Stability Option	±1.0ppm
Long Term Stability	±0.5ppm (1 year)
Output Power	50W to 1000W CW
Power Level	0 - 100% (from front panel)
RF Input Connector / Impedance	N Female or 7/16" Female type / 50 Ohm
RF Output Connector / Impedance	BNC / -48dBc ±1dB
Off Lock Attenuation	> 60dB
Asynchronous AM S/N Ratio	> 65dB
Synchronous AM S/N Ratio	> 60dB
Spurious and Harmonics Suppression	Meets or exceeds all FCC and ETSI requirements
Modulation Capability	Meets or exceeds all FCC and ETSI requirements

MPX OPERATION SECTION

Audio Input Connector / Impedance	BNC 10kOhm unbalanced
Audio Input Level	2.2Vpp nominal -6dB/+12dB adjustable from rear panel
Frequency Amplitude Response	±0.2dB 30Hz - 100kHz
THD (Total Harmonic Distortion)	< 0.1% 30 - 100kHz (< 0.05% 30 - 53kHz)

MONO OPERATION SECTION

Audio Input Connector / Impedance	XLR / Balanced 600 Ohm / 10kOhm (jumper)
Audio Input Level	2.2Vpp nominal -6dB/+12dB adjustable from rear panel
Frequency Amplitude Response	±0.3dB 30Hz - 15kHz
THD (Total Harmonic Distortion)	< 0.1% 30 - 100kHz (< 0.05% 30 - 53kHz)
Pre-emphasis	Flat, 50us, 75us (ON/OFF from display, 50/75 from jumper)
S/N Ratio with CCIR unweighted	> = 75dB
S/N Ratio with CCIR weighted	> = 73dB

INTERNAL CODER OPERATION

Audio Input Connector / Impedance	XLR / Balanced 600 Ohm / 10kOhm (jumper)
Audio Input Level	2.2Vpp nominal -6dB/+12dB adjustable from rear panel
MPX Output Connector / Impedance	BNC / 50 Ohm
MPX Output Level	5.6Vpp
Frequency Amplitude Response	±0.3dB 30Hz - 15kHz
THD (Total Harmonic Distortion)	< 0.1% 30 - 100kHz (< 0.05% 30 - 53kHz)
Pre-emphasis	Flat, 50us, 75us (ON/OFF from display, 50/75 from jumper)
Stereo Separation	> 50dB (typ. 60dB) 30Hz - 15kHz
S/N Ratio with CCIR unweighted	> = 73dB
S/N Ratio with CCIR weighted	> = 71dB

SCA OPERATION (2 Inputs)

SCA Input Connector / Impedance	BNC / 10kOhm unbalanced
Audio Input Level	2Vpp nominal for ±7.5kHz deviation
Frequency Amplitude Response	±0.2dB 50k - 100kHz

OUTPUT SIGNAL

RF Monitor Level / Connector	-60dBc / BNC 50 Ohm
MPX Analogue Output / Connector	0dBu from internal stereo coder / BNC 50 Ohm
Pilot Carrier Output	1Vpp digitally synthesized

GENERAL

Power Supply Voltage	90 - 260VAC, 50/60Hz ±4%
Power Consumption	50W (130VA), 300W (450VA), 500W (700VA), 1000W (1450VA)
Remote Control Port	RS485 / DB9 Connector
USB Port	USB-B Connector
Cabinet	Rack 19"-1U (50W), Rack 19"-2U (300W, 500W, 1000W)
Operating Temperature	-5°C to +50°C

Specifications, characteristics and front panel are subject to change without notice