



## MIZAR FM Stereo Radio Transmitter

### MAIN CHARACTERISTICS:

- Availability of 30W (2U), 300W (3U), 500W (3U) and 1kW (3U) 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
- RS232 (or RS485) connection for remote control
- Automatic output power level control
- Control of all the functions via 2Rx16C display
- All the final stages with MOSFET technology
- A Stereo Coder can be integrated in the cabinet

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

The display on the front panel can indicate and change frequency, frequency step, forward and reflected power, amplifier temperature, modulation level, alarms level, emphasis and 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, 2 BNC for SCA operation. There is also a DB9 for wired external control and a DB9 for serial RS232 or RS485 (internally selectable) remote control.

As far as audio performances are concerned, only one world 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 type socket. Main input is via an EMI filtered IEC power connector.

The power amplifier is based modern MOSFET device.

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.

The switching type power supply automatically adapts itself to any input voltage from 80 to 260V.

## MONO MODELS:

- 30W (Mizar 30)
- 300W (Mizar 300)
- 500W (Mizar 500)
- 1000W (Mizar 1000)

## STEREO MODELS:

- 30W (Mizar 30S)
- 300W (Mizar 300S)
- 500W (Mizar 500S)
- 1000W (Mizar 1000S)

	Power Consumption	AirFlow
MIZAR30	70VA	60m <sup>3</sup> /h
MIZAR300	600VA	120m <sup>3</sup> /h
MIZAR500	1kVA	120m <sup>3</sup> /h
MIZAR1000	2kVA	250m <sup>3</sup> /h

## RF SECTION

Frequency Range, Frequency Step	87.5 - 108MHz, 10/50/100 kHz (from front panel) 87.0 - 108MHz China, other bands on request
Reference Stability	± 2.5ppm (0°C - 50°C)
Nominal Output Power	30W / 300W / 500W / 1000W
Power Level	0-100% (from front panel)
Output Impedance / Connector	50 /N Female
RF Monitor Level / Connector	-30dBc/BNC
Off Lock Attenuation	> 60dB
Asynchronous AM S/N Ratio	> 65dB
Synchronous AM S/N Ratio	> 60dB
Spurious and Harmonic Suppression	Meets or Exceeds all FCC and CCIR requirements
Modulation Capability	Meets or Exceeds all FCC and CCIR requirements

## AUDIO SECTION

### MPX OPERATION

Audio Input Impedance	10k
Audio Input Connector	BNC
Audio Input Level	2Vpp Nominal (±6dB adjustable from rear panel)
Frequency Amplitude Response	± 0.2dB 30Hz-100kHz
Harmonic Distortion	< 0.1% 30Hz-100kHz (0.05% 20Hz-53kHz)
S/N Ratio with CCIR Unweighted	> 73dB
S/N Ratio with CCIR Weighted	> 73dB

### MONO OPERATION

Audio Input Impedance	Balanced 600 /10k (jumper)
Audio Input Connector	XLR
Audio Input Level	2Vpp Nominal (±6dB adjustable from rear panel)
Frequency Amplitude Response	± 0.5dB 30Hz-15kHz
Harmonic Distortion	< 0.05% 30Hz-15kHz
Pre-emphasis	Flat, 50 s, 75 s (ON/OFF from display, 50/75 from jumper)
S/N Ratio with CCIR Unweighted Filter	> 73 dB
S/N Ratio with CCIR Weighted Filter	> 73 dB

### INTERNAL CODER OPERATION (Stereo Coder Option)

Audio Input Impedance	Balanced 600 /10k (jumper)
Audio Input Connector	XLR
Audio Input Level	2Vpp Nominal (±6dB adjustable from rear panel)
MPX Output Connector / Impedance	BNC / 50
MPX Output Level	5.6Vpp
Frequency Amplitude Response	± 0.5dB 30Hz-15kHz
Harmonic Distortion	< 0.05% 30Hz-15kHz
Pre-emphasis	Flat, 50 s, 75 s (ON/OFF from display, 50/75 from jumper)
Stereo Separation	> 50dB (typ. 60dB) 30-15kHz
S/N Ratio with CCIR Unweighted Filter	> 70 dB
S/N Ratio with CCIR Weighted Filter	> 70 dB

### SCA OPERATION (2 Inputs)

SCA Input Impedance	10k
SCA Input Connector	BNC
Input Level	2Vpp Nominal for ± 7.5kHz deviation
Frequency Amplitude Response	± 0.2dB 40-100kHz

### AUXILIARY SOCKETS

Serial Interface	RS232/RS485 (internally selectable)
Telemetry	Forward, Reflected, Alarm and On/Off control

## GENERAL

AC Power Requirements	80 - 260V <sub>AC</sub> 50/60Hz
Dimensions / Weight	Rack 19" 2U-6kg (30W) 3U-11kg (300W) 3U-15kg (500W) 3U-20kg (1000W)
Ambient Temperature Range	-5°C to +45°C

Specifications and characteristics are subject to change without notice Rev 5/3.13