RADIO

MIRA
FM Stereo Radio Transmitter

MAIN CHARACTERISTICHS:

- Availability of 30W and 250W version in the same cabinet with extremely simplified wiring
- Repeatability of the performances, guaranteed by the completely mechanized assembling
- Good values of distortion and high S/N ratio
- Lock to 5MHz or 10MHz external reference
- Analogic telemetry signals available on DB9
- Connections RS232 and RS485 for remote control
- Automatic output power level control
- Hour scheduling of output power
- Control of all the functions via touch-screen display
- All the final stages with MOSFET technology
- A Stereo Coder can be integrated directly on the mother board

The MIRA is a reference point for the global market of FM Transmitters.
It was the first to have an extremely clear and simple built-in user interface, allowing to completely control the MIRA without any electromechanical device, simply by touching the screen with a finger.
It was the first to include powerful management functions, such as the time scheduling of the output power to decrease consumption, for instance, at night, or the password to lock all programming operations, in order to prevent it to be used by unauthorized people.
For what concerns audio performances, only one word is needed: "transparent".
With a signal-to-noise ratio of 90dB, the whole dynamic of the modern digital audio sources are reproduced with high fidelity.
With a crosstalk of 60dB there is no chance to "misunderstand" the source of the signals.
The switching-type power supply automatically adapts itself to any input voltage from 80 to 260V.
Finally, all functions can be remotely controlled, managing the MIRA from the network control centre.

The DIGITAL AUDIO INPUT option allows the MIRA to have audio input according with three different standards (dip-switch selectable): AES/EBU for professional applications, S/PDIF used by consumer audio sources and TosLink on fiber optic.

Rear panel of MIRA

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Technical characteristics

MIRA FM Transmitter

MODELS		
	30W	250W
MONO	MIRA30	MIRA250
STEREO	MIRA30S	MIRA250S

OPTIONS

- Frequency Stability
- Digital Input
- RDS coder inside

RF SECTION

Frequency Range	87.5 - 108MHz, 10/50/100kHz (64 - 74MHz available on request)
Reference Stability	± 2.5ppm (0°C - 50°C)
Lockable to External Reference	5/10MHz
Nominal Output Power	30W / 250W
Automatic Level Control	0-100%
Output Impedance / Connector	50Ω/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

Audio Input Impedance	600Ω/10kΩ (jumper), balanced / unbalanced (jumper)
Audio Input Connector	XLR
Audio Input Level	2Vpp Nominal (-6dB / +12dB adjustable from front panel)
Frequency Amplitude Response	± 0.05dB 20-53kHz ± 0.1dB 53-100kHz
Harmonic Distortion	< 0.1% 20-100kHz (0.05% 20-53kHz)
S/N Ratio with CCIR Unweighted	80dB (400Hz reference for ± 75kHz deviation with 50µs de-emphasis)
S/N Ratio with CCIR Weighted	78dB (400Hz reference for ± 75kHz deviation with 50µs de-emphasis)
S/N Ratio with RMS Detector	90dB (400Hz reference for ± 75kHz deviation with 50µs de-emphasis)

MONO OPERATION

Audio Input Impedance	600Ω/10kΩ (jumper), balanced
Audio Input Connector	XLR
Audio Input Level	2Vpp Nominal (-6dB / +12dB adjustable from front panel)
Frequency Amplitude Response	± 0.2dB 30-15kHz
Harmonic Distortion	≤ 0.15% 30-15kHz
Pre-emphasis	Flat, 50µs, 75µs
S/N Ratio with CCIR Unweighted Filter	80dB
S/N Ratio with CCIR Weighted Filter	78dB

INTERNAL CODER OPERATION (Stereo Coder Option)

Audio Input Impedance	600Ω/10kΩ (jumper), balanced
Audio Input Connector	XLR
Audio Input Level	2Vpp Nominal (-6dB / +12dB adjustable from front panel)
Frequency Amplitude Response	± 0.2dB 30-15kHz
Harmonic Distortion	< 0.05% 30-15kHz
Pre-emphasis	Flat, 50µs, 75µs
Stereo Separation	> 50dB (typ. 60dB) 30-15kHz
S/N Ratio with CCIR Unweighted Filter	76dB (with 50µs de-emphasis)
S/N Ratio with CCIR Weighted Filter	72dB (with 50µs de-emphasis)

SCA OPERATION (2 Inputs)

Audio Input Impedance	10kΩ unbalanced
Audio Input Connector	BNC
Audio Input Level	2Vpp Nominal for ± 7.5kHz deviation
Frequency Amplitude Response	± 0.1dB 40-100kHz

AUXILIARY SOCKETS

Serial Interface	RS232, RS485 (with host computer/modem)

DIGITAL AUDIO INPUT (Option)

Digital Audio Formats	AES/EBU (XLR Female), S/PDIF (BNC), TosLink (Fiber Optic)
Sample Rate Range	16kHz to 96kHz with Automatic Sample Rate Converter
Audio Processing	Fully 24 bit digital audio accuracy
THD+N	-117dB @ 1kHz

GENERAL

AC Power Requirements	110 - 230V_{AC} 50/60Hz
Dimensions / Weight	Rack 19"-3U - 12kg
Ambient Temperature Range	-5°C to +45°C

Specifications and characteristics are subject to change without notice

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