



telsat

High Power
FM Transmitters

SERIES MKRT-DH



Discover the marKoni High Power Line

Here are our top-class transmitters, providing brilliant performances by the use of a simple and reliable architecture, to reach very high output powers.

Through the User friendly touch screen display, the Master Control Unit of these transmitters manages all the general parameters of each single component (exciters, change over systems, amplifiers, etc).

Key Features

- Crystal Digital Sound purity
- Fully Digital Signal Processing
- Embedded RDS generator
- Auto-calibration at power-on
- Unbeatable value-for-money
- Lifetime upgradable firmware
- Absolutely no analogue trimming points
- Single-chip Digital Processing for the maximum compactness
- Minimum BOM, maximum long-term reliability
- Fully remotely controllable by Web/SNMP interface
- 1pps and 10MHz inputs for Synchro FM Operation
- 2 Redundant Inputs
- E-mail Alert

Configurations

- Single and Dual Drive
- Passive Reserve
- N+1 Reserve
- Customer specified reserve systems are available on request

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Specifications



▲ Touch-screen display

TYPE	POWER	NUMBER OF AMPLIFIERS	AMPLIFIER MODEL	NUMBER OF PWS
MKRT-DH3	3kW	1	MKPA3000	2
MKRT-DH4	4kW	2	MKPA2000	2
MKRT-DH5	5kW	1	MKPA5000	3
MKRT-DH6	6kW	2	MKPA3000	4
MKRT-DH10	10kW	2	MKPA5000	6
MKRT-DH12	12kW	4	MKPA3000	8
MKRT-DH15	15kW	3	MKPA5000	9
MKRT-DH16	16kW	6	MKPA3000	12
MKRT-DH20	20kW	4	MKPA5000	12

SIGNAL PROCESSING SECTION

FM Carrier Generation	NCO-based synthesis
FM Modulation	Fully digital
Stereo Coder	Fully digital, integrated
Input Audio Limiter	Proprietary integrated Soft Limiter
Digital Processing Resolution	Real-time internal 32-bit digital processing
RDS Generator	Fully integrated
Monitoring Output Signal	Fully digitally generated

INPUT SECTION

- Analog L/R Input

L/R Analogue Inputs	30Hz - 15kHz (integrated digital stereo coder)
L/R Analogue Inputs Impedance	0dBu nominal (adjustable from -12dBu to +12dBu) 600 Ohm/10 kOhm balanced/unbalanced

- Analog MPX and SCA Input

Analogue MPX Input	30Hz - 100kHz 0dBu nominal
MPX Analogue Inputs Impedance	10 kOhm unbalanced
SCA1/SCA2 Inputs	40kHz - 100kHz 2Vpp nominal for ± 7.5 kHz deviation
SCA1/SCA2 Analogue Inputs Impedance	10 kOhm unbalanced

- Digital L/R Input

Digital Audio Input	AES/EBU (XLR Female), S/PDIF (BNC)
Balanced AES/EBU Input Impedance	110 Ohm
unbalanced S/PDIF Input Impedance	75 Ohm

- RX-IP Audio Decoder (Option)

RTP Receiver Decoder	Unicast RTP/UDP compatible receiver HE-AAC (v.1 and v.2), MPEG-1 Layer 3 or raw PCM
Connector	RJ45

- Audio Delay

Audio Input Delay (all audio inputs)	0 - 4ms, step 1ms
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OUTPUT SECTION

RF Output Frequency (FM/OIRT bands)	87.5MHz - 108MHz step 1Hz, ± 1 ppm frequency stability / OIRT on request
Pilot Carrier Frequency	19kHz ± 0.001 Hz
Pilot Carrier Level	0-12% modulation in 0.1% steps
Pilot Carrier Output	1Vpp digitally synthesized
MPX Analogue Output	0dBu from integrated digital stereo coder
19kHz and 38kHz Tone Suppression	< -63dB
THD (30Hz-15kHz)+N	< 0.1%
Synchronous AM	Better than -60dB
Asynchronous AM	Better than -70dB
Mono SNR RMS	Better than -85dB
Stereo SNR RMS	Better than -80dB
L/R and R/L Crosstalk	> 50dB (60dB typ.)
M/S and S/M Crosstalk	> 45dB full-band
Pilot Carrier Phase	User-adjustable (step 1°)
Frequency Deviation Range	User-adjustable 0 to ± 200 kHz
Pre-emphasis	Flat, 50us or 75us

GENERAL

Physical	Customizable Cabinet
Remote Control Port	RS232/RS485
Remote Control Options	PSTN, GSM (optional), Ethernet, SNMP
Front Panel User Interface	LCD full color touch screen display
Power Supply Voltage	High power, 400V, $\pm 15\%$
Typical Efficiency at 98MHz	70%
Operating Temperature	0 - 45°C

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