MOTOROLA

MTR3000

BASE STATION/REPEATER

MTR3000 is a MOTOTRBO™ integrated voice and data base station/repeater designed to meet the requirements of small public safety, utilities and professional organizations.

The MTR3000 operates in digital mode in MOTOTRBO Conventional, IP Site Connect, and Capacity Plus systems delivering increased capacity, spectral efficiency, integrated data applications and enhanced voice communications.

In addition the MTR3000 can also operate in analog mode for conventional and LTR/Passport Trunking systems providing a flexible high power base station/repeater.

For systems currently using the high power MTR2000 base station/repeater a simple MTR3000 upgrade kit is available so the station can operate in a MOTOTRBO system and allow the user to leverage their current investment.

MTR3000 STANDARD FEATURES:

Operates in analog or MOTOTRBO digital mode with a LED indicating mode of operation

Reliable 100W Continuous Duty Cycle Operation

12.5 or 25 kHz programmable channel spacing

Analog and digital conventional are all standard in one base station without the cost of additional software or hardware

Power supply functions over a wide range of voltages

RoHS (Restriction of Hazardous Substances) compliant

MTR3000 PROGRAMMED IN MOTOTRBO MODE PROVIDES:

Supports two simultaneous voice paths in digital 12.5 kHz TDMA

6.25e compliant

Divides existing channel into two timeslots delivering twice the capacity through a single repeater

Supports MOTOTRBO IP Site Connect for increased wide area coverage

Supports MOTOTRBO Capacity Plus single site trunking without a separate hardware controller

MTR3000 SERVICEABILITY:

Repeater diagnostic and control software provides remote or local site monitoring

Easy to replace components with functionally separate Field Replaceable Units (FRU)

Software based design simplifies feature upgrades

Easy access to station ports (no need to remove the front panel) shortening installation and maintenance time

For ease of installation, minimal station alignment is needed

Improved Warranty: Backed by Motorola's Standard 2-year Warranty

SPECIFICATION SHEET

MTR3000 Base Station/Repeater

General Specifications

Model Number		T3000A T2003A - Upgrade kit for MTR2000 stations	
Number of Frequencies		Up to 16	
Modulation		FM & 4FSK	
Frequency Generation		Synthesized	
Channel Spacing	Analog Digital	12.5 kHz, 25 kHz 12.5 kHz (6.25e compliant)	
Mode of Operation		Semi-duplex / Duplex	
Temperature Range		–30°C to +60°C	
Antenna Connectors		Transmit and Receive, Type "N" Female	
AC Operation		85-264 VAC, 47-63 Hz	
DC Operation		28.6 VDC (25.7-30.7 VCD full rated output power)	
		Dimensions	**Weight**
Base Station Repeater		5.25 x 19 x 16.5 in. (133 x 483 x 419 mm)	40 lbs (19 kg)

UHF Input Power Neg. Gnd. or Battery Revert

		AC Line 117 Volts / 220 Volts	**28 VDC**
100 W Standby		0.4A/0.2A	0.8A
100 W Transmit		3.3A/1.8A	11.5A

Transmitter (UHF)

		Model T3000A	**Model T2003A**
Frequency		403-470, 470-524 MHz	403-435, 435-470 MHz
Power Output		8-100 watts	25-100 watts
Electronic Bandwidth		Full Band	
Output Impedance		50 Ohms	
Intermodulation Attenuation		55 dB	
Maximum Deviation (RSD)	25 kHz 12.5 kHz	±5 kHz ±2.5 kHz	
Audio Sensitivity		60% RSD @ 80 mV RMS	
Spurious and Harmonic Emissions Attenuation		85 dB	
FM Hum and Noise (750 µs de-emphasis)	25 kHz 12.5 kHz	50 dB nominal 45 dB nominal	
Frequency Stability (for temperature and aging variation)		1.5 PPM/External Ref (optional)	
Audio Response		+1,–3 dB from 6 dB per octave pre-emphasis; 300-3000 Hz referenced to 1000 Hz at line input	
Audio Distortion		Less than 3% at 1000 Hz; 60% RSD	
Emission Designators		FM Modulation: 12.5 kHz: 11K0F3E; 25 kHz: 16K0F3E 4FSK Modulation: 12.5 kHz - Data Only: 7K60FXD; 12.5 kHz - Data & Voice: 7K60FXE	

Receiver (UHF)

		Model T3000A	**Model T2003A**
Frequency		403-470, 450-524 MHz	403-470 MHz
Selectivity (TIA603)	25 kHz 12.5 kHz	80 dB 75 dB	
Selectivity (TIA603D)	25 kHz 12.5 kHz	75 dB 45 dB	
Sensitivity 12 dB SINAD		0.30 µV	
Digital Sensitivity 5% BER		0.30 µV	
Signal Displacement Bandwidth	12.5 / 25 kHz	1 kHz / 2 kHz	
Intermodulation Rejection	12.5 and 25 kHz	85 dB	
Spurious and Image Response Rejection		85 dB	
Audio Response		+1,-3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz at line output	
Audio Distortion		Less than 3% at 1000 Hz; 60% RSD	
Line Output		330 mV (RMS) @ 60% RSD	
FM Hum and Noise (750µs de-emphasis)	25 kHz 12.5 kHz	50 dB nominal 45 dB nominal	
RF Input Impedance		50 Ohms	

FCC Type Acceptance

Frequency Range in MHz	Type	Power Output in Watts	US Type Acceptance Number
403-470	Transmitter	8-100	ABZ89FC4823
403-470	Receiver	N/A	ABZ89FC4824
470-524	Transmitter	8-100	ABZ89FC4825
450-524	Receiver	N/A	ABZ89FC4826

Industry Canada Approval: ICID 109AB-T3000; IC model T3000-UHFR1
Specifications per TIA/EIA 603 unless otherwise noted
Product meets ETSI 300-086 & ETSI 300-113

Specifications subject to change without notice.

MOTOROLA

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R3-2-2010A (POD)