



# 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 organisations.

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 analogue mode for conventional 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 analogue or MOTOTRBO digital mode with a LED indicating mode of operation

Reliable 100W Continuous Duty Cycle Operation

12.5, 20 or 25 kHz programmable channel spacing

Analogue 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

Backed by Motorola's Standard 2-year Warranty

## SPECIFICATION SHEET

MTR3000 Base Station/Repeater

General Specifications			
Model Number	T3000A T2003A - Upgrade kit for High Power MTR2000 stations (does not conform to R&TTE directive 1999/5/EC)		
Number of Frequencies	Up to 16		
Modulation	FM & 4FSK		
Frequency Generation	Synthesized		
Channel Spacing	Analogue	12.5 kHz, 20 kHz, 25 kHz	
	Digital	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 VDC full rated output power)		
	<b>Dimensions</b>		<b>Weight</b>
Base Station Repeater	133 x 483 x 419 mm (5.25 x 19 x 16.5 in)		19 kg (40 lbs)

### 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			
Frequency	403-470, 470-524 MHz		
Power Output	8-100 watts		
Electronic Bandwidth	Full Band		
Output Impedance	50 Ohms		
Adjacent Channel Power	-60 dB @ 12.5 kHz -70 dB @ 20/25 kHz		
Modulation Limiting	25 kHz 20 kHz 12.5 kHz	±5 kHz ±4 kHz ±2.5 kHz	
Audio Sensitivity	60% RSD @ 80 mV RMS		
Conducted/Radiated Emission	403-470 MHz: -36 dBm <1 GHz -30 dBm ≥ 1...4 GHz > 470 MHz: -36 dBm <1 GHz -30 dBm ≥ 1...12.5 GHz		
Frequency Stability (for temperature and aging variation)	1.5 PPM/External Ref (optional)		
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			
Frequency	403-470, 450-524 MHz		
Channel Spacing	12.5/20/25 kHz		
Sensitivity (20 dB SINAD @ 50 Ohms)	0.60 µV typical @ 12.5/20/25 kHz		
Intermodulation Rejection	12.5/20/25 kHz	≥ 75 dB	
Spurious and Image Response Rejection	≥ 85 dB		
Line Output	330 mV (RMS) @ 60% RSD		
Conducted Spurious Emission	403-470 MHz: -57 dBm <1 GHz -47 dBm ≥ 1...4 GHz > 470 MHz: -57 dBm <1 GHz -47 dBm ≥ 1...12.5 GHz		
RF Input Impedance	50 Ohms		

### FCC Type Acceptance

Frequency Range in MHz	Type	Power Output in Watts	FCC 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

Specifications subject to change without notice.

\* Availability subject to individual country's law and regulations. Radios meet applicable regulatory requirements. All specifications listed are typical and are subject to change without notice. Specifications are issued for guidance only. Conforms to R&TTE directive 1999/5/EC Product meets EN 300 086, EN 300 113, EN 301 489-1, EN 301 489-5 and EN 60950-1:2006. To ensure compliance with RF energy exposure standards and regulations, use only Motorola-approved accessories.

Contact your local Motorola Authorised Dealer to find out more about how communicating with Motorola radios will benefit your organisation.



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