MTR 3000
BASE STATION / REPEATER

MTR3000 is a MOTOTRBO™ integrated voice and data repeater designed to meet the requirements of operators in municipalities, utilities and professional organizations.

The MTR3000 operates in all MOTOTRBO system configurations, 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 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
- Integrated 100W Power Amplifier and AC/DC
- Power Supply afford minimized: cabling, rack space, expense, and overall complexity
- Supports VHF frequency bands
- Wireline capability enables Integrated Tone Remote Control and DC Remote control functionality with balanced audio

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 (Software License Required)
- The transmit interrupt suite - voice interrupt, remote voice dekey, emergency voice interrupt or data over voice interrupt - to help prioritized critical communication exactly when needed
- Dynamic mixed mode capability which allows for automatic switching between analog and digital mode

MTR3000 SERVICEABILITY:

- Repeater diagnostic and control software provides remote or local site monitoring
- Easy to replace components with functionally separate Field Replaceable Units (FRUs)
- 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

MTR3000 BASE STATION / REPEATER VHF SPECIFICATIONS

GENERAL SPECIFICATIONS

	T3000A - MTR3000	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, 30 kHz / 12.5 kHz (6.25e compliant)	
Mode of Operation	Simplex / 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)	
	Dimensions	Weight
Base Station Repeater	5.25 x 19 x 16.5 in. (133 x 483 x 419 mm)	40 lbs (19 kg)

VHF INPUT CURRENT (T3000A)

	AC Line 117 Volts / 220 Volts	28 VDC D/C Battery Revert, Neg. Gnd.
100 W Standby	0.4A / 0.4A	0.8A
100 W Transmit	3.5A / 1.9A	12.2A

TRANSMITTER (VHF)

	MTR3000	T2003A - Upgrade kit for MTR2000 stations
Frequency	136-174 MHz	136-154, 150-174 MHz
Power Output (Continuous Duty)	8-100 watts	1-30/40 watts, 25-100 watts
Electronic Bandwidth	Full Band	
Output Impedance	50 Ohms	
Intermodulation Attenuation	55 dB	40 dB for 40W and 100W stations; 70 dB for 30W station
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	90 dB	85 dB
FM Hum and Noise (750 µs de-emphasis) 25 kHz / 12.5 kHz	50 dB (55 dB typical) / 45 dB (52 dB typical)	
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% (1% typical) at 1000 Hz; 60% RSD	
Emission Designators	FM Modulation: 12.5 kHz: 11K0F3E; 25 kHz,30 kHz: 16K0F3E 4FSK Modulation: 12.5 kHz - Data Only: 7K60FXD; 12.5 kHz - Data and Voice: 7K60FXE	

RECEIVER (VHF)

	MTR3000	T2003A - Upgrade kit for MTR2000 stations
Frequency	136-174 MHz	
Selectivity (TIA603) 25 kHz / 12.5 kHz	80 dB (90 dB typical) / 75 dB (82 dB typical)	
Selectivity (TIA603D) 25 kHz / 12.5 kHz	80 dB (90 dB typical) / 50 dB (60 dB typical)	
Analog Sensitivity 12 dB SINAD	0.30 uV (0.22 uV typical)	
Digital Sensitivity 5% BER	0.30 uV (0.20 uV typical)	
Signal Displacement Bandwidth 25 kHz / 12.5 kHz	2 kHz / 1 kHz	
Intermodulation Rejection 25 kHz and 12.5 kHz	85 dB	
Spurious and Image Response Rejection	85 dB (95 dB typical)	
Audio Response	+1/-3 dB from 6 dB per octave pre-emphasis; 300-3000 Hz referenced to 1000 Hz at line output	
Audio Distortion	Less than 3% (1% typical) at 1000 Hz; 60% RSD	
Line Output	330 mV (RMS) @ 60% RSD	
FM Hum and Noise (750us de-emphasis) 25 kHz / 12.5 kHz	50 dB (56 dB typical) / 45 dB (52 dB typical)	
RF Input Impedance	50 Ohms	

FCC TYPE ACCEPTANCE

Frequency Range in MHz	Model	Type	Power Output in Watts	US Type Acceptance Number
136-174	T3000A	Transmitter	8 - 100	ABZ89FC3793
136-174	T3000A	Receiver	N/A	ABZ89FR3794
136-174	T3000A	Transmitter	25 - 100	ABZ89FC3795
136-174	T3000A	Receiver	N/A	ABZ89FR3796
136-174	T3000A	Transmitter	1-30 / 40	ABZ89FC3797

Industry Canada Approval: IC ID 109AB-3793; IC model T3000-VHF
Specifications per TIA/EIA 603D unless otherwise noted
Product meets ETSI 300-086 & ETSI 300-113
CE Pending; RoHS compliant; UL Listed
Digital Protocol ETSI 102 361-1, -2, -3; AMBE +2™ Vocoder
Specifications subject to change without notice.

MOTOROLA SOLUTIONS
Value Added Reseller

JALVO INC
14 Fulton St
Pittson, PA 18640
www.jalvo.com
570-908-5822