

## Base Station MTR2000



## Stay In Touch On The Move

The MTR2000 base station radio features enhanced analogue capabilities in a compact/economical package.

The MTR2000 base station/repeater utilises cutting edge technology, providing power levels equivalent to current analogue base stations and repeaters in its class. The smaller, 3 rack units, require less maintenance.

- Integral component of any conventional or Motorola Selectacom MX, Smartnet or Smartzone trunked analogue radio system.
- Unmatched flexibility.
- Available in 25-100 Watt or 2-40 Watt UHF, (1-40 Watt VHF) variable power models.
- VHF and UHF frequencies and features 12.5 or 25/30 kHz programmable channel spacing.
- Software-based design simplifies upgrades.
- Programming and diagnostic testing through personal computer.
- Shorter maintenance time through use of field replaceable units.
- Reliable solid-state performance.
- Continuous-duty cycle operation.
- Battery revert in the event of a site power failure.
- Self testing to reduce regular maintenance schedules.
- Alternative indoor cabinet enclosures.
- Attractive packages available in 40 Watt for VHF and UHF.

# Base Station MTR2000



## GENERAL

Frequency Band	RF Power Output
132-174 MHz	1-40 W
132-154 MHz, 150-174 MHz	25-100 W
403-470 MHz	2-40 W (6-40 W only ETS approved)
403-435 MHz, 435-470 MHz	25-100 W
<b>Modulation:</b>	FM
<b>Temperature Range:</b>	-30°C to +60°C
<b>Antenna Connectors:</b>	Transmit and Receive, Type "N" Female
<b>No. of Frequencies:</b>	6 (Up to 32 optional)
<b>Frequency Generation:</b>	Synthesised
<b>Channel Spacing:</b>	12.5 kHz/20 kHz/25 kHz/30 kHz
<b>Mode of Operation:</b>	Simplex/Semi-duplex/Duplex
<b>Input Voltage AC:</b>	180-264 VAC, 47-63 Hz
<b>Optional DC Only Operation:</b>	14.2 VDC (30/40 Watt Station) 28.6 VDC (100 Watt station)

	Dimensions	Weight
All Stations and Receivers	19 x 16.5 x 5.25 in. † (483 x 419 x 133 mm)	40 lbs † (19 kg)

### Alternative Cabinet Enclosures

Enclosure	Dimensions	Weight
30" Indoor Cabinet	30 x 22 x 20 in. (762 x 559 x 508 mm)	66 lbs* (30 kg)
46" Indoor Cabinet	46 x 22 x 20 in. (1168 x 559 x 508 mm)	75 lbs* (34 kg)
60" Indoor Cabinet	60 x 22 x 20 in. (1524 x 559 x 508 mm)	102 lbs* (46 kg)
70" Outdoor Cabinet	70 x 22 x 20 in. (1778 x 559 x 508 mm)	225 lbs* (103 kg)
30" Modular Rack	30 x 22 x 20 in. (762 x 559 x 508 mm)	52 lbs* (24 kg)
45" Modular Rack	45 x 22 x 20 in. (1143 x 559 x 508 mm)	59 lbs* (27 kg)
52" Modular Rack	52 x 22 x 20 in. (1321 x 559 x 508 mm)	61 lbs* (28 kg)

† Applies to standard station configuration \*Enclosure Only

All specifications use the ETS 300-086 & ETS300-113 method for measurement.  
All values subject to change without notice

## RECEIVER

	VHF	UHF
<b>Frequency - Wideband:</b>	132-174 MHz	403-470 MHz
<b>Frequency - High Performance Preselector:</b> (Option to the station)	132-154 MHz 150-174 MHz	403-433 MHz 433-470 MHz
<b>High Performance Preselector Bandwidth:</b> (Receiver Bandwidth)	4.0 MHz 150-174 MHz	433-470 MHz
<b>Adjacent Channel Rejection:</b> (12.5 and 25/30 kHz) (Selectivity):	75 db/80 db	
<b>Sensitivity 12 db SINAD</b>	0.35 µV	
<b>Signal Displacement Bandwidth:</b> (Off Channel Acceptance): (12.5/25 kHz)	2 kHz	
<b>Frequency Stability:</b> (for temperature and Voltage Variation)	1.5 ppm External Ref optional	
<b>Intermodulation Rejection:</b> (12.5 and 25/30 kHz)	80 db / 85 db typical	
<b>Spurious and Image Response Rejection:</b>	85 dB	
<b>Optional High Performance Preselector:</b>	90 dB	
<b>Audio Response:</b>	+1,-3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz at line input	
<b>Audio Distortion:</b>	Less than 3% at 1000 Hz; 60% RSD	
<b>Line Output:</b>	-20 dBm to 7 dBm @ 60% RSD, 1 kHz	
<b>FM Hum and Noise:</b> (750 µs de-emphasis)	1000 Hz tone @ 60% RSD 25/30 kHz: 50 dB 12.5 kHz: 45 dB	
<b>RF Input Impedance:</b>	50 Ohms	

## TRANSMITTER

	VHF	UHF
<b>Frequency - 30/40 Watt:</b>	132-174 MHz	403-470 MHz
<b>Frequency - 100 Watt:</b>	132-154 MHz 150-174 MHz	403-435 MHz 435-470 MHz
<b>Electronic Bandwidth:</b> (Transmit Bandwidth)	Full Sub-band (reduced with the addition of a duplexer/external circulator option)	
<b>Output Impedance:</b>	50 Ohms	
<b>Frequency Stability:</b> (for temperature and Voltage Variation)	1.5 ppm External Ref	
<b>Intermodulation attenuation:</b> (For ref isolation):	40 dB for 40 W, 100 W 70 dB for 30 W	
<b>Maximum Deviation:</b>	30 (VHF)/25 kHz: +/-5 kHz 12.5 kHz +/-2.5 kHz	
<b>Audio Sensitivity:</b>	-20 dBm to 0 dBm variable	
<b>Spurious and Harmonic Emissions Attenuation:</b> (Spurious and harmonic Emissions)	-36 dBm for frequencies smaller than 1 GHz and -30 dBm for frequencies smaller than 4 GHz	
<b>FM Hum and Noise:</b> (750 µs de-emphasis)	300 to 3000 Hz bandwidth, 60% RSD 30 (VHF)/25 kHz: 50 dB 12.5 kHz: 45 dB	
<b>Audio Response:</b>	+1,-3 dB from 6 dB per octave pre-emphasis; 300-3000 Hz referenced to 1000 Hz at line input	
<b>Audio Distortion:</b>	Less than 3% at 1000 Hz; 60% RSD	

Contact your local Authorised Motorola Dealer to find out more about how communicating with the MTR 2000 will benefit your organisation

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