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
## General Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>T3000A</th>
<th>T2003A - Upgrade kit for MTR2000 stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number</td>
<td>T3000A</td>
<td></td>
</tr>
<tr>
<td>Number of Frequencies</td>
<td>Up to 16</td>
<td></td>
</tr>
<tr>
<td>Modulation</td>
<td>FM &amp; 4FSK</td>
<td></td>
</tr>
<tr>
<td>Frequency Generation</td>
<td>Synthesized</td>
<td></td>
</tr>
<tr>
<td>Channel Spacing</td>
<td>Analog 12.5 kHz, 25 kHz</td>
<td>Digital 12.5 kHz (6.25e compliant)</td>
</tr>
<tr>
<td>Mode of Operation</td>
<td>Semi-duplex / Duplex</td>
<td></td>
</tr>
<tr>
<td>Temperature Range</td>
<td>–30ºC to +60ºC</td>
<td></td>
</tr>
<tr>
<td>Antenna Connectors</td>
<td>Transmit and Receive, Type &quot;N&quot; Female</td>
<td></td>
</tr>
<tr>
<td>AC Operation</td>
<td>85-264 VAC, 47-63 Hz</td>
<td></td>
</tr>
<tr>
<td>DC Operation</td>
<td>28.6 VDC (25.7-30.7 VDC full rated output power)</td>
<td></td>
</tr>
</tbody>
</table>

### Dimensions

<table>
<thead>
<tr>
<th>Base Station Repeater</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.25 x 19 x 16.5 in. (133 x 483 x 419 mm)</td>
<td>40 lbs (19 kg)</td>
</tr>
</tbody>
</table>

### UHF Input Power

<table>
<thead>
<tr>
<th>Power Source</th>
<th>AC Line 117 Volts / 220 Volts</th>
<th>28 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 W Standby</td>
<td>0.4A/0.3A</td>
<td>6.9A</td>
</tr>
<tr>
<td>100 W Transmit</td>
<td>3.3A/1.8A</td>
<td>11.5A</td>
</tr>
</tbody>
</table>

### Transmitter (UHF)

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

### Receiver (UHF)

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

### FCC Type Acceptance

<table>
<thead>
<tr>
<th>Frequency Range in MHz</th>
<th>Type</th>
<th>Power Output in Watts</th>
<th>US Type Acceptance Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>403-470</td>
<td>Transmitter</td>
<td>8-100</td>
<td>ABZ98FC4823</td>
</tr>
<tr>
<td>403-470</td>
<td>Receiver</td>
<td>N/A</td>
<td>ABZ98FC4824</td>
</tr>
<tr>
<td>470-524</td>
<td>Transmitter</td>
<td>8-100</td>
<td>ABZ98FC4825</td>
</tr>
<tr>
<td>450-524</td>
<td>Receiver</td>
<td>N/A</td>
<td>ABZ98FC4826</td>
</tr>
</tbody>
</table>

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.

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