**MTR2000**  
800/900 MHz Station/Repeater/Receiver

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**MTR2000**  
Station/Repeater available in:  
- Conventional:  
  - Local Operation  
  - Tone Remote Control  
  - Spectra-TAC Voting  
- Trunking:  
  - SMARTNET and SmartZone  
- Continuous Duty

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**FEATURES/BENEFITS**

**Provides Unmatched Flexibility in a Compact Design**  
- Analog operation in conventional systems  
- Analog operation in SMARTNET or SmartZone trunking systems  
- Software based design allows for future system applications  
- 75-20 Watt variable power models  
- Compact dimensions, 3 rack units (5.25” or 13.3 cm), utilize expensive site space efficiently  
- 12.5 or 25 kHz programmable channel spacing (800 MHz)  
- 12.5 kHz channel spacing (900 MHz)

**Contributes to Maximizing System Up-Time**  
- Microprocessor based design with integrated DSP capability  
- Continuous duty cycle operation  
- Self testing monitors station performance  
- Switching power supply functions over a wide range of voltages and frequencies

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**Shortens Installation and Maintenance Time**  
- Programming and diagnostic testing performed through a personal computer  
- Standard EIA 19” rack mount configuration  
- Lightweight (40 lbs/19 kg)  
- Functionally separate modules: Field Replaceable Units (FRU)  
- Software based design simplifies upgrades
## SPECIFICATIONS

### GENERAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model Number: T5544, T5731</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
</tr>
<tr>
<td>Conventional Analog</td>
</tr>
<tr>
<td>SMARTNET 6800 Analog Trunking</td>
</tr>
<tr>
<td>SmartZone 6800 Analog Trunking</td>
</tr>
<tr>
<td>No. of Frequencies</td>
</tr>
<tr>
<td>Frequency Generation</td>
</tr>
<tr>
<td>Channel Spacing</td>
</tr>
<tr>
<td>12.5 kHz</td>
</tr>
<tr>
<td>Mode of Operation</td>
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<tr>
<td>Modulation</td>
</tr>
<tr>
<td>Temperature Range</td>
</tr>
<tr>
<td>Antenna Connectors</td>
</tr>
<tr>
<td>Input Voltage AC</td>
</tr>
<tr>
<td>Optional DC Only Operation</td>
</tr>
<tr>
<td>Operational Battery Revert</td>
</tr>
<tr>
<td>Output power may be reduced up to 3 dB in battery revert mode to conserve battery life.</td>
</tr>
<tr>
<td>Dimensions</td>
</tr>
<tr>
<td>All Stations and Receivers</td>
</tr>
<tr>
<td>Alternative Cabinet Enclosure</td>
</tr>
<tr>
<td>46” indoor cabinet: 46 x 22 x 20 in. (1168 x 559 x 508 mm)</td>
</tr>
<tr>
<td>60” indoor cabinet: 60 x 22 x 20 in. (1524 x 559 x 508 mm)</td>
</tr>
<tr>
<td>30” Modular Rack: 30 x 22 x 20 in. (762 x 559 x 508 mm)</td>
</tr>
<tr>
<td>45” Modular Rack: 46 x 22 x 20 in. (1168 x 559 x 508 mm)</td>
</tr>
<tr>
<td>30” Indoor Cabinet</td>
</tr>
<tr>
<td>45” Indoor Cabinet</td>
</tr>
<tr>
<td>60” Indoor Cabinet</td>
</tr>
<tr>
<td>45” Modular Rack</td>
</tr>
<tr>
<td>60” Modular Rack</td>
</tr>
<tr>
<td>45” Modular Rack</td>
</tr>
<tr>
<td>60” Modular Rack</td>
</tr>
</tbody>
</table>

### 800/900 MHz INPUT POWER (VARIES WITH OPTIONS)

<table>
<thead>
<tr>
<th>DC Only Operation</th>
<th>Neg. Grid. or Battery Revert</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Line</td>
<td>117 Volts / 220 Volts</td>
</tr>
<tr>
<td>Standby</td>
<td>0.3A (12 VAC)</td>
</tr>
<tr>
<td>75 W - Transmit</td>
<td>4.5A / 2.5A</td>
</tr>
<tr>
<td>800 MHz</td>
<td>10A / 900 MHz: 11A</td>
</tr>
</tbody>
</table>

### TRANSMITTER

#### 800 MHz

- **Frequency**: 806-825 MHz
- **Bandwidth**: Full Band
- **Output Impedance**: 50 Ohms
- **Frequency Stability**: ±2.5 kHz @ 2 kHz
- **Audio Sensitivity**: -20 dBm to 10 dBm variable
- **Spurious and Harmonic Emissions Attenuation**: 80 dBc
- **FM Hum and Noise**:
  - 300 to 3000 Hz bandwidth: -60 dBc
  - 300 to 3000 Hz, -60 dBc
  - 25 kHz: 45 dBc nominal
  - Audio response: +1, -3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz
  - Audio distortion: Less than 3% at 1000 Hz; Less than 3% at 1000 Hz; Less than 3% at 1000 Hz; Less than 3% at 1000 Hz
  - Emission Designators: X450 (851-870 MHz), X600 (806-825 MHz)

#### 900 MHz

- **Frequency**: 896-901 MHz
- **Bandwidth**: Full Band
- **Output Impedance**: 50 Ohms
- **Frequency Stability**: ±2.5 kHz @ 2 kHz
- **Audio Sensitivity**: -20 dBm to 10 dBm variable
- **Spurious and Harmonic Emissions Attenuation**: 80 dBc
- **FM Hum and Noise**:
  - 300 to 3000 Hz bandwidth: -60 dBc
  - 300 to 3000 Hz, -60 dBc
  - 25 kHz: 45 dBc nominal
  - Audio response: +1, -3 dB from 6 dB per octave de-emphasis; 300-3000 Hz referenced to 1000 Hz
  - Audio distortion: Less than 3% at 1000 Hz; Less than 3% at 1000 Hz; Less than 3% at 1000 Hz; Less than 3% at 1000 Hz
  - Emission Designators: X460 (935-940 MHz), X663 (896-901 MHz)

### RECEIVER

#### 800 MHz

- **Frequency**: 806-891 MHz
- **Bandwidth**: Full Band
- **Selectivity**: 60 kHz
- **Intermodulation Rejection**: 85 dB
- **Spurious and Image Response**:
  - 1000 Hz tone @ 60% RSD: 70 dB
  - 1000 Hz tone @ 60% RSD: 70 dB
  - Line output: 25 dBm to 7 dBm, @ full system deviation @ 1 kHz
  - FM Hum and Noise:
    - 750µs de-emphasis: 1000 Hz tone @ 60% RSD: 50 dB nominal
    - 12.5kHz: 45 dB nominal
    - 12.5kHz: 45 dB nominal

#### 900 MHz

- **Frequency**: 891-901 MHz
- **Bandwidth**: Full Band
- **Selectivity**: 60 kHz
- **Intermodulation Rejection**: 85 dB
- **Spurious and Image Response**:
  - 1000 Hz tone @ 60% RSD: 70 dB
  - 1000 Hz tone @ 60% RSD: 70 dB
  - Line output: 25 dBm to 7 dBm, @ full system deviation @ 1 kHz
  - FM Hum and Noise:
    - 750µs de-emphasis: 1000 Hz tone @ 60% RSD: 50 dB nominal
    - 12.5kHz: 45 dB nominal
    - 12.5kHz: 45 dB nominal

### FCC TYPE ACCEPTANCE

<table>
<thead>
<tr>
<th>Frequency Range in MHz</th>
<th>Type</th>
<th>Power Output in Watts</th>
<th>Type Acceptance Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>851-855</td>
<td>Transmitter</td>
<td>75-20</td>
<td>AD9355/51285</td>
</tr>
<tr>
<td>898-901</td>
<td>Receiver</td>
<td>NA</td>
<td>AD9395/5168</td>
</tr>
<tr>
<td>905-909</td>
<td>Transmitter</td>
<td>75-20</td>
<td>AD9395/5168</td>
</tr>
<tr>
<td>909-911</td>
<td>Receiver</td>
<td>NA</td>
<td>AD9395/5169</td>
</tr>
</tbody>
</table>

Industry Canada Approval: Type T5544, 109195112

Note: Specifications are per TIA/EIA 633.

Specifications subject to change without notice.

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### Customer Communication

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**Atlanta 1996**

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### R3-2-1001

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