MC SERIES
Deskset Controllers

STANDARD FEATURES
- Multiple models for various applications
  - Extended Local Control for controlling an on-site radio up to 1000 feet away
  - Tone or DC Remote Control for controlling a station with 600 ohm telephone lines
- Multiple control points allow up to 10 units to operate in parallel
- Internal microphone, intercom, and speaker for convenient operation
- Push-to-talk (PTT) handset for private communications
- Monitor switch for monitoring channel activity before transmitting

PRODUCT OVERVIEW
The MC Series Desktop Controllers allow remote access to the functions of a compatible station (base station, repeater, or control station). These desktop controllers support tone, DC, and E&M signalling for keying and control of stations.

Pictured from left to right are the MC2000™ Advanced Model, the MC2500™ Multi-channel Model, and the MC1000™ Basic Model.
MC1000 BASIC MODEL (non-signaling) FEATURES

For Local Control Models
- Single Frequency and Single Station Control
- Push-to-Talk Handset
- Speaker
- Speaker on/off (receive audio is heard through handset and speaker simultaneously)
- Volume Control
- Full Duplex Capability
- Internal Mic (for use without handset)
- Transmit Button with LED
- Monitor Button with LED
- Front panel programming (easy setup – no RSS required)
- Intercom between MC1000 units and stations
- Operator cross mute
- 10 units can operate in parallel
- Parallel Operator Busy Indication
- 120 Vac - 60 Hz Power Supply
- Can be wall mounted

For Tone and DC Control Models Only in addition to Local Features
- 4 Frequency Single Station Control
- 2- or 4-Wire Audio
- Takeover/Line Select allows a supervisory unit to override other parallel units or allows connection of two base stations for back-up control (Main/Alt operation)

MC2000 ADVANCED MODEL (signaling) FEATURES
- All MC1000 Basic Model features plus:
- 110/220 Vac 50/60 Hz Power Supply
- Parallel Status (Tone model only) …. Each deskset operator knows the selected frequency and status of the station
- Programmable Voice Delay …………. User can speak immediately after pressing PTT or Transmit bar without message truncation
- Desk Mic Compatible ………………… Allows another choice of audio accessory
- MDC1200 Signaling and Paging……… Operator can selectively signal pagers, portables, or mobile radios Supports the following: (E/D; E = Encode, D = Decode)
  - PTT Unit ID (E/D) …………………… Displays unit ID of caller (250 aliases)
  - Voice Alert …………………………. Allows dispatcher to alert specific user prior to critical voice transmission
  - Call Alert/Short Call Alert (E/D) …………. Informs the user to call-in by sending a “page” to their portable or mobile
  - Status/Message (D)……………….. Displays received status and message codes
  - Radio Enable/Disable (E) …………. Allows operator to remotely enable and disable a lost or stolen portable
  - Radio Check (E) ……………………. Console operator can determine if a radio is on the air and within range without disturbing the radio user
  - Emergency Alarm (D) …………….. Flashing display, audible tone, and an output for external alarms can alert the console operator of emergency situations
  - Recent User Stack…………………. Allows last nine records to be stored for review at a later time
  - RS232 Printer Port………………….. Allows RSS programming via computer or the logging of MDC1200 inbound/outbound message activity for permanent record keeping on a serial printer
  - Alert Tone ……………………. 3 alert tones are supported
MC SERIES
Deskset Controllers

MC2000 ADVANCED MODEL (signaling) FEATURES (cont’d)

- Paging Encoder ...................... Integrated paging encoder supporting 2 Tone, Quik-Call I & II, DTMF, 5 Tone, 6 Tone, GE99, NEC5, NEC6, Reach 1+1, Pulse and custom 2-tone with aliasing
- 18 Programmable Buttons ............ Allows for deskset flexibility. Button usage may include single button paging, fast access to paging or MDC1200 signalling, alert tones, frequency selection, speaker mute, relay control and wildcards
- Frequency Control..................... 16 Frequency Control (Tone) and 4 Frequency Control (DC) with alias names
- DTMF Decode .......................... Allow ANI (Automatic Number Identification) or selective call mode of operation
- Securenet Compatible .................. Allows control of coded/clear modes of operation on Motorola secure equipped stations
- RSS Programming Available .......... Allows the console to be customized to fit customer requirements
- External connectors .................. For power, RSS/printing, base station connections, and desk mic
- 2 line x 20 character backlit display ........................................ Displays important, easy to read information to the operator such as channel status, alias names, emergency ID’s, status/message information and VU meter

MC2500 MULTI-CHANNEL MODEL FEATURES

- All MC2000 Advanced Model features plus:
  - 4 channel control........................ Controls up to 4 radios or base stations. Includes ability for DC control on 1 channel
  - Individual channel select and instant transmit ........................ Individual status indicators and control
  - Unselect speaker connector ............ Allows connection of unselect speaker to separate audio for ease of operation
  - Individual volume control .............. Each channel has individual volume control
  - All mute ........................................ Mutes audio on the unselected channels
  - Dedicated logging recorder output . Fixed 600 Ohm output (no keying tones) with all audio summed for recording
  - Radio Patch .............................. Patch any two channels
  - Multi-Select ............................. All four channels can be selected for simultaneous transmit

ACCESSORIES
For Extended Local Control
- Junction Box connects up to six local desksets to the station. When 7-10 desksets are operating in parallel, two junction boxes are required.

TONES AND DC REMOTE CONTROL ADAPTERS
Tone and DC Remote Adapters allow local control base stations to be controlled remotely via a Tone or DC Remote Deskset. Each adapter will accept up to 10 desksets.

STANDARD FEATURES

<table>
<thead>
<tr>
<th></th>
<th>DC (L3277)</th>
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<tbody>
<tr>
<td>Tone (L3276)</td>
<td></td>
</tr>
<tr>
<td>LED Indicators for Power, Line PTT, Monitor, Squelch Detect, Accessory Port and Desk Mic</td>
<td>LED Indicators for Power, Line PTT, Monitor, Squelch Detect, Accessory Port F1, F2, F3 and F4</td>
</tr>
<tr>
<td>Local Desk Mic Port</td>
<td>N/A</td>
</tr>
<tr>
<td>16 Function Tone Decode</td>
<td>5 DC Current Detects</td>
</tr>
</tbody>
</table>

2- or 4-wire Audio
Accessory Port used for local deskset or data applications
Accessible audio level adjustments
Rack mountable
## MC Series Deskset Controllers

### Deskset Specifications

<table>
<thead>
<tr>
<th></th>
<th>Local Deskset</th>
<th>DC Remote Deskset</th>
<th>Tone Remote Deskset</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MC1000 - L3211</strong></td>
<td></td>
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<tr>
<td><strong>MC1000 - L3212</strong></td>
<td></td>
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<tr>
<td><strong>MC1000 - L3213</strong></td>
<td></td>
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<tr>
<td><strong>MC2000 - L3216</strong></td>
<td></td>
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<tr>
<td><strong>MC2500 - L3217</strong></td>
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</tr>
</tbody>
</table>

**Dimension**

3.75” H x 8.5” W x 9.9” D (9.53 cm H x 21.59 cm W x 25.14 cm D)

**Weight**

Maximum 3.75 lb. (1.7 kg)

**Temperature Range**

32°F to 122°F (0°C to 50°C)

**Humidity**

95% at 122°F (50°C) (non-condensing)

**Power Input:**

- **MC1000 Models**
  +12 Vdc/1 A max
- **MC2000 Model**
  +12 Vdc/2.5 A Max
- **MC2500 Models**
  +12 Vdc/1 A, –12 Vdc/0.2 A, +5 Vdc/2 A

**Frequency Response**

300 to 3300 Hz +3, –3 dB @ less than 3% distortion

**Hum and Noise**

45 dB below rated output at any port

**Audio Distortion**

Less than 3% THD

**Audio Output to Speaker**

.8 W (1 W peak)

**Line Impedance**

600 or 10 K Ohm, or differential

**Receive Audio Input**

300 mv AC Adjustable from –30 to +11 dBm

**Transmit Audio Output**

80 mv AC Adjustable from –30 to +11 dBm

**Maximum Number of Desksets**

10 in Parallel

**Control Functions (Maximum):**

- **MC1000 Models**
  PTT + Monitor 4 Freq Select + Monitor 4 Freq Select + Monitor
- **MC2000 Models**
  PTT + Monitor 4 Freq Select + Monitor 15 Freq Select + Monitor
- **MC2500 Models**
  4 Freq Select + Monitor 15 Freq Select + Monitor

**Number of Radios:**

- **MC1000 and MC2000 Models** 1 1 1
- **MC2500 Models** 1 Max 4 Max

**Outputs and Inputs:**

- **PTT Relay**
  Form C dry closure. 150 mA, 60 Vdc non-inductive load.
- **Monitor/Aux Outputs**
  Form C dry closure. 150 mA, 60 Vdc non-inductive load.
- **Aux Inputs**
  Opto-coupled inputs, 5 K Ohms impedance, 5 to 20 MA input current, unbalanced.

**Recorder Port (MC2500 only)**

Nominal output –10 dBm @ 600 Ohm

**Auxiliary/Paging Input (MC2500 only)**

Nominal output –10 dBm, balanced 600 Ohm input

**All Mute (MC2500 only)**

–24 dB or full muting of unselected channels, timer programmable 1 to 255 seconds or infinite durations.
## Remote Adapter Specifications

<table>
<thead>
<tr>
<th></th>
<th>DC (L3277)</th>
<th>Tone (L3276)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>Approximately 8.2” W (20.8 cm) x 7.3” L (18.5 cm) x 1.3” H (3.3 cm)</td>
<td></td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Approximately 1.55 lbs (.7 kg)</td>
<td></td>
</tr>
<tr>
<td><strong>Operating Temperature Range</strong></td>
<td><del>22°F to 140°F (</del>−30°C to +60°C)</td>
<td></td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>95% at 122°F (50°C) (non-condensing)</td>
<td></td>
</tr>
<tr>
<td><strong>Power Input</strong></td>
<td>10.5 to 16 Vdc max.; 250 mA typical 650 mA max.</td>
<td>10.5 to 16 Vdc max.; 350 mA typical 650 mA max.</td>
</tr>
<tr>
<td><strong>Frequency Range</strong></td>
<td>±3 dB from 300 to 3000 Hz @ 1 KHz ref.</td>
<td>±3 dB from 300 to 3000 Hz @ 1 KHz ref. except at 2175 Hz notch filter</td>
</tr>
<tr>
<td><strong>Hum and Noise</strong></td>
<td>Less than −45 dB below rated output</td>
<td></td>
</tr>
<tr>
<td><strong>Audio Distortion</strong></td>
<td>Less than 3% THD @ 1 KHz</td>
<td></td>
</tr>
<tr>
<td><strong>Radio Rx Input</strong></td>
<td>32 mVac to 4.5 Vac (nominal 300 mVac). Jumper selectable to between range:</td>
<td>32 mVac to 800 mVac (nominal 80 mVac). Jumper selectable to between range:</td>
</tr>
<tr>
<td></td>
<td>32 mVac to 500 mVac (default) or 500 mVac to 4.5 Vac</td>
<td>32 mVac to 500 mVac (default) or 500 mVac to 800 mVac</td>
</tr>
<tr>
<td><strong>Radio Tx Output</strong></td>
<td>32 mVac to 800 mVac (nominal 80 mVac). Jumper selectable to between range:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32 mVac to 500 mVac (default) or 500 mVac to 800 mVac</td>
<td></td>
</tr>
<tr>
<td><strong>Line Rx Input</strong></td>
<td>−24 dBm to 0 dBm (nominal −10 dBm into 600Ω)</td>
<td></td>
</tr>
<tr>
<td><strong>Line Tx Output</strong></td>
<td>−15 dBm to +10 dBm (nominal −10 dBm into 600Ω)</td>
<td></td>
</tr>
<tr>
<td><strong>Max. Number of Desksets Supported</strong></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Control Functions (Max.)</strong></td>
<td>4 Freq. + Monitor</td>
<td>15 Freq. + Monitor</td>
</tr>
<tr>
<td><strong>Input Tolerance</strong></td>
<td>±20%</td>
<td>±2%</td>
</tr>
</tbody>
</table>

## Digital Junction Box Specifications

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimension</strong></td>
<td>8-2/16” W (20.5 cm) x 8-1/4” L (21 cm) x 1-3/8” (3.5 cm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1.5 pounds (680 grams)</td>
</tr>
<tr>
<td><strong>Audio Distortion</strong></td>
<td>Less than 3% THD (total harmonic distortion)</td>
</tr>
<tr>
<td><strong>Audio Transmit</strong></td>
<td>0.78 Vac nominal</td>
</tr>
<tr>
<td><strong>Audio Receive</strong></td>
<td>0.78 Vac nominal</td>
</tr>
<tr>
<td><strong>Data Interface</strong></td>
<td>RS-485 standard</td>
</tr>
<tr>
<td><strong>Frequency Response</strong></td>
<td>±3 dB from 300-3000 Hz @ 1 kHz ref.</td>
</tr>
<tr>
<td><strong>Hum and Noise</strong></td>
<td>Less than −45 dB below rated outputs</td>
</tr>
<tr>
<td><strong>Humidity</strong></td>
<td>95% at 122°F (50°C)</td>
</tr>
<tr>
<td><strong>Maximum distance between Master</strong></td>
<td>5000 feet (1524 meters)</td>
</tr>
<tr>
<td><strong>Digital Junction Box and console/deskset</strong></td>
<td>5000 feet (1524 meters)</td>
</tr>
<tr>
<td><strong>Power Input</strong></td>
<td>10.5 to 16 Vdc maximum</td>
</tr>
<tr>
<td><strong>Temperature Range</strong></td>
<td>32°F to 122°F (0°C to 50°C)</td>
</tr>
</tbody>
</table>

Specifications subject to change without notice.