

Specification Sheet

MC SERIES Deskset Controllers



Pictured from left to right are the MC2000™ Advanced Model, the MC2500™ Multi-channel Model, and the MC1000™ Basic Model.



PRODUCT OVERVIEW

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

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

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 DelayUser can speak immediately after pressing PTT or Transmit bar without message truncation
- ▶ Desk Mic CompatibleAllows another choice of audio accessory
- ▶ MDC1200 Signaling and PagingOperator 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 AlertAllows 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 StackAllows last nine records to be stored for review at a later time
 - RS232 Printer PortAllows RSS programming via computer or the logging of MDC1200 inbound/outbound message activity for permanent record keeping on a serial printer
 - Alert Tone3 alert tones are supported

MC2000 ADVANCED MODEL (SIGNALING) FEATURES (cont'd)

- ▶ Paging EncoderIntegrated 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 ButtonsAllows 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 Control16 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 AvailableAllows 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 controlControls up to 4 radios or base stations. Includes ability for DC control on 1 channel
- ▶ Individual channel select and instant transmitIndividual status indicators and control
- ▶ Unselect speaker connectorAllows 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 PatchPatch any two channels
- ▶ Multi-SelectAll four channels can be selected for simultaneous transmit

ACCESSORIES

FOR EXTENDED LOCAL CONTROL

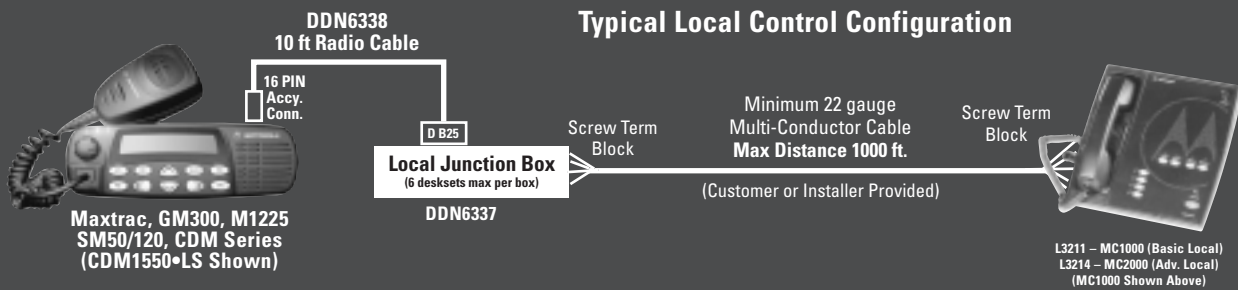
- ▶ Junction Box connects up to six local desksets to the station. When 7-10 desksets are operating in parallel, two junction boxes are required.

TONE AND DC REMOTE CONTROL ADAPTERS

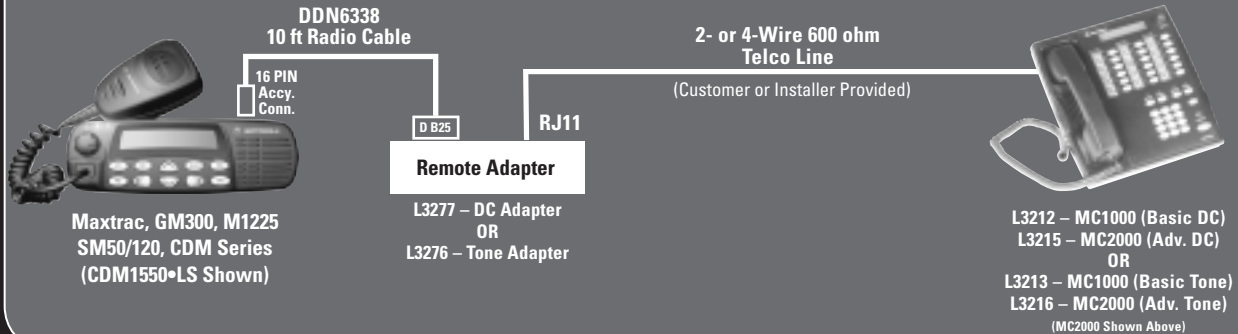
Tone and DC Remote Adapters allow local control base stations to be controlled remotely via a Tone or DC Remote Deskset. Each adapter will accept up to 10 desksets.

STANDARD FEATURES	
Tone (L3276)	DC (L3277)
LED Indicators for Power, Line PTT, Monitor, Squelch Detect, Accessory Port and Desk Mic	LED Indicators for Power, Line PTT, Monitor, Squelch Detect, Accessory Port F1, F2, F3 and F4
Local Desk Mic Port	N/A
16 Function Tone Decode	5 DC Current Detects
2 or 4-wire Audio	
Accessory Port used for local deskset or data applications	
Accessible audio level adjustments	
Rackmountable	

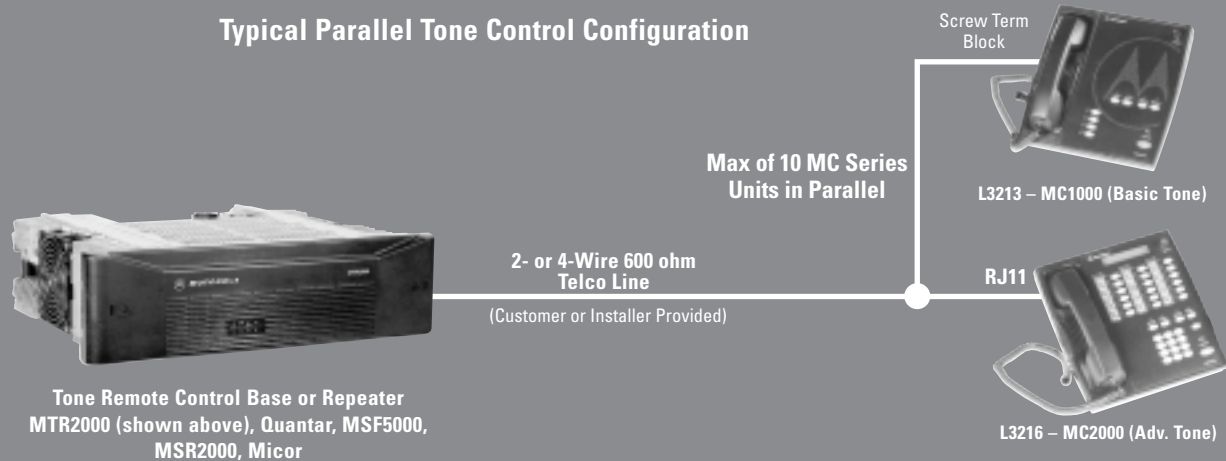
Typical Local Control Configuration



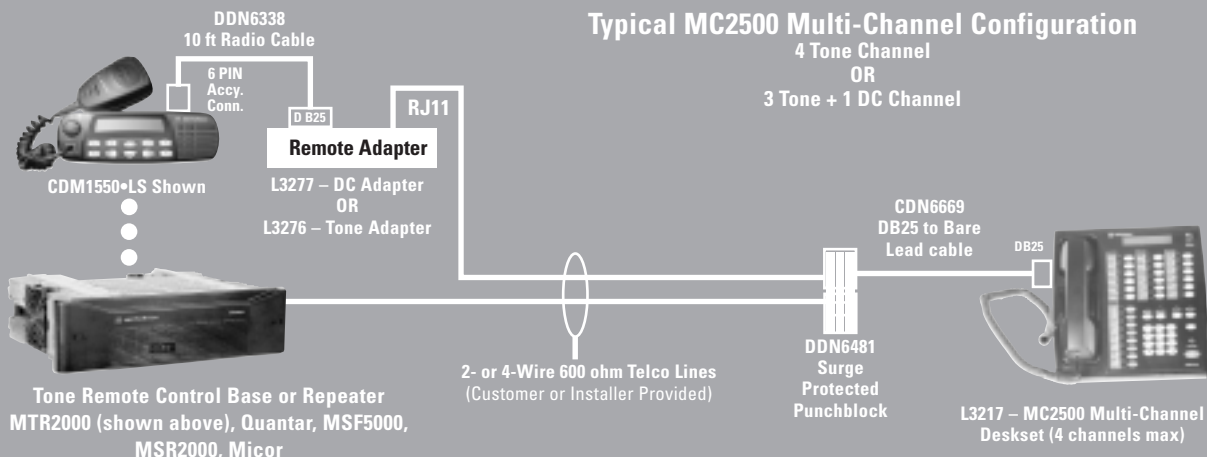
Typical Mobile in a Tray Tone or DC Remote Control Configuration



Typical Parallel Tone Control Configuration



Typical MC2500 Multi-Channel Configuration



DESKSET SPECIFICATIONS

	Local Deskset MC1000 - L3211 MC2000 - L3214	DC Remote Deskset MC1000 - L3212 MC2000 - L3215 MC2500 - L3217	Tone Remote Deskset MC1000 - L3213 MC2000 - L3216 MC2500 - L3217
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 Models	+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

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

DIGITAL JUNCTION BOX SPECIFICATIONS

Dimension	8-2/16" W (20.5 cm) x 8-1/4" L (21 cm) x 1-3/8" (3.5 cm)
Weight	1.5 pounds (680 grams)
Audio Distortion	Less than 3% THD (total harmonic distortion)
Audio Transmit	0.78 Vac nominal
Audio Receive	0.78 Vac nominal
Data Interface	RS-485 standard
Frequency Response	±3 dB from 300-3000 Hz @ 1 kHz ref.
Hum and Noise	Less than -45 dB below rated outputs
Humidity	95% at 122°F (50°C)
Maximum distance between Master Digital Junction Box and console/deskset	5000 feet (1524 meters) (50 feet [15 meters] for RCH 3000)
Maximum distance to digital radio	50 feet (15 meters)
Power Input	10.5 to 16 Vdc maximum
Temperature Range	32°F to 122°F (0°C to 50°C)



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