

### FLEXIBLE AND CUSTOMIZABLE USER INTERFACE

MIP 5000 features the familiar MCC 5500 Graphical User Interface (GUI) that minimizes user-training requirements. The intuitive and familiar GUI is based on Microsoft Windows with pull-down menus, icons and tool tips. The flexible and customizable GUI provides multiple screen layouts (folders) to organize resources by agency, shift, or any criteria that meets the needs of the console user(s). The GUI provides user options for color control of the display and resizable windows and icons. To save time, dispatchers have Page History and Activity Log windows always available for real time status information.

### CUSTOMIZABLE CHANNEL CONTROL

MIP 5000 VoIP radio channels are customizable with various controls, such as patch status, frequency select, coded/clear select, and individual volume control based on user preferences. Per channel controls can be fully or partially shown, or hidden to save space on the screen.

Busy Dispatchers can respond to a missed call by simply clicking on an entry in the Activity Log. The number of calls and call information displayed in the Activity Log is customizable to suit the needs of the user(s).

### KEY FEATURES

MIP 5000 is a full featured console including capabilities of Multi-select (APB), Single Button Page, DTMF Decode and MDC 1200 signaling support. MDC signaling features include: PTT ID with Alias, Emergency, Call Alert, Selective Call, and Radio Enable / Disable.

### INTEROPERABILITY

MIP 5000 allows users to patch communication between dissimilar radios with an easy drag and drop capability. The MIP 5000 console meets the standard for Level 4 Interoperability with dispatcher controlled radio to radio patching.

### MIP 5000 CONSOLE OPERATOR POSITION

MIP 5000 operator positions connect directly to the radio system's IP transport network without gateways or interface boxes. Audio processing and switching intelligence for dispatch is performed within each software-based operator position, without additional centralized electronics.

The MIP 5000 console system does not require separate configuration or performance management equipment. The MIP 5000 console system is configured and managed by the Console System Database Manager (CSDM). This provides the customer with a single point for configuring and managing the entire console system. This centralized approach saves valuable time and effort for system administrators and technicians.

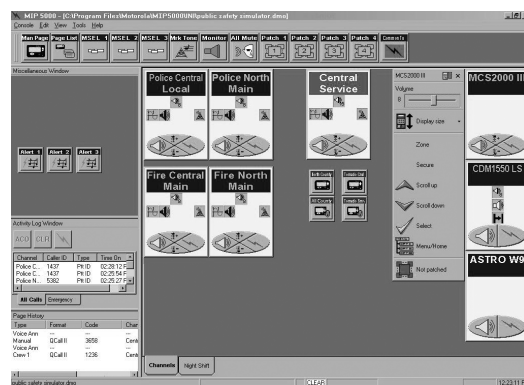
### COMPATIBILITY

MIP 5000 software is compatible with Microsoft Office software and can be installed on an existing XP-SP2 desktop or laptop computer to allow dispatch capability wherever network access is available. The MIP 5000 is able to communicate with Trunked radio systems as well as UHF or VHF Conventional systems and can neutralize the disharmony associated with proprietary communications systems. MIP 5000 Local, Tone or Digital gateways work in parallel with customer existing legacy systems.

### MIP 5000 VoIP RADIO GATEWAY

MIP 5000 Single Channel Gateways provide the connection between the Radio (one gateway – one radio/channel) and the network. The gateways provide access to multiple radio types including local control, tone control and Motorola Digital control.

\* For the maximum performance required in a public safety environment, the MIP 5000 VoIP radio console should be configured with a dedicated LAN/WAN connection on a secure, non-congested, QoS enabled network.



# MIP 5000

## VoIP Radio Console

The MIP 5000 VoIP Radio Console is designed to provide customers an affordable solution to transmit dispatch quality voice over their existing Ethernet network. The MIP 5000 radio console connects up to 100 remote users with flexible licensing that is available with 1, 4 and 8 channel software options. The console system consists of two parts: a Graphical User Interface (GUI) and a Radio Gateway(s).

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**RADIO GATEWAY (The following specifications apply to all three gateway versions: Local, Tone, and Digital)**

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Dimensions	1.5in H x 6in W x 7in D (40mm H x 150mm W x 180mm D)
Weight	Max. 2lb. (0.9kg)
Operational Temperature Range	-22°F to +140°F (-30°C to +60°C)
Humidity	Up to 95% at 122°F (50°C), non-condensing
Power Input	5VDC @ 1.2A
Supplied Power Supply Input	90-264 VAC, 50/60Hz ± 3Hz
Supplied Power Supply Output	5VDC @ 2.4A (12W max.)
Electrostatic Discharge Immunity	15KV on all exposed operator control areas. At 4KV operation is not disturbed. At 15KV no permanent failure.
Line Protection	Fast-acting solid-state surge protection
Memory Protection	Settings preserved in Non-Volatile RAM
Network Connector Type	RJ45
Vocoder Algorithm Supported	G.711

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**RADIO GATEWAY AUDIO (The following Audio specifications apply to all three gateway versions: Local, Tone, and Digital)**

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Frequency Response	300Hz to 3300Hz +1/-3 dB @ less than 3% distortion, except at Guard Tone Notch Frequency
Hum and Noise	65dB below rated output at any port
Distortion	Less than 3% THD
CrossTalk	Less than -65dB @ 0dBm Transmit Level
Line Balance	60dB @ 1004Hz
Line Impedance	600 ohms or 10K ohm, selectable (Tone Gateway)
Receive Audio Input Level	Adjustable from -40dBm to +11dBm
Call Indicator Sensitivity	-5 to -32dBm per receive sensitivity
Transmit Audio Output	Adjustable from -40dBm to +11dBm
Level Control	Digital AGC. Less than 3dB change for voice input levels over rated range
DTMF Decode Performance	Max. accepted individual tone frequency offset ±3.5%, and a Min. rejected frequency offset ±1.5%
MDC1200 Decode Performance	<1% MER @ 12dB SINAD, direct connect to radio

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**TONE RADIO GATEWAY SPECIFICATIONS**

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Guard Tones Supported	2175Hz (Default), 2100Hz, 2300Hz and 2325Hz
Function Tones Supported	550Hz - 2050Hz in 100Hz increments, Qty 16
Tone Tolerance	± 2%
Opto-Input	Qty 1, for High Speed Mute, COR detect, Cd/Clr Rx Status (selectable),
Opto-Input Rating	5-20mA input current, unbalanced, 5K Ohm Impedance
Relay Output	Qty 1, follows PTT command to radio
Relay Output Type	Form C, DPDT, Dry Closure, 150mA Max., or 60VDC Max.
Relay Output Switching Power	3 Watts Max., non-inductive load
Radio Connector Type	RJ45

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**DIGITAL RADIO GATEWAY SPECIFICATIONS**

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Radio Data Interface	RS485
Max Cable Length to Radio	50ft.
Max Cable Length to Digital Junction Box	5000ft.
Radio Connector Type	RJ45

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**LOCAL RADIO GATEWAY SPECIFICATIONS**

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Opto-Input	Qty 1, for High Speed Mute or COR detect (selectable)
Opto-Input Rating	5-20mA input current, unbalanced, 5K Ohm Impedance
Relay Output	Qty 7, for PTT, Monitor, Takeover, Binary Freq Select, PL Select. Wildcard, (selectable)
Relay Output Type	Form C, DPDT, Dry Closure, 150mA Max., or 60VDC Max.
Relay Output Switching Power	3 Watts Max., non-inductive load
Radio Connector Type	DB25

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**NETWORK REQUIREMENTS**

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Type	Multicast and QoS Enabled, 10/100 Mbps Ethernet
Bandwidth Usage	100kbps per radio voice channel, Gateway
Packet Loss	1% Max.
End-To-End Delay	150ms Max.
Jitter	100ms Max.

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**COMPUTER REQUIREMENTS**

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Processor	Intel Pentium 4, 1.5GHz min.
Operating System	Microsoft Windows XP Pro, SP2 or later
Hard Drive	20GB min.
Memory	512MB RAM
Network Card	10/100 Mbps Ethernet adapter
Video	SVGA-4MB VRAM or greater
Monitor	17" Min., 1024x768 Resolution and 256 Color or better
Soundcard	Soundblaster compatible
Input Devices	101 Key Keyboard, 2 Button Mouse or Trackball
Speakers	For best audio: Stereo, 4W amplified with internal power supply, 3" speaker Min.
USB Ports	As required for optional audio accessories; Headset w/mic, Desktop mic, Footswitch

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**RADIO GATEWAY CERTIFICATIONS (applies to all gateways)**

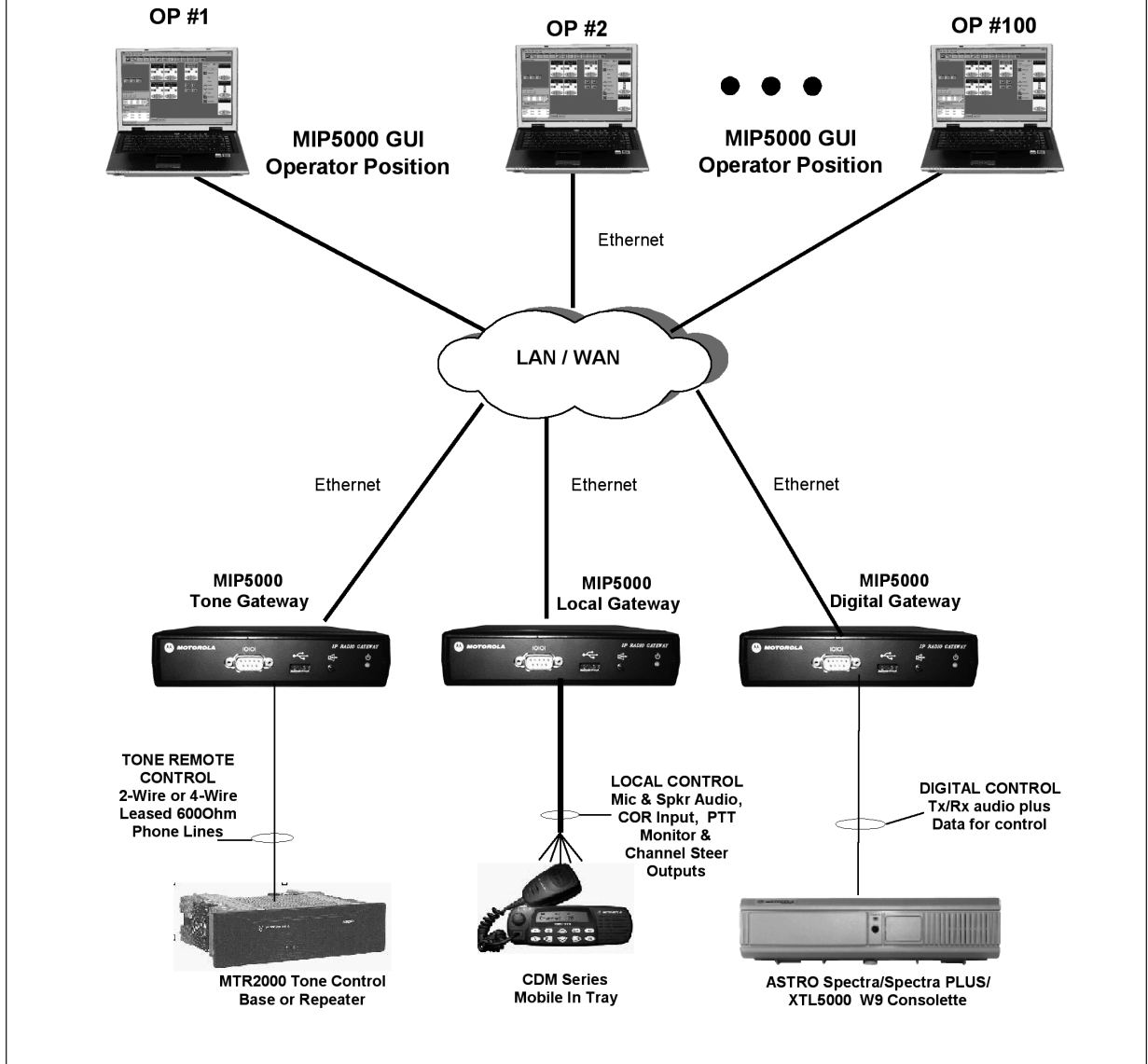
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FCC Part 15, Class A
FCC Part 68/TIA968-A
Industry Canada CS03
Industry Canada ICES-003
UL and CSA listed PSU
CE/RTTE
RoHS
WEEE

Specifications subject to change without notice.



### MIP5000 System Configuration, Multiple Ops to Multiple Radios



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