

# MOTOROLA MCC 5500

## Dispatch Console



The Motorola MCC 5500 GUI is a Windows based application. The GUI provides a flexible and intuitive front end to the Motorola MCC 5500 Dispatch Console.

### FEATURES

#### *Flexible Graphical User Interface*

- Microsoft based application
- Utilizes pull-down menus, drag-and-drop, tool-tips.
- Intuitive icons
- Resize windows and icons

#### *Enhanced Monitoring Capabilities*

- Automatic monitoring and testing of system components
- Generate statistical reports
- Log Dispatcher Operations

#### *Industry Standards*

- Microsoft Windows XP and Vista OS
- Standard Ethernet LAN
- Standard PC, Monitor and Accessories
- Touchscreen

#### *Integrated Resources*

- Single application to control Radio, Telephone and Paging operations
- Single operator PC for IRR and Telemetry control

#### *Multiple System Support*

- Stat-Alert™
- ASTRO™
- Wireless Interface for other systems
- iDEN (RALP)

#### *Multiple Paging Formats Including*

- 2-Tone
- Quick Call I and II
- DTMF
- 5/6-Tone
- Custom formats

The Motorola MCC 5500 Dispatch Console provides fully functioned dispatch capabilities for Conventional radio systems. With integrated paging and telephony your dispatch team can effectively manage all resources at your disposal. With its flexible GUI the MCC 5500 Dispatch Console gives you the capability to customize the look and feel for your operation. The MCC 5500 Dispatch Console includes a TDM

switch (CES), utilizing a distributed architecture, and an audio unit (CAB) at the operator position. Comprehensive diagnostics and automatic switching allow for a fully redundant and self-healing solution. The MCC 5500 Dispatch Console is part of the family of Motorola integrated Control Room applications, providing a co-ordinated approach to effective resource management.

## SPECIFICATION SHEET

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The MCC 5500 dispatch console solution consists of the following:

### MCC 5500 Dispatch Console Operator Position

The MCC 5500 dispatch console operator position is the interface between the dispatcher and the console system. Each dispatch console operator position consists of PC, dispatch application software, Console Audio Box (CAB), and operator accessories. The operation is controlled via a mouse and/or touch screen monitor. It provides a means for a dispatcher to communicate with field units and telephone caller. It also allows dispatchers to control and monitor multiple channels of radio activity, patch various channels together, and send pages. Each operator position is connected to a CAB and Console Electronic Shelf (CES).

### Dispatch Application Software

The MCC 5500 dispatch application software program features an intuitive, easy-to-use Graphical User Interface (GUI) that runs under the Microsoft Windows® XP or Vista operating system utilizing the industry standard PC platform. The GUI is extremely flexible and can be tailored to both operational and dispatcher needs making dispatching simple and intuitive. The layout and colors of the GUI can be tailored to any given operation and can be configured on a per operator basis.

### Console Audio Box (CAB)

The CAB provides the interface between the MCC 5500 dispatcher PC and CES. It is the connections point for the operator accessories. There is one CAB for each console position.

### Console Electronics Shelf (CES)

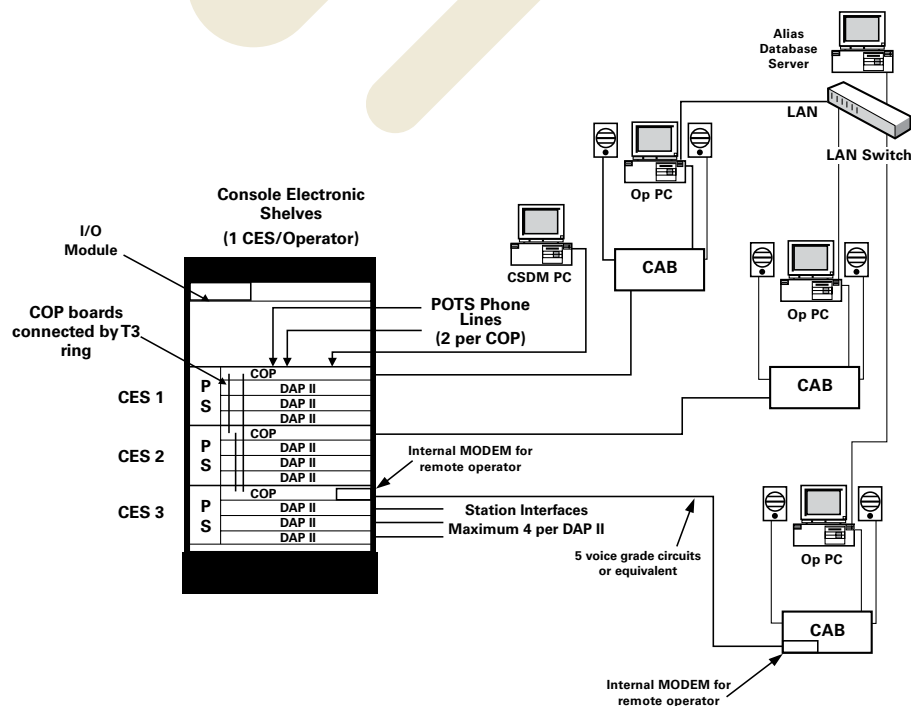
The CES consists of a console processor (COP) module to manage communications and digital audio processor (DAP) modules to interface external analog circuits. The modules facilitate communications between console operators, radio channels, voice recorders, and any other external devices connected to the console.

### Console System Database Manager (CSDM)

The CSDM is a powerful configuration and maintenance tool for the MCC 5500 dispatch console and is a requirement for every customer site. The CSDM is used to configure a MCC 5500 dispatch console system, to access the configuration database, to upgrade software, to monitor the system, and to troubleshoot console problems. It also provides extensive on-line help. The CSDM program is located on a dedicated PC that runs the Windows XP or Vista operating system. The CSDM terminal is located in the backroom.

### Alias Database Manager (ADM) Server (optional)

The ADM is a program for managing centralized server-based access to Caller ID aliases. The ADM provides simple aliasing of radio unit IDs, status members and message numbers. The ADM is an optional component and not included in all architectures. The ADM program is located on a separate PC Server that runs on Windows 2003 operating system. A network is required to operate ADM using standard networking techniques.



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### PHYSICAL SPECIFICATIONS

Dimensions (H x W x D)	CAB	2.75 x 16.75 x 13.00 inches (70 mm x 425 mm x 330 mm) [+4 in (100 mm) for cabling]
	CES	7 x 17 x 16 inches (175 mm x 430 mm x 405 mm) [+4 in (100 mm) for cabling]
	I/O Shelf	1.75 x 17.625 x 8 inches (44 mm x 448 mm x 200 mm) [+4 in (100 mm) for cabling]
Weight	CAB	Max. 11 lb. (5 kg)
	CES	Max. 25 lb. (11.5 kg)
	I/O Shelf	Max. 7.5 lb. (3.4 kg)
Temperature Range	CAB and Speaker	41° to 104°F (5° C to +40° C)
	CES	32° to 122°F (0° C to +50° C)
	I/O Shelf	32° to 122°F (0° C to +50° C)
Humidity	95% at 122°F (50°C) (non-condensing)	
Control Type	32-bit Microprocessor	
Audio Switch Type	Time Division Multiplexing (TDM)	
Voice Digitization	64 Kb $\mu$ LAW PCM	
Electrostatic Discharge Immunity	15KV on all exposed operator control areas At 14KV operation is not disturbed At 15KV no permanent failures	
Line Protection	Fast-acting solid-state surge protection	
Memory Protection	Settings preserved in non-volatile memory	
Cable Lengths	CAB to CES: 50 ft, 100 ft, up to 4000 ft CAB to PC (USB Cable, A/B connectors) 3 m (max) CSDM Computer Cable: 25 ft	

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### END-TO-END SPECIFICATION

Frequency Response	300 to 3400 Hz +1 -3dB @ less than 2% distortion; expect attenuation of generated tones that are outside this range.
Hum and Noise	65 dB below rated output at any port
CrossTalk	Less than -65 dB at 0 dB transmit level
Level Control	Digital AGC (Automatic Gain Control) Gain adjustment performed through Digital Signal Processors (DSPs) Gain will not increase in the presence of noise or absence of voice Constant output (less than 3 dB change) all voice input levels over rated range: Microphone: -60 to -22 dBm Receive line: -60 to +11 dBm

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### BASE STATION CONTROLS

Channel Control	Each channel can be separately configured for E&M, Tone, DC, ASTRO DIU, or iDEN (RALP) control. Four types of mobiles are supported: CDM1550 LS+, Consolette W9, MCS 2000 III, or MTM700, and two types of iDEN radios are supported as control stations: i325 and i365IS.
Tone Control	Function tone in the 200 to 3400 Hz range Frequency adjustable in 0.1 Hz increments Total tone duration adjustable from 0 to 60,000 ms in 1 ms increments Guard tone configurable for 2100 Hz, 2175 Hz, 2300 Hz, or 2325 Hz.
DC Control	125 VDC Positive and negative current (0.5 to 12.5 mA increments) Max loop resistance including base station termination; 10K chms
PTT Relay	Form A dry closures 150 mA max, or 60 V DC max Switching power 3 watts max Maximum distance 200 ft within one building

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### TRANSMIT LINE OUTPUTS

Line Output	Adjustable from -60 to +11 dBm
Output Impedance	600 ohms

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### RECEIVER LINE INPUTS

Receiver Sensitivity	Adjustable from -60 to +11 dBm
Call Light Sensitivity	Adjustable from -5 to -32 dBm, relative to receive sensitivity
Line Balance	60 dB @ 1004 Hz
Input Impedance	600 ohms

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### OTHER AUDIO PORTS

Recorder Port (per channel)	Output consist of summed transmit/receive audio of the channel with a high level guard tone (HLGT) filter. Output level is programmable from -60 to 11 dB into 600 ohms
Recorder Port (per console)	Output consists of different sources (select, unselect, telephone, call director, and monitor speaker) and transmit audio of the operator. Fixed nominal output is -10 dBm, into 600 ohms
Aux./Paging Input	Adjustable from -60 to +11 dBm, balanced 600-ohm input

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### AUDIO CONTROLS

Individual Volume	34 dB range in 15 discrete steps Muting configurable for -24 dB or full mute
All Mute	24 dB below current setting or full muting of unselected channels with timer programmable from 1 to 120 seconds or for infinite duration

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### STATUS OUTPUTS AND INPUTS – GENERAL I/O MODULE (I/O SHELF)

Auxiliary Outputs	Form C dry closures 1 A max. at 24 VDC Switching power 30 watts max Maximum distance 200 ft within one building
Auxiliary Inputs	Opto-coupled inputs High impedance 0.5 to 12 mA input current Maximum distance 200 ft within one building

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### POWER SUPPLY (CAB) CONSOLE AUDIO BOX (CAB) SPECIFICATIONS

AC Input Voltage	110-240 VAC, 1.6 A max.
Input Frequency	50/60 Hz, $\pm 3$ Hz
Power Output	48 W max.
DC Outputs	+12 VDC @ 4 A
Agency Approvals	UL (Underwriters Laboratories) CSA (Canadian Standards Association) CE Mark (Conformité Européene)

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### POWER SUPPLY (CES) SPECIFICATIONS

AC Input Voltage	120/240 VAC 9 A @ 115 VAC; 4.5 @ 230 VAC
Input Frequency	50/60 Hz, $\pm 3$ Hz
Power Output	300 W max.
Agency Approvals	UL (Underwriters Laboratories) CSA (Canadian Standards Association) CE Mark (Conformité Européene)

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### POWER SUPPLY (I/O SHELF) SPECIFICATIONS

AC Input Voltage	120/240 VAC, 0.5 A max.
Input Frequency	50/60 Hz, $\pm 3$ Hz
Power Output	30 W max.
DC Outputs	+5 VDC, 2.6 A max.
Agency Approvals	UL (Underwriters Laboratories) CSA (Canadian Standards Association) CE Mark (Conformité Européene)

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### REGULATORY CERTIFICATIONS

Safety	IEC60950 1:2001 EN 60950-1: 2001 First Edition
EMC Emissions & Immunity	EN 55022: 1998 + A1:2001, A2:2002 EN 55024: 1998 + A1:2001, A2:2003 EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 6100-4-11 EN 61000-3-2:2000 EN 61000-3-3:1995 + A1:2001
European Council Directives	Provisions of the normatives: EMC Directive 89/336/EEC (including amendments) Low Voltage Directive 73/23/EEC (amended by 93/68/EEC) R&TTE Directive 1999/5/EEC

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### MCC SERIES ACCESSORIES SPECIFICATIONS

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#### Speaker

Dimensions (H x W x D)	Without bracket: 4.9 x 4 x 3.5 inches (124 mm x 102 mm x 89 mm) With bracket: 4.9 x 4 x 5.8 inches (124 mm x 102 mm x 146 mm)
Weight	9.7 lb (0.3 kg)
Power Input	Add 0.05 Amps per speaker to CAB power Input at 120 VAC
Thermal Output	15 BTU/Hr (maximum), 8 BTU/Hr (typical)

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#### Headset Jack

Dimensions (H x W x D)	1.6 x 5 x 6 inches (41 mm x 127 mm x 152 mm)
Weight	1.2 lb (0.5g)
Power Input	Negligible
Thermal Output	Negligible

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#### Microphone

Dimensions (H x W x D)	Gooseneck at 90°: 4.5 x 4.8 x 6.6 inches (114 mm x 121 mm x 168 mm) Gooseneck at 180°: 21.8 x 4.8 x 6.6 inches (552 mm x 121 mm x 168 mm)
Weight	24 lb (1.1 kg)
Power Input	Negligible
Thermal Output	Negligible

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### MCC 5500 DISPATCH CONSOLE CAPACITIES

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Operator Positions	Up to 36 operator positions per console system
Channel Capacity	Up to 128 radio channels (sharable)
Central Office (CO) Lines	Up to 2 CO lines per dispatch console position Up to 72 CO lines per console system
Multi-Select Groups	Up to 10 Multi-Select groups per dispatch console (with up to 16 radio channel resources per MSel)
Patch Groups	Up to 10 Patch groups per dispatch console (with up to 16 radio channel resources per Patch)
Paging Buttons	Up to 512 Paging buttons (with up to 50 single pages in a group)
General I/O functions	Up to 512 general I/O functions
Speed Dial Aliases	Up to 10,000 Speed Dial Aliases per console

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