MOBILE, FLEXIBLE, MISSION CRITICAL VoIP DISPATCH CONSOLE

MCC 7100
IP DISPATCH CONSOLE

Today's dynamic command and control environments demand communication capabilities that can be deployed at a moment's notice, anytime, anywhere. As a fixed or mobile solution, the MCC 7100 IP Dispatch Console eliminates traditional technology barriers to deliver the flexible, interoperable communications you demand.

The MCC 7100 Console offers mission critical capability for controlled public safety dispatch environments as well as secure connectivity from the customer network or VPN access over the internet.

Listen and respond to 9-1-1 callers and radio communications on one headset using external phone interface (EPI) and standard Motorola accessories or travel light with MCC 7100 Console on a laptop or tablet and common off the shelf USB accessories.

Instantly record selected radio receive audio as well as dispatcher transmit audio for replay wherever

you are. The integrated Instant Recall Recorder (IRR) can save and forward a single call or a block of calls and will automatically delete records as they exceed the configurable capacity.

Take command of situations from virtually anywhere. The MCC 7100 Console uses wired or wireless networks to establish Project 25 (P25) encrypted voice communications with trunked and conventional radios, when and where you need them most.

Use the portable MCC 7100 Console to quickly expand your mobile work force communications for on the spot coordination during special events, for disaster management, in back-up facilities and to increase temporary dispatch capacity. Equip senior staff with the ability to easily monitor and initiate communications from their office, on the road or in remote locations.

With this new flexibility and mobility, dispatchers in the field no longer have to juggle multiple portable radios for communications. Instead, a laptop or PC equipped with the MCC 7100 Console provides full dispatch control with firewall secured protection into the ASTRO® 25 network.

EASY TO USE, FLEXIBLE, AND CUSTOMIZABLE USER INTERFACE

To help reduce training needs, increase adoption rates and keep dispatch practices consistent, the MCC 7100 Console uses the familiar MCC 7500 Console graphical user interface (GUI) with easily recognized icons and graphics based on Microsoft Windows®.

The customizable GUI allows you to layout screen resources with color, size and placement choices organized by agency, shift or other criteria in order to build the user interface according to your individual or organization specifications.

Enhanced Alert Tones provide the ability for dispatchers to send one of fifteen user-configurable alert tones on the selected radio resource(s). The radio resource may be analog conventional, ASTRO 25 conventional, or trunked talkgroups or Private Calls.

The Enhanced Alert Tones are based on .wav files stored on the dispatch position's computer and mapped to alert tone buttons on the dispatch position's GUI.

Trunked and conventional radio channels are customizable with various controls, such as; patch setup and tear down, 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.

Because mission critical voice is dependent on the state of the network in use, the MCC 7100 Console includes a Network Status Indicator to provide the user with constant real time feedback about network conditions affecting communication performance.

Busy users quickly respond to missed calls by simply clicking on an entry in the Activity Log and selecting transmit. The display information such as the number of calls and date and time specifics are customizable to fit the needs of the individual user.

To support full customization of the GUI or integration with 3rd party applications, an available Software Development Kit (SDK) provides access to all console functionality.

KEY INTEROPERABILITY FEATURES

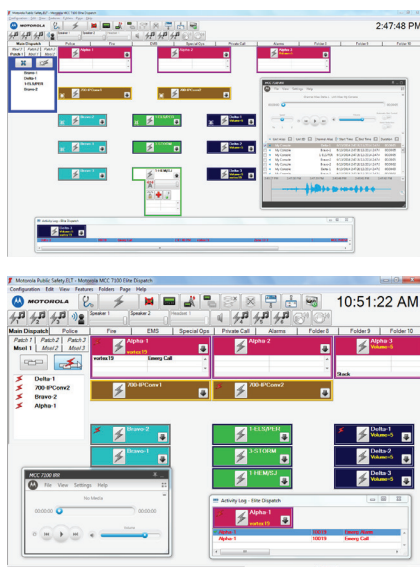### Works in Parallel with MCC 7500 Consoles

The ASTRO 25 console system may consist exclusively of MCC 7100 Consoles or operate in parallel with MCC 7500 Consoles. Both share the same GUI and can have the same selected resources with cross muting supported between the two.

USB Audio Interface Module (AIM)

The USB AIM supports Motorola standard mic, footswitch, and headset peripherals, plus an external paging encoder port to provide tone paging services, a NENA compliant external phone interface (EPI) port to allow a single headset to be used to answer 9-1-1 calls and handle radio communications, a local logging recorder port, and support for four private dedicated Aux I/O's.
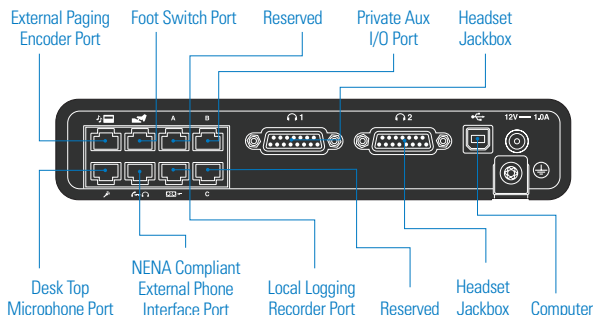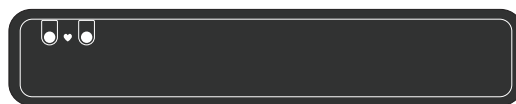
Agency Partitioning Delivers Sharing and Cost Savings

With Agency Partitioning, multiple agencies can share a system to gain interoperability and cost savings benefits, and still maintain control of their own channels, encryption keys, configuration and more.

Tailor the MCC 7100 Console to your needs with the customizable user interface

Audio Interface Module (AIM)

Console Alias Manager Gives Local Control

The MKM 7000 Console Alias Manager may be used with the MCC 7100 Console to allow agencies to locally manage their radio unit IDs.

Different agencies sharing the system can manage their radio unit ID aliases independently and autonomously. Users easily differentiate between "their" radio users and "other" radio users by using more generic aliases for the "other" users.

Ensure Emergency Transmissions Get Priority

Transmit Priority Levels provide an orderly and consistent method for ensuring that higher priority transmissions are able to takeover resources from lower priority transmissions.

Create Communications Interoperability

MCC 7100 Console users patch communications between trunked and/or conventional radios that are normally unable to communicate with each other. Patched radio users see the ID or alias of the other patched radio(s), as opposed to that of the console. This minimizes confusion and the need for the user to intervene in the call. Patches are automatically re-established if interrupted so that users stay focused on continuing operations.

Protect Sensitive Communications

Encryption and decryption services within each position enable users to fully participate in secure communications while keeping sensitive, vital information completely encrypted between the MCC 7100 Console dispatcher and radio users.

Users can connect with agencies that have different encryption configurations without any manual intervention or delay. Up to twenty calls using up to three different algorithms and multiple secure keys can be supported simultaneously.

To help reduce stress and potential errors when managing encrypted audio situations, indicators and alerts are provided when the console mode does not match that of a received call, as well as when a patch or multi-select group is being set up between a mix of clear and secure channels. Both software and hardware encryption is available for AES, DES-OFB and ADP encryption algorithms.

The added security of tamper resistant FIPS 140-2 approved key storage is exclusively supported for laptop users with Hardware Key Management. The Hardware Key Management system is fully compliant with KVL 4000 (Version B) keyloading and Over the Ethernet Keying (OTEK).

SOLUTION COMPONENTS

MCC 7100 Console Positions

The MCC 7100 Console connects directly to the radio system's IP transport network without gateways or interface boxes. Vocoding and encryption are performed within each software-based operator position. MCC 7100 Consoles function as integrated components of the total radio system without additional centralized electronics.

The MCC 7100 Console position can be comprised of a laptop computer with just a headset, or operate with a traditional desktop computer and monitor with a keyboard, mouse / trackball / touchscreen, up to 8 assignable speakers, and audio accessories.

Audio Accessories

Commercially available USB connected accessories that have been tested for optimal audio quality are supported.

Compatibility

The MCC 7100 Console software requires Microsoft Windows® 7 operating system.

For users who need to conduct dispatch activity and other tasks on a single computer, the MKM 7000 Console Alias Manager Client, ASTRO 25 Advanced Messaging Solution and Microsoft® Office are also approved for installation.

Channel Capacity Licenses

Channel capacity licenses are available for 5, 10, 15 or 20 encrypted or unencrypted simultaneous voice streams (channels). The licenses provide monitoring ability of 15, 30, 45, and 60 resources, respectively.

Capacity licenses are issued for the life of the product and continue in force when the system is upgraded.

Remote Operation

Full dispatch capability is provided when operating outside of the ASTRO 25 Network. The MCC 7100 Console supports firewall controlled access for up to 10 channels into the secure ASTRO 25 network from the Customer Enterprise Network (CEN). For remote access with additional security, virtual private network (VPN) access is also supported through the CEN.

SPECIFICATIONS

System Compatibility	ASTRO® 25 System
Vocoder Algorithms Supported	AMBE, (IMBE is compatible with AMBE), G.728 (for Analog Conventional)
Encryption Algorithms Supported	AES (256 bit), DES-OFB, ADP (Advanced Digital Privacy)

MCC 7100 IP Dispatch Console Capacities	Console Resides on the ASTRO 25 Network	Console Resides Outside the ASTRO 25 Network
Simultaneous Audio Sessions per Console	5, 10,15 or 20 license options	5 or 10 license options
Bandwidth Requirement per Channel	35 kbps	35 kbps
Simultaneous Encryption/ Decryption Sessions per Secure Capable Console	5, 10,15 or 20	5 or 10
Multi-Select Groups per Dispatch Console	Up to 4 (with up to 20 Members per Multi-Select group)	Up to 4 (with up to 10 Members per Multi-Select group)
Patch Groups per Dispatch Console	Up to 4 (with 8 members per patch group)	Up to 2 (with 4 members per patch group)
Monitored Resources per Dispatch Console	Up to 60	Up to 30

USB AUDIO INTERFACE MODULE SPECIFICATIONS

Before you mount and install the USB Audio Interface device (AIM), verify that you meet the environmental requirements necessary for the device to operate.

	Connector type	Device
Audio Interface Module (AIM)	RJ45	One desktop gooseneck microphone, one local logging recorder, one external telephone headset, one external paging encoder, one footswitch, and support for four private Aux I/O's.
	DB15	Two headset jacks connectors.
Dimensions (H x D x W)	1.69 x 5.23 x 8.39 in (43 x 133 x 213 mm)	
Weight	1.43 lbs (0.65 kg)	
AC Operating Voltage for the USB AIM Power Supply	90 VAC - 264 VAC	
Minimum Input Voltage	90 VAC with 57~63 Hz	
Maximum Input Voltage	264 VAC with 47~53 Hz	
Typical Input Voltages	115 VAC and 230 VAC	
DC Operating Voltage for the USB AIM Device	12 VDC (nominal)	
Maximum Power Consumption	0.5 A at 12 VDC (6 Watt)	
Operating Temperature	5°C (41°F) — 40°C (104°F)	
Storage Temperature	-25°C (-13°F) — 70°C (158°F)	
Relative Humidity Operating	0% — 90% relative humidity at 40°C non-condensing	
Certifications	CE CMM EPUF 50 EAC Safety CSA 60950-1-07 2011-12 UL 60950-1 2011 IEC 60950-1 2005 EMC Emissions & Immunity FCC part15B Class B	ICES-003 EN 609 50 - 1 : 2006 + A11 : 2009 + A1 : 2010 + A12: 2011 EN55022 :2010 EN55024 :2010 EN 61000-3-2:2006 +A1:2009 +A2:2009 EN 61000-3-3:2008 Energy Efficiency International Energy Efficiency Level V (PVM power supply only)

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