CommandSTAR Lite™
Desktop Console

MOTOROLA

The CommandSTAR Lite is designed for mobile radio communication dispatch applications with 10 or less operators.

Available in 4, 6 and 8 channel configurations

For mid-size dispatch operations with up to 10 operator positions.

Maximum of 8 Operator Control Modules can be customized to meet the unique requirements of each operator position and allows for easy maintenance.

Up to 8 base stations or repeaters can interface to each operator position.

Parallel status updating (on digital or tone control channels) between positions, with no central electronics required.

Digital remote control modules are capable of unlimited mode changes.

Comprehensive multi-tasking dispatch functionality.

Field programmable for ease of maintenance and upgrades.

All electronics are housed internally.

PRODUCT OVERVIEW

Available in 4, 6 and 8 channel configurations with the flexibility to add individual auxiliary control modules, conventional channel control modules, and digital remote control modules. The CommandSTAR Lite console is capable of independent operation or in parallel with multiple positions. Multi-tasking allows the operator to perform various tasks simultaneously – providing efficiency during busy periods. It comes standard with a call-director audio interface or optionally, a 2-line telephone interface. The CommandSTAR Lite is software-controlled, so it can be easily adapted to specific requirements and system expansions.

OPERATOR MODULES

Dual Channel Control Module (CCM)
Features per channel include one channel select button with Status LED, Call Detect LED, Instant Transmit button provides immediate access to channel even if not selected, Mute, and Volume Control. Three buttons may be programmed with any number of station features, such as Coded/Clear, Main/Standby, PL or Frequency select. Non-display model can be used where MDC messaging and PTT ID are not required.

Dual Channel Control Module with Display (DCCM)
Same button customization as CCM without Display, but includes a 2 line x 8 character LED display with brightness control. Display shows MDC 1200 decode functions such as PTT ID and emergency messages. DCCM's can further improve efficiency of the operator via this display window on a per channel basis.

Digital Radio Control Module (DRCM)
Each DRCM can control one of three digital radio types: Astro Spectra Consolette (Model W9), MCS 2000 (Model III), and iDEN (Model M470). All DRCM's are shipped with the Mute, Select, and Transmit controls. All other function buttons emulate those on the specific model of digital radio being controlled. DRCM gives complete access to all features of the radio and unlimited mode changes.

Auxiliary Control Module (ACM)
Each ACM provides 16 buttons, with two LEDs and customizable labels that can be created in the field. There are over 40 features that can be programmed under these buttons. Functions such as one button paging, patching, multi-select, MDC 1200 features, and I/O control. Quick one-button access to dispatch functions helps to minimize response time.

18 Button Keypad Module
Equipped with 12 alphanumeric keys for telephone dialing and entering signaling codes; a 2 line x 16 character display shows date, time, paging aliases, paging status, queued MDC 1200 messages, console features, programming and test functions; VU meter; and a main transmit button. Module also includes four standard function keys for built-in system tests or reprogramming the console features. Crucial dispatch functions are contained in a single module. Customer can choose the location of the module within the console.

OPERATOR FEATURES

Tone, DC, or E&M keying
Provides for E&M, tone, or DC (optional) station control per channel for up to eight channels; or tone and DC signaling over the same wireline in specific applications. Provides flexibility by accommodating a variety of station types.

Digital
Provides digital station control for up to six channels. Completely mimics the control head of the radio. Allows for unlimited mode changes.

Audio Accessories
An internal condenser microphone is provided as the standard audio input device. Auxiliary connectors are provided for an optional gooseneck microphone, desk microphone, footswitch, or up to two headsets. Allows user to select the audio accessory of their choice. A Dual-headset provides for supervisory monitoring of dispatcher training or backup.

Parallel Status Updating
Frequency immediately updates as other parallel positions make changes to the tone or digital control station. User always knows current setting of radio.

Select and Unselect Speakers
The Select speaker is dedicated to receive audio from the selected channel. All other receive audio is heard through the unselect speaker. Allows users to focus on primary activities.

Dispatcher Busy Indication
LED signals when there is audio present, indicating a dispatcher is involved in a radio or telephone conversation. Helps to minimize disruptions.

Multiple Frequency and PL
Up to 16 frequencies or up to 6 Private Line codes are available per channel on compatible tone control stations. Gives the console the flexibility to work efficiently in larger system configurations.

Direct Telephone Interconnect (Optional)
Allows a customer to access two dial up analog phone lines directly from the console without the use of a separate telephone. Lines can be used to answer or initiate a phone call or for phone patch operations. The use of a headset allows for full duplex operation. Direct landline access allows for more flexibility and user productivity.

Alert Tone
Customer can alert system users of an urgent message by transmitting a distinct signal over the keyed radio channels. One, two, or all of the three available signal tones can be used per console operator position to designate different levels or urgency. Urgent transmissions can be flagged so they are given proper priority in the field.

Coded Clear
A signaling system which provides a scrambler "on or off" command to a Motorola Secure equipped station prior to each key up. Two LED's indicate coded or clear transmissions. Allows for system integration of secure stations.

Auxiliary I/O's
General relay inputs and outputs can be used for supervisory control, main/standby, audible alarms, voting receiver comparators, control of external functions such as a security camera or a magnetized door. Twelve opto-coupler inputs and six form-C relay outputs are available with each optional I/O module. Up to 4 I/O modules can be added to each console. Provides user with additional system control.

Operator Crossmute
Acoustically mutes a channel at one operator position every time another operator is transmitting on the same channel(s). Useful when operator positions are located near each other in the same dispatch center to eliminate the possibility of acoustic feedback between positions.

Channel Crossmute
The receive audio is automatically muted on desired channels when a crossmuted channel is keyed. Helps prevent cross-station interference from being heard.

Intercom
Buttons can be configured to intercom with maintenance personnel located at specific base station sites or other operator positions. Dispatchers can engage in productive communications without using the airwaves.

SIGNALING FEATURES FOR TONE, DC OR E&M KEYING

Integrated Paging Encoder
Supports industry-standard paging formats: Motorola 2-Tone, Quick Call I & II, DTMF, 5 tone, 6 tone, GE99, NEC5, NEC6, Reach 1+1, Plectron, Pulse and Custom page formats. Helps eliminate the need to deplete space and resources to accommodate an external encoder.

One Button Paging
Buttons on the Auxiliary Control Module(s) can be pre-defined with paging destinations; including channel, frequency, page format, and cap code. A single page transmission can be sent out to multiple pagers by depressing up to 16 page buttons prior to page transmit. Provides a fast and accurate paging method.

Alias Paging
Aliases, preprogrammed with the proper page code and destination, are recalled on the Keypad module display with a button press. Selecting the correct alias by scrolling through the list, and pressing page transmit sends the page over the correct channel and frequency. Up to 512 aliases are possible. Does not require the availability of multiple ACM buttons.

Multi-Select with Memory and APB
Radio channel combinations can be grouped and stored for simultaneous transmission, such as an All-Points-Bulletin. Up to 8 channel combinations can be stored in memory and recalled when needed. Dispatching the same message to multiple channels with a single transmission saves time.

Patch with Memory and Instant Transmit
Any combination of available radio channels can be patched together, regardless of band, with any number of available phone lines or call director circuits. The customer can recall these combinations, which are stored in memory, at any time and choose to interface with the patch or proceed with other activities. Up to 5 simultaneous patches are possible per operator position. Storing patch combinations in memory allows customers to be more productive. Linking channel users allows for a more reliable transfer of information.

Stat-Alert Signaling
MDC 1200 data signaling format supports the following functions on a per channel basis using a DCCM with display. PTT ID encode/decode, Radio Check encode, Emergency Alert decode, Call Alert encode/ decode, Voice Alert encode/decode, Smart Status/Message decode, Vehicle Status Request, Radio Inhibit and Enable, Repeater Access enable and disable, Repeater Access Code, Remote Monitor, Queue, and Data Operated Squelch. Allows users to manage their mobile fleets in a more efficient manner by inter-mixing voice and data transmissions on a standard radio channel. Data can be decoded per channel, allowing for a clear separation of channel activities.

DTMF Decode
DTMF data signaling format supports two modes of operation, to ease the migration from DTMF to MDC 1200 systems:

1) Automatic Number Identification (PTT ID) with Alias
2) Pager function – radio channel is muted until distinct DTMF digits are received.

CommandSTAR Lite™

General Specifications

Dimensions:	Desktop = 7″ (18 cm) H x 18″ (46 cm) W x 13″ (33 cm) D [+ 4″(10 cm) for cabling]
Weight:	Maximum 7.7 kg (17 lbs)
Temperature Range:	0°C to +50°C
Humidity:	95% at 50C° (non-condensing)
Line Protection:	Fast acting solid-state surge protection.
Memory Protection:	Settings preserved in non-volatile memory.
Maximum Number of Remote:	10 parallel units (tone, DC, E&M)
	31 parallel units (digital remote control)

End-to-End Specifications

Frequency Response:	300 to 3300 Hz +1, –3 dB @ less than 2% distortion.
Hum and Noise:	65 dB below rated output at any port.
Cross Talk:	Less than –65 dB at 0 dBm transmit level.
Level Control:	Digital Automatic Gain Control (AGC)- Constant output (< 3 dB change) for all voice input levels over the rated range: Microphone: –60 to –22 dBm Receive Line: –40 to +11 dBm

Base Station Controls

Channel Control:	Each channel can be separately configured for E&M, Tone, DC control, or digital.
Tone Control:	Guard tone and one function tone in the 300 to 3300 Hz range, frequency adjustable in 0.1 Hz increments. Total tone duration adjustable from 0 to 60000 ms in 1 ms increments. Parallel status update on function tones (550 to 2050 Hz in 100 Hz increments). Guard tone configurable for 2100 Hz, 2175 Hz, 2300 Hz, or 2325 Hz.
DC Control:	125V DC. Positive and negative currents (0.5 to 12.5 mA in 0.5 mA increments). Maximum loop resistance including base station termination: 10K Ohms.
Digital Control	5000 feet aggregate cable length to junction box.

Transmit Line Outputs

Line Output:	Adjustable from –40 to +11 dBm
Output Impedance:	600 Ohm or 10K Ohm

Receiver Line Inputs

Receive Sensitivity:	Adjustable from –40 to +11 dBm.
Call Light Sensitivity:	Adjustable from –5 to –32 dB, per receive sensitivity.
Line Balance:	60 dB @ 1004 Hz
Input Impedance:	600 Ohm or 10K Ohm

Other Audio Ports

Recorder Port (per channel):	The output shall consist of summed transmit/receive audio of the channel with a 2175 Hz filter. The output level is adjustable from –40 to +11 dBm into 600 Ohm.
Recorder Port (per console):	The output shall consist of mixed selected receive audio (telephone and radio) and the operator's transmit audio. A fixed nominal output of –10 dBm into 600 Ohm.
Auxiliary/Paging Input:	Adjustable from –40 to +11 dBm, balanced 600 Ohm input.

Audio Controls

Individual Volume:	0 to –21 dB in 8 discrete 3 dB steps. Muting configurable for –24 dB or full mute.
All Mute:	24 dB or full muting of unselected channels with timer programmable from 1 to 120 seconds or for infinite duration.

Status Outputs and Inputs

Panel Indicators:	Solid state LED indicators. Red, yellow, green depending on function.
PTT Relay:	Form A dry closure. 150 mA, 60 VDC non-inductive load.
Auxiliary Outputs:	Form C dry closures. 150 mA, 60 VDC non-inductive load.
Auxiliary Inputs:	Opto-coupled inputs, 5K Ohms impedance, 5 to 20 MA input current, unbalanced.

Power Supply

AC Input Voltage:	110-240 VAC, 6A maximum
Input Frequency:	50/60 Hz, +/– 3Hz
Power Output:	110 watt maximum
DC Outputs:	V1 +5 Vdc @ 10 amps
	V2 –5 Vdc @ 1 amp
	V3 +12 Vdc @ 5.0 amps
	V4 –12 Vdc @ 1.0 amp
Agency Approvals:	UL (Underwriters Laboratories)
	CSA (Canadian Standards Association)
	CE Mark (Conformite Europeenne)

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