

MCS 2000 Model I User Guide

	page
General Information	2
Functions of the Buttons	2
Audio Signals	3
General operation	4
Radio ON/OFF and Volume Control	4
Function Selection	4
Function Button Selection	4
Menu Selection	4
Exiting Functions	5
Adjust Display Intensity	5
Tones On/off	5
Zone and Mode Selection	5
Outgoing Calls	6
Scanning	6
Turning Scanning On/Off	6
Viewing a Scan List	7
Changing Scan Lists	7
Telephone Interconnect	7
Receiving a Telephone Call	7
Sending a Telephone Call	8
Keypad Selection (List/Buffered Dialing)	8
Private Call	9
Receiving a Private Call	9
Sending a Private Call (trunking only)	9
Enhanced Private Call	10
Caller ID	10
Mode Preset Buttons	10
Mode Recall	10
Automatic Power-Off	10
SmartZone/AMSS Functions	11
Site Search & Site Lock	11
Emergency Operation	11
External Alarm	12

Handset Operation	12
Car Radio Mute	12
Failsoft	12
Conventional Operation	13
Repeater/Direct	13
Monitor	13
User-Selectable Private Line (PL)	13
Stat Alert (MDC - 1200/Star Signalling) Features	13
PTT ID and Emergency	13
Selective Calls	13
Receiving a Selective Call	13
Sending a Selective Call	14
Telephone Interconnect	14
Status/Message	14
MDC Repeater Access (RAC)	14
Trunking Functions	15
Sending a Call Alert Page	15
Receiving a Call Alert	15
Reprogram Request	15
One Touch Button Functions	15
Out of Range	15
Secure Operation	16
Secure Keypad and Erase	16
Data Operation	17
Radio Care	17
Safety Information	17
Important Electromagnetic Emission Information	18
Control Station Operation	18
Caution: VEHICLES EQUIPPED WITH AIR BAGS	19
Accessories	19
Menu Overview	20
Computer Software Copyrights	20

Warning: When installing or removing the mobile radio from the vehicle, the radio must be switched off or damage to the radio may occur.

General Information

With the MCS 2000 Model I you have chosen an excellent mobile radio. The Motorola warranty for quality guarantees the high standard of Motorola products. Your MCS 2000 Model I radio has left our factory only after extensive tests.

This user guide describes the way a **standard** radio works. Since standard operation may be changed by programming - both concerning the **Functions** which the radio includes and the **Buttons** used to activate them - the way your radio operates may differ from what is described here.

The radio display prompts may be programmed into the radio in one of a number of different languages. English is the default language and is used to describe the displays in this user guide.

For further information, contact the person in charge of your radio system or your local service representative.

Functions of the Buttons

Numbers in brackets refer to the illustrations on the fold out page.

Depending on the keypad ordered with your radio, refer to either "E" or "I" for the description of the buttons:

- (A) **Radio ON/OFF and Volume control**
- (B) **Three-color indicator**
 - Green**, flashing: incoming call or Call Alert Page
 - Red**, continuous: radio transmits in clear and secure
 - Orange**, continuous: system/channel busy or incoming clear call (secure operation).
 - Orange**, flashing: incoming secure call (secure operation).
- (C) **Display** with symbols and one line of 8 characters.
- (D) **Mode selector**
- (F) **Transmit key (PTT)**
 - Push to talk, release to listen.
- (G) **Microphone connector**
- (1) **Zone select**
- (2) **Monitor**, press button to listen for activity (conventional operation) or Search (AMSS/SmartZone operation)
- (3) **HOME**

- (4) **Secure on/off** (secure operation)
- (5) **Emergency**
- (6) **External alarm**
- (7) **Telephone interconnect** or **Secure on/off**
(secure operation)
- (8) **Scan**
- (9) **Menu**
- (10) **Option**
- (11) **Page**
- (12) **Private call**
- (13) **Select**

Audio Signals

- High tone Ringing tone Low tone
- _____ Call alert sent
- _____ Call alert acknowledgement
- _____ Busy (repeated four times)
- _____ Automatic call back (trunking)
- _____ Call alert received (repeated every five seconds)
- _____ Call initiated (Enhanced Private Call)
- _____ Selective call received (Private Call II)
- _____ Incoming private call (repeated for 20 seconds)

- _____ Phone initiate/Receive
- _____ Emergency activate
- _____ Emergency acknowledgement
- _____ Emergency exit
- _____ Failsoft (repeated every 10 seconds trunking)
- _____ Out of range (repeated, trunking)
- _____ Keypad entry accepted
- _____ Radio self-test failed/ Key entry not accepted/Time out timer warning/ System reject
- _____ Function/Channel/Hardware error, tone continues until valid operation or radio turned off.
- _____ Keyfail (secure operation)
- _____ PTT pressed in clear mode (secure operation)

General operation

Radio ON/OFF and Volume Control

Turn the radio on by pressing the on/off button (A). The radio then carries out a self-test.

Adjust the volume to a comfortable listening level by turning the on/off button (A).

Note: If equipped, your radio may be programmed with ignition sense enabled. Depending on programming, if the ignition is turned off, the radio will:

- turn off
- inhibit transmit capability, or
- inhibit the use of the PTT button.

Contact your system operator for further information.

Turn the radio off by pressing the on/off button (A) again.

Note: If the radio sounds the error tone and displays an error message, please contact the person in charge of your radio system or your local service representative.

Function Selection

Functions programmed into the radio can be selected in two different ways:

- 1 Directly via a pre-programmed, dedicated button, or
- 2 Indirectly via the radio MENU.

Function Button Selection

For direct access to a feature, depress the desired function button. A triangle in the display points to the function button used. If the function requires additional input, use the mode selector (D) to display your choices, and press the select button (13).

Note: Function buttons are usually active. Pressing a function button will exit the current feature and start the selected feature.

Menu Selection

Features may be accessed indirectly through the radio menu. The menu is selected by pressing the menu button (9). Selections are made by using the mode selector (D) to the desired function. Press the select button (13). The radio will leave menu mode and enter the selected feature, or enter a sub-menu. If additional

input is required, use the selector (D) to select the desired function. Press the select button (13).

A list of potential menu functions is found in the back of this user guide (page 20).

Exiting Functions

If your radio is programmed with a HOME button (3), press it to exit any function/menu.

If no HOME button is programmed, press the function button once to exit the function. If the function is accessed via the menus, press the menu button (9) twice to exit.

Adjust Display Intensity

Select the menu **INTNSITY** as described above. Press the select button (13). The display intensity may then be adjusted to one of four levels: high, medium, low or very low, using the selector (D).

Tones On/off

The tones heard every time a key is pressed may be turned off or on through the menus.

Select the menu **TONES** as described above. Press the select button (13). The display then shows the present state e.g.



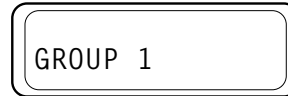
Use the mode selector (D) to toggle between "TONE OFF" and "TONE ON". Press the select button (13) when the desired state is in the display.

Zone and Mode Selection

A mode is a channel or talkgroup and all its related features. A zone is a grouping of modes that can be selected by pressing the zone button (1). Use the mode selector (D) to display the desired zone e.g.



The zone name flashes until you press the select button (13) to choose it. Then use the mode selector (D) until the desired talkgroup/channel is displayed, e.g.



Outgoing Calls

When you have selected zone and mode, you are ready to transmit.

Lift the microphone out of its holder and press the transmit key PTT (F) while talking, release it while listening. Speak in a normal tone of voice, keeping a distance of 5 -10 cm (2-4") from the microphone. While transmitting the red indicator (B) will light.

Conventional only:

If the orange indicator is lit, the channel is busy. Wait for the indicator to turn off before transmitting.

Trunking only:

If the busy tone sounds, release the PTT (F) and wait for the automatic call back tone. When this tone is heard, press the PTT (F) within 3 seconds to transmit the call again.

If your radio is equipped with a time out timer, a warning tone will sound a few seconds before the call is terminated.

Scanning

Scan allows the user to monitor more than one channel or talkgroup (including the selected channel or talkgroup) at a time for activity.

Channels within a scan list may be assigned priority levels as follows:

Priority 1: Most important

Priority 2: Second most important

Non-Priority: Normal scan list member without priority

In scan the radio will listen to the channel/talkgroup with the highest priority. If a channel/talkgroup with a higher priority becomes active while the radio is listening to a lower priority member, the radio will switch to the higher priority channel/talkgroup.

Note: If the user is involved in a conversation, he will not be interrupted by any normal priority calls.

Turning Scanning On/Off

The scanning feature may be turned on via the Scan button (8) or via a menu as previously described.

For as long as "SCAN ON" is selected, the scan icon (Z) will be on in the display and the radio will scan for activity in the channels/talkgroups that are defined in the scan lists of the present mode.

Note: If a mode is pre-programmed with auto-scanning, the radio scans automatically when-

ever this mode is selected and scan cannot be turned off.

Viewing a Scan List

Select the menu **VIEW LST** as previously described, then use the mode selector (D) to display the menu **SCAN**. Press select (13).

The dot in the scan icon Z^* flashes if the mode is priority 1, lights continuously Z^{\bullet} if the mode is priority 2 or the icon Z lights continuously to indicate a normal priority mode. The programming icon P will be on while the list is viewed.

Use the mode selector (D) to view the next member. When all members have been viewed the function should be exited.

Changing Scan Lists

If a scan list is user programmable, it may be changed by the user (members added or deleted).

Select the menu **PGM LIST** as previously described, then use the mode selector (D) until **SCAN** is displayed and press the select button (13) or

Press and hold the scan button (8) until the key press accepted tone is heard. The programming icon P and the triangle in the display flash.

Use the mode selector (D) to select the desired mode. Press the select button (13) if the scan icon Z is not in the display, to include the mode as a normal priority member.

Press the button again to make the mode priority 2 (the scan icon Z^{\bullet} lights continuously).

Press the button a third time to make it a priority 1 mode (the dot in the scan icon Z^* flashes).

Pressing the button again makes the mode non-member (mode not included in the list).

Telephone Interconnect

Telephone interconnect is used when the radio is required to operate in a radio system connected to a public or private telephone system.

Receiving a Telephone Call

When your radio receives a telephone call, a telephone ringing tone sounds and the display alternates between



and the home display. The green indicator (B) and the call received icon flash.

Press the phone button (7) to answer the call.
Exit the function when the conversation is over.

Sending a Telephone Call



List Selection

Press the menu button (9) and use the mode selector (D) until **PHONE** is displayed. Press the select button (13) and use the mode selector (D) until the desired name or number is displayed. Press the select button (13) or the PTT (F). The radio then transmits the number.

Note: If your radio has been so programmed, you can press the phone button for quick access to the telephone interconnect function. Using the mode selector (D), you can scroll between last dialled call and phone number lists.

Keypad Selection (List/Buffered Dialing)

(with optional keypad microphone)

Press the phone button (7) or select the menu **PHONE** as previously described, then enter the desired number directly from the keypad. If you are placing a call to a local extension number requiring a pause before it, press  .

If an incorrect phone number is entered, the digits may be erased using the mode selector (D) down.

Continue using the mode selector (D) down to erase the entire number.

When the number is complete, press the select button (13) or the PTT (F) to transmit the call.



will be in the display, while the system is setting up the call.

Trunking only:

If the PHONE system is busy, the display will show



and your call will be placed when the system is available, unless you exit the function.

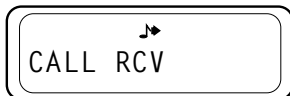
If phone access is unavailable to your radio, the display shows



Private Call

Receiving a Private Call

When your radio receives a private call, the incoming private call tone sounds and the display alternates between



and the home display. The green indicator (B) and the call received icon flash.

Press the call button (12) or select the menu **PVT CALL** to view the ID of the calling party.

If the PTT (F) is pressed within 20 seconds, the call is answered and a private conversation can go ahead.

Note: If the call button (12) is not pressed, the call will be initiated as a talkgroup call.

Exit the function when the conversation is over.

Sending a Private Call (trunking only)

Private calls can be selected either from a list or directly via the keypad (with optional keypad microphone).

Note: If your radio has been so programmed, you can press the call button for quick access to the Private Call function. Using the mode selector (D), you can scroll between last received ID, Private Call lists and your own radio ID.

Press the call button (12) or select **PVT CALL** through the menus.

The display shows the last ID transmitted or received.

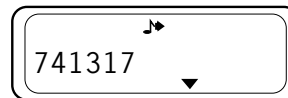
List Selection:

Transmit to the displayed ID by pressing the PTT (F) or choose another ID from the list by using the mode selector (D).

To view the radio's own ID, use the mode selector (D) until the display shows:



alternating with the radio's ID, e.g.:



Keypad Selection:

(with optional keypad microphone)

Press the call button (12) or select **PVT CALL** through the menus and enter the desired ID directly from the keypad.

Until the ID is completed the last digit may be erased by pressing down the mode selector (D). Continue pressing the mode selector (D) down to erase the entire ID. Then enter the correct ID.

When the ID has been selected in one of the two ways described above, the private call may be transmitted to the displayed ID by pressing the PTT (F).

Enhanced Private Call

If an Enhanced Private Call is not answered within 20 seconds the display changes into



Press the PTT (F) to leave your ID with the called radio so that you will be called back later. The call alert sent tone will sound.

Caller ID

The radio will momentarily display the ID or alias name of the radio that initiated a call. If an emergency call is received in trunked operation, the radio will alternate

the display between the talkgroup, the emergency received display and the ID (or alias name) of the radio that initiated the emergency call.

Mode Preset Buttons

Mode preset buttons will allow quick access to commonly used modes. Press and hold a mode preset button until a good-key tone is heard to program the button for the currently selected mode. A short press of a mode preset button will cause the radio to immediately change to the mode programmed for that button.

Mode Recall

The radio will always remember the last mode selected. Pressing mode recall will cause the radio to switch to the previously selected mode.

Note: The "last" mode must be selected for a minimum of 5 seconds to be retained as the "last" mode.

Automatic Power-Off

"Automatic power off" will power off your radio when no user actions occur during a pre-programmed length of time. A user action is defined as the press of a button, turn of a knob or the use of any radio accessory (e.g. footswitch).

2 minutes prior to automatic power-off, the radio will generate a continuous low tone and



will flash on the display. Any user action will immediately cause the radio to cease the automatic power-off tones and display and return the radio to normal operation.

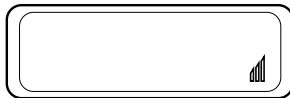
SmartZone/AMSS Functions

In SmartZone and AMSS (Automatic Multiple Site Select) operation the two functions mentioned below may be programmed into your radio:

Site Search & Site Lock

Press the site search/monitor button (2) to show the current site and signal strength.

Additionally a bar display is used to reflect the signal strength level for the current site ranging from 0 to 3 bars:



3 bars indicate a very strong signal and no bar indicates a very weak signal.

Press and hold the site search button (2) to force the radio to scan for a new site.

If the optional “wide-area roaming” function is programmed the radio will automatically switch sites as it moves through your coverage area.

Automatic site switching may be disabled by activating the site lock function.

Please contact the person in charge of your radio system for further information.

Emergency Operation

If emergency is enabled on your system the function is invoked by pressing the emergency button (5).

Emergency is exited by pressing the emergency button for approximately 2 seconds.

Trunking only:

Your radio may be programmed to indicate that an emergency call has been received from another member of your talkgroup. The display will then alternate between



and mode name of the calling party.

If “emergency with voice to follow” is enabled, the

radio will automatically transmit an emergency alarm. It transmits audio through the visor microphone for a pre-defined period of time after pressing the emergency button. Please contact the person in charge of your radio system for further information.

Note: Automatic transmit via the visor microphone is possible only with the emergency feature.

External Alarm

Depending on the accessories ordered and installed with your radio the external alarm function activates the vehicle horn or lights if you do not respond to a call (Page, Trunking Private Call, or Trunking Phone Call) before a pre-programmed time.

Press button (6) or select **H/L** via the menu to turn the external alarm on. "H/L ON" alternates on the display to indicate the feature is active. Turn the alarm off by pressing button (6) again or via the menu.

Handset Operation

To select Handset operation, select **HANDSET** from the menu and select **HAND ON**. When **HAND ON** is selected and the handset is removed from the Hang up box (HUB) audio will be heard only through the

handset speaker and the radio speaker will be muted for privacy.

When the handset is placed in the HUB, or when **HAND OFF** is selected from the menu, audio will be heard through the radio speaker.

Car Radio Mute

If the car radio mute feature is programmed into your MCS 2000 Model I, your standard car radio will momentarily mute when your MCS 2000 Model I mobile radio is transmitting or receiving. Please contact the person in charge of your radio system for further information.

Failsoft

The failsoft feature ensures that a conversation is not interrupted if the trunked system fails. In this mode communication will be maintained on an open channel. The failsoft tone will sound every 10 seconds and the display will alternate between



FAILSOFT

and the current active display.

Conventional Operation

Before transmitting, always make sure that the selected mode is free (Orange LED not on).

Repeater/Direct

Select the menu **RPTR/DIR** as previously described or press a preprogrammed button. The current mode (direct or repeater) will be displayed. Use the mode selector (D) to toggle the mode. Press the select button (13) to select the displayed mode of operation.

Monitor

Press the monitor button to toggle monitor on or off. Press and hold the monitor button to enter squelch configuration. Using the mode selector (D), the squelch level of the radio may be fine-tuned. Press the select key when the desired level is attained.

User-Selectable Private Line (PL)

User Selectable Private Line (PL) allows the radio user to select a PL code from a pre-programmed list of codes. Press the Multiple Private Line (MPL) button (if programmed) to view the current PL or press and hold the MPL button to enter MPL configuration. Use the mode selector to change the PL code and press the select key when the desired PL is displayed.

Stat Alert (MDC - 1200/Star Signalling) Features

PTT ID and Emergency

Each radio can be programmed to send a unique digital identification code at the beginning of each transmission, at the end, or both. When the PTT-ID is programmed to come before voice transmission, you will hear a tone until the ID transmission is complete. This ID may be combined with an emergency alarm that is activated by an emergency button on the radio. The dispatcher can quickly identify the radio user in an emergency situation.

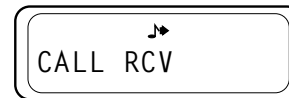
Emergency Operation

Emergency is operated as previously described.

Selective Calls

Receiving a Selective Call

The radio will display



for two seconds upon receiving a Selective Call. You can enter Selective Call to view the ID of the calling radio and to respond with a Selective Call (see below).

Sending a Selective Call

Press the call button (12) or select the menu **CALL** as previously described. Enter the ID via the keypad or use the mode selector (D) to scroll to the ID you wish to call. Press the PTT (F) to transmit the selective call to this ID. If automatic Selective Call is disabled, the radio exits Selective Call after the transmission. If automatic Selective Call is enabled, the radio will remain in Selective Call until you exit.

Call Alert

See trunking section for more details.

Telephone Interconnect

To make a call through the telephone system in the conventional mode your radio must send access and hangup codes to the system. The access code can be transmitted in either of two ways, depending on how your radio is programmed.

Immediate: The radio automatically sends a pre-stored access code as soon as the telephone interconnect button (7) is pressed.

Delayed: Press the Select button (13) or the PTT (F) and the radio sends the pre-stored access code.

After the access code is sent, you should get a dial tone. (If no dial tone sounds, exit the function to hang up.) Now press the Select button (13) or the PTT (F). The radio then transmits the number.

The call is then handled as described under “**Sending a Telephone Call**” above.

Status/Message

Select the menu **STATUS** or **MESSAGE** as previously described. The last acknowledged status or the first message will be displayed. Use the mode selector (D) to scroll through the lists of possible statuses or messages. When the display shows the desired status or message, press the select key (13) to transmit the status or message. Four beeps will sound to indicate that the status or message has been received. The radio will automatically exit the status/message feature. If the status or message is not received, the radio will display



and generate a continuous tone. Press the select (13) key to transmit the status or message again or exit the function.

MDC Repeater Access (RAC)

MDC repeater access will select a repeater for transmission. Consult your system administrator for more information.

Trunking Functions

Sending a Call Alert Page


Select the menu PAGE as previously described, then use the mode selector (D) to display the desired ID. Press the PTT (F) the select button (13) to send the Call Alert Page.

The call alert page acknowledgement tone is heard if the called radio receives the call alert page. If the page is not received the display will show



Exit the function to return to the home display.

Receiving a Call Alert

When a call alert is received, the call alert received tone is heard, the green LED and the  icon flash in the display until the Call Alert is acknowledged by pressing the PTT (F) or pressing and releasing the monitor button (2).

Status/Message

Operated as previously described under **Conventional Functions**.

Reprogram Request

If dynamic regrouping is programmed into your radio, the reprogram request function may be selected through a menu. A reprogram request will send a message to the console operator requesting that the operator assigns the radio to a new talkgroup. See your system administrator for further details.

One Touch Button Functions

If this optional feature is programmed in your radio, a button may be dedicated to sending a pre-programmed status, message, call alert or dialing a pre-programmed phone number. See your system administrator for further details.

Out of Range

If this optional function is programmed into your radio, it will indicate when you have left your radio coverage area. The display will alternate between




and the current mode and the out of range tone will sound.

Secure Operation

Note: This section applies only if **secure operation** is programmed into your radio. This section lists features where differences occur when operating in secure. For other feature operation see **General Operation** above.

Outgoing Calls: When the selected mode is not pre-programmed as either secure-only or clear-only, secure transmit is turned on/off by pressing the secure button (4), except for trunking telephone interconnect and private call which are always controlled by the button. A beep immediately after the PTT is pressed indicates a clear (non-secure) transmission.

Note: If the secure button is pressed during a transmission, the transmission is aborted, and an alert tone will sound until the PTT is released. The operation change will be effective with the next PTT press.

Incoming Calls: When a secure call is received the orange LED (conventional only) and the secure icon  will flash.

Conventional Functions: In monitor, only calls from radios with the same encryption key will be heard. Calls with a different key will be heard as noise.

Trunking Functions: When secure transmit is controlled by the secure button (4), during a **talk group** or **private call** you can only change from clear to secure operation. During a **telephone interconnect** or **fail-soft call** you can change from clear to secure operation, or from secure to clear. During an **emergency call** NO change is possible.

Secure Keyload and Erase

An encryption key must be **loaded** from a Key Variable Loader (KVL) that corresponds to the encryption type of the radio.

Disconnect the microphone cable from the control-head and attach the keyloader cable. The display shows "KEYLDNG" (KEYLOADING), and normal transmit and receive is disabled. Refer to the KVL instruction manual for loading procedure.

Note: For some earlier radio models, enter the keyloading mode by pressing and holding the secure button (4) until the display changes showing the secure menu's first item. Scroll to the "KEYLOAD" choice, and press the select button. To exit, press the home button.

When the key has been loaded successfully, the radio will sound one long beep.

To erase a key, press and hold the secure button (4) until the display changes showing the secure menu's first item "ERASE KY", and press the select button. When key erase is complete, the display will show "ERASED".

Note: If battery power is removed from the radio for more than 3 days, the radio may lose its encryption key.

Data Operation

If your radio is programmed for data operation, you may send and / or receive data messages from a data terminal. While sending or receiving data, the radio will display



DATA XFR

Any button press will cause the radio to interrupt the data transfer and return the radio to normal operation. Please contact the person in charge of your radio system for further information.

Radio Care

- Avoid any physical abuse of the radio.
- The radio exterior should be cleaned with a cloth dampened with clean water, a mild liquid soap solution or isopropyl alcohol.

CAUTION

The use of chemicals such as detergents, alcohol (except isopropyl), aerosol sprays, and petroleum products may be harmful and damage the radio housing.

Safety Information

Every radio, when transmitting, radiates energy into the atmosphere which may, under certain conditions, cause the generation of a spark.

All users of vehicles fitted with radios should be aware of the following warnings:

Do not operate radio near flammable liquids or in the vicinity of explosive devices

During normal use, the radio will subject you to radio energy substantially below the level where any kind of harm is reported.

To ensure personal safety, please observe the following simple rules:

- **DO NOT** transmit when the antenna is very close to, or touching, exposed parts of the body, especially the face and eyes.
- **DO NOT** hold the transmit (PTT) key in when not actually desiring to transmit.
- **DO NOT** allow children to play with any radio equipment containing a transmitter.
- **DO NOT** operate radio while driving. It should also be noticed that the use of a hand held microphone while driving could constitute an offence under the Road Traffic Regulation.

Important Electromagnetic Emission Information

In August, 1996, The Federal Communications Commission (FCC) adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment. Motorola subscribes to this same updated safety standard for the use of its products.

In keeping with sound installation practice and to maximize radiation efficiency, a one-quarter (1/4) wave length antenna should be installed at the center of the vehicle roof. If it is necessary to mount the antenna on the vehicle's trunk lid, an appropriate 3dB gain antenna should be used. This installation procedure will assure that vehicle occupants will be exposed to radio frequency energy levels lower than the limits specified in the standard adopted by the FCC in General Docket 79144.

To assure that radio frequency (RF) energy exposure to bystanders external to a vehicle is lower than that recommended by FCC adopted standard, transmit with any mobile radio only when bystanders are at least two (2) feet away from a properly installed externally mounted antenna for radios with less than 50 watts of output power, or three (3) feet away for radios with 50 watts or greater power.

Control Station Operation

In the event of Control Station operation, to assure operators and bystanders are exposed to radio frequency (RF) energy levels lower than the limits specified in the FCC adopted standard, the antenna should be installed outside of any building, but in no instance shall the antenna be within two feet (less than 50 watts power output) or within three feet (50 watts or

higher power output) of station operators or bystanders.

When planning the installation of communication equipment in a vehicle with one or more air bags:

Caution: VEHICLES EQUIPPED WITH AIR BAGS

- An air bag inflates with great force. **DO NOT** place objects, including communication equipment, in the area over the air bag or in the air bag deployment area. If the communication equipment is improperly installed and the air bag inflates, this could cause serious injury.
- Installation of vehicle communication equipment should be performed by a professional installer/technician qualified in the requirements for such installations. An air bag's size, shape and deployment area can vary by vehicle make, model and front compartment configuration (e.g., bench seat vs. bucket seats).
- Contact the vehicle manufacturer's corporate headquarters, if necessary, for specific air bag information for the vehicle make, model and front compartment configuration involved in your communication equipment installation.

Accessories

Please contact your local Motorola representative for further information about the accessories listed below:

Microphone Options:

- Palm Microphones
- Keypad Microphones
- Noise Cancelling Microphones
- Visor Microphone
- Desk Microphones
- Telephone Style Handsets

Mounting Accessories:

- Tilt Mount Bracket
- Key Lock
- Direct Trunnion Mount
- Base Tray with Loudspeaker
- Remote Mount Option

A Variety of External Loudspeakers (low/high power)

A Variety of Cable kits

Desk (Control Station) Accessories:

- Power Supplies
- External Emergency Foot-switch

Antennas

Menu Overview

- Zone: Select a Zone (same as button - 1)
- Channel: Select a channel (Same as mode selector - D)
- Scan: Scan ON or OFF (Same as button - 8)
- Tones: Keypad entry tones ON or OFF
- Display intensity:
Adjust display backlight
- View: View a Scan, Telephone, Private Call, or Call Alert List
- Program lists:
Program a Scan, Telephone, Private Call, or Call Alert List
- Horn/Lights:
Turn External Alarm (Horn/Lights) ON or OFF (Same as button - 6)
- High/Low power:
Set the radio to High or Low Power level(s)
- Transmit inhibit:
Turn the transmitter ON or OFF
- Private Call:
Select Private Call feature. (Same as button - 12)
- Page: Select the Call Alert Feature. (Same as button - 11)
- Phone: Select a Phone feature. (Same as button - 7)
- Status: Select and send a pre-programmed status from a list

Message: Select and send a pre-programmed message from a list

Handset: Select handset mode of operation

Trunking

Reprogram Request:
Request Dynamic Regrouping program change

Wide-Area Trunking

Site Lock/Unlock:
Disables or enables automatic site switching

Conventional Only

Repeater or Direct:
Enables repeater access or talkaround capability.

Computer Software Copyrights

The products described in this manual may include copyrighted computer programmes stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola/Europe and Motorola Inc. certain exclusive rights for copyrighted computer programmes, including the right to copy or reproduce in any form the copyrighted computer programme. Accordingly, any copyrighted computer programmes contained in the products described in this manual may not be copied or reproduced in any manner without the express written permission of the holders of the rights. Furthermore, the purchase of these products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any licence under the copyrights, patents, or patent applications of the holders of the rights, except for the normal non-exclusive royalty free licence to use that arises by operation of law in the sale of the product.