MOTOROLA
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Commercial Series

CP140 Portable Radio

User Guide

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RADIO OVERVIEW

This user guide covers the operation of the CP040 Portable Radios.

Before using this product, read the operating instructions for safe usage contained in the Product Safety and RF Exposure booklet 6864117B25_ enclosed with your radio.

ATTENTION!

This radio is restricted to occupational use only to satisfy ICNIRP RF energy exposure requirements. Before using this product, read the RF energy awareness information and operating instructions in the Product Safety and RF Exposure booklet (Motorola Publication part number 6864117B25_) to ensure compliance with RF energy exposure limits.

OPERATION AND CONTROL FUNCTIONS

Radio Controls

The numbers below refer to the illustrations on the inside front cover.

1. Push-to-talk (PTT)
   Press and hold down this button to talk; release it to listen.
2. On-Off / Volume Knob
   Used to turn the radio on or off, and to adjust the radio's volume.
3. Channel Selector Knob
   Switches the radio to different channels.
4. LED Indicator
   Indicates power up, transmit, receive, scan status, Call Alert, Selective Call and battery status.
5. Microphone
   Hold the microphone 2.5 to 5 cm from your mouth, and speak clearly into it.
6. Side Button 2 (Programmable)
7. Side Button 1 (Programmable)
   Recommended for Monitor/Cancel button.
8. Accessory Connector
   Connects remote microphones, remote earphones and other accessories. Replace dust cap when not in use.

LED Indicator

The LED shows radio status as follows:

LED	State	Indication
Radio Call		
Red	Solid	Radio transmitting.
Red	Flashing	Channel busy - when receiving.
Scan		
Green	Flashing	Radio is scanning.
Call Alert		
Yellow	Flashing	Receiving a Call Alert
Selective Call		
Yellow	Flashing	Receiving a Selective Call
Sticky Monitor/Open Squelch		
Yellow	Solid	Radio in monitor mode.
Low Battery Level		
Red	Flashing	Flashing when transmitting.

Programmable Buttons

Your radio has two programmable buttons. Your dealer can program these buttons as shortcuts to various radio features.
Check with your dealer for a complete list of functions your radio supports.
The buttons can access up to two features, depending on the type of button press:

- short press—quickly pressing and releasing the programmable buttons
- long press—pressing and holding the programmable buttons for a period of time (at least 1 1/2 seconds)
- hold down—pressing and holding down the programmable buttons while checking status or making adjustments

The following table is a summary of programmable radio features and corresponding page references. In the “Button” column, have your dealer record the name of the programmable button next to the feature that has been programmed to it.
Also, where appropriate, have your dealer indicate whether the button press requires a short press, a long press, or needs to be held down.

Function	Short Press	Long Press	Hold Down	Page	Button
Battery Indicator			Checks battery charge status.	6	
Volume Set	—	—	Sound a tone for adjusting your radio's volume level.	11	
Sticky Permanent Monitor	A long press of the Monitor button initiates. A short press of the Monitor button cancels.	Monitors activity on a selected channel.	—	12	
Voice Operated Transmission (VOX)	Toggle VOX On and Off.			13	
Repeater/ Talkaround	Toggle between using a repeater or transmitting directly to another radio.		—	14	
Power Level	Toggle transmit power level between High and Low.		—	14	
Squelch	Toggles your radio's squelch level between tight and normal squelch.			14	
Scan/Nuisance Channel Delete	Toggle scan on and off .	Delete a nuisance channel while scanning.	—	15	

Improved Audio Feature

Companding

Companding is a feature that allows further improvement of voice quality. It compresses your voice at transmission and expands it when receiving while simultaneously reducing extraneous noise. However, to enjoy this benefit, all transmitting and receiving radios must have this feature activated.

Battery Charge Status

You can check battery charge status if your dealer has preprogrammed one of the programmable buttons. Hold down the preprogrammed Battery Indicator button. The charge status is shown by the color of the radio's LED indicator.

Battery Level	LED Indicator
Good	Green
Sufficient	Yellow
Low	Flashing Red
Very Low	None

Audio Indicators for Programmable Buttons

High pitched tone	Low pitched tone
	Self Test Pass Tone.
	Self Test Fail Tone.
	Positive Indicator Tone.
	Negative Indicator Tone.

Some programmable buttons use tones to indicate one of two modes:

Button	Positive Tone	Negative Tone
Scan	Start scan	Stop scan
Power Level	High power selected	Low power selected
Squelch	Tight Squelch	Normal Squelch
Repeater/ Talkaround	Does not use repeater	Uses repeater
VOX	VOX Enabled	VOX Disabled

GETTING STARTED

BATTERY INFORMATION

Charging Your Battery

If a battery is new, or its charge level is very low, you will need to charge it before you can use it. When the battery level is low and the radio is in transmit mode you will see the LED indicator flash red. Upon release of the PTT button, you will hear an alert tone.

Note: Batteries are shipped uncharged from the factory. Always charge a new battery 14 to 16 hours before initial use, regardless of the status indicated by the charger.

Desktop Charger

To Charge the Battery

1 Turn the radio off.

2 Place the battery, with or without the radio, in the charger pocket.

- The charger LED indicates the charging progress.

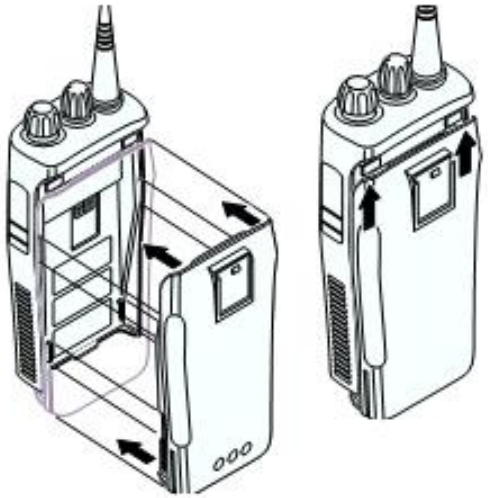
LED color	Status
No LED Indication	Battery inserted incorrectly or battery not detected.
Single Green Flash	Successful charger power-up.
Flashing Red [a]	Battery unchargeable or not making proper contact.
Red	Battery is charging.
Flashing Yellow	Battery in charger but waiting to be charged. The battery temperature may be too hot or too cold. The voltage may be lower than the predetermined threshold level for charging.
Flashing Green [b]	Battery 90% (or more) charged.
Green	Battery fully charged.

a Remove and replace the battery in the charger. If the LED indicator continues to flash red, consult your dealer.

b A standard battery may require 90 minutes to charge to 90% capacity.

ACCESSORY INFORMATION

Attaching the Battery



1 Align the battery to the battery rails on the back of the radio (approximately 1 cm from the top of the radio.)

2 Press the battery firmly to the radio and slide the battery upward until the latch snaps into place.

3 Slide the battery latch, located on radio bottom, into the lock position.

Removing the Battery

1 Turn off the radio if it is turned on.

2 Slide the battery latch into the unlock position. Disengage by pushing downward and holding the latch towards the front of the radio.

3 With the battery latch disengaged, slide the battery down from the top of the radio approximately 1 cm. Once the battery is free from the battery rails, lift it directly away from the radio.

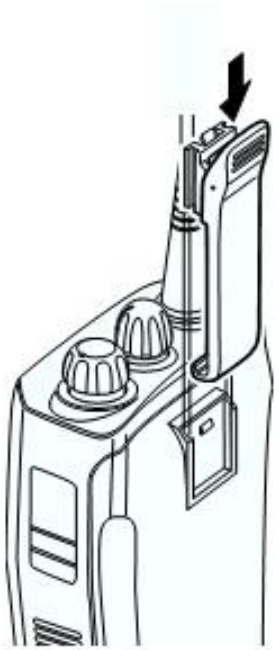
Attaching the Antenna

Turn the antenna clockwise to attach it.

Removing the Antenna

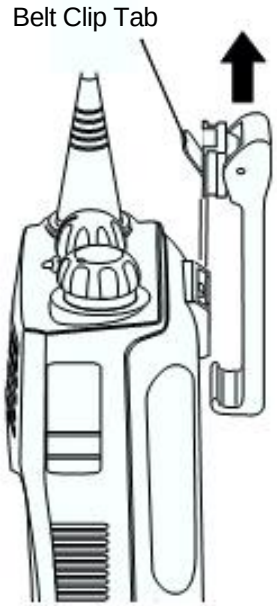
Turn the antenna counter-clockwise to remove it.

Attaching the Belt Clip



1	Align the grooves of the belt clip with those of the battery.
2	Press the belt clip downward until you hear a click.

Removing the Belt Clip



1	Use a key to press the belt clip tab away from the battery to unlock the belt clip.
2	Slide the belt clip upward to remove it.

TURNING THE RADIO ON OR OFF

ON

Turn the On/Off/ Volume Control knob clockwise. If power-up is successful, you will hear the Self-Test Pass Tone ( ) and see the LED flash green.

If the radio fails to power up, you will hear the Self Test Fail Tone ( ).

OFF

Turn the On/Off/ Volume Control knob counter-clockwise until you hear a click.

ADJUSTING THE VOLUME

1. Hold down the Volume Set button; you will hear a continuous tone.
2. Turn the On/Off/Volume Control knob to the desired volume level.
3. Release the Volume Set button.

SELECTING A RADIO CHANNEL

Your radio offers 4 or 16 channels.

Note: Due to government regulations, some channels may not be programmed. Ask your dealer for more information.

To select a channel, turn the Channel Selector knob clockwise or counterclockwise until you reach the desired channel.

SENDING A CALL

1. Turn your radio on.
2. Use the Channel Selector knob to select the desired channel.
3. Hold the radio in a vertical position, press the PTT, and talk at a distance of about 2.5 to 5 cm from the microphone.
4. Release the PTT to listen.

RECEIVING A CALL

1. Turn your radio on.
2. Adjust the radio's volume.
3. Switch to the desired channel. To respond, hold the radio in a vertical position, press the PTT, and talk at a distance of about 2.5 to 5 cm from the microphone.

MONITORING

It is important to monitor traffic before transmitting to ensure that you do not "talk over" someone who is already transmitting.

1. Press and hold the preprogrammed Monitor button to access channel traffic.
2. Once channel traffic has cleared, proceed with your call by pressing the PTT button.
3. A long press of the preprogrammed Monitor button places the radio in Sticky Permanent Monitor mode.
   - You hear a high-pitched tone.

   A short press of the Monitor button cancels Sticky Permanent Monitor mode and returns the radio to normal operation.

VOX OPERATION

When hands-free operation is desired, your radio can be activated by voice alone using the VOX feature when you speak through an accessory that is connected to your radio.

Connecting a VOX Headset

1	Turn off your radio.
2	Connect the VOX accessory to your radio and turn the radio on.
3	To enable or disable VOX operation, press the preprogrammed VOX button. Note: Pressing PTT disables VOX.
	-or-
	Select a channel that has been programmed for VOX by your dealer to enable VOX. Note: You do not need to press a preprogrammed VOX button. Note: Pressing the PTT button disables VOX.
4	Select a channel that has not been preprogrammed for VOX by your dealer to disable VOX.

ENABLE/DISABLE HEADSET SIDETONE

Your dealer can program your radio to hear your voice through the headset during transmit.

VOX Headset

1	Turn off your radio.
2	Connect the VOX accessory to your radio.
3	Turn the radio on. During transmit, the sidetone will be enabled, if programmed in the radio.

Non-VOX Headset with In-Line PTT

1	Turn off your radio.
2	Connect the non-VOX accessory to your radio.
3	Press and hold the In-line PTT on your headset.
4	Turn the radio on and release the PTT once the radio has completed start-up.
5	To disable the headset sidetone, turn off your radio and turn the radio on again.

RADIO CALLS

REPEATER OR TALKAROUND MODE

Talkaround Mode enables you to communicate with another radio when either:

- the repeater is not operating

—or—

- your radio is out of the repeater's range but within communicating distance of another radio.

Press the preprogrammed Repeater/Talkaround button to toggle between Repeater mode and Talkaround Mode.

SETTING TIGHT OR NORMAL SQUELCH

Use this feature to filter out nuisance (unwanted) calls and/or background noise. However, tightening squelch could cause calls from remote locations to be filtered out as well. In this case, normal squelch may be more desirable.

Press the preprogrammed Squelch button to toggle between tight and normal squelch.

SETTING THE POWER LEVEL

Each channel in your radio has a predefined transmit power level that can be changed.

- High power allows you to reach a radio that is farther away.
- Low power conserves the battery's charge.

Press the preprogrammed Power Level button to toggle between low and high power.

RECEIVING A SELECTIVE CALL

When you receive a selective call:

- The LED indicator flashes yellow, if programmed by your dealer.
- You hear two high pitched tones.

To answer the call, press the PTT button.

RECEIVING A CALL ALERT PAGE

When you receive a Call Alert Page:

- The LED indicator flashes yellow, if programmed by your dealer.
- You hear four high pitched tones.

To answer the Page, press the PTT button; to cancel the Page, press any other key.

SCAN

You can monitor multiple channels and receive any calls that are transmitted on them. Channels can be programmed into a scan list by your dealer. Your radio automatically switches to a scan list channel when it detects activity on it.

STARTING OR STOPPING SCAN

The LED indicator blinks green during a scan operation and stops blinking when the radio switches to a channel.
You can start or stop a scan operation by:

1 To start or stop a scan operation, press the preprogrammed Scan button.

- or -

2 Select a channel that has been preprogrammed by your dealer to start Auto Scan.

Note: You do not need to press a preprogrammed Scan button.

3 Select a channel that has not been preprogrammed by your dealer to stop Auto Scan.

TALKBACK

If the Talkback option is preprogrammed, you can respond to any calls received during the scan operation. To respond, press the PTT button before the programmed hangtime elapses. Otherwise, the radio will continue scanning. Check with your dealer for details.

DELETING A NUISANCE CHANNEL

Note: Your dealer must have preprogrammed a button to Nuisance Delete to access this feature.

If a channel continually generates unwanted calls or noise (a “nuisance” channel), you can temporarily remove it from the scan list:

1 While the radio is on the Nuisance Channel, press the preprogrammed Nuisance Channel Delete button until you hear a tone.

2 Release the Nuisance Channel Delete button. The nuisance channel is deleted.

Note: You cannot delete a priority channel or the last remaining channel in the scan list.

Restoring a Channel to the Scan List

1	Press the Scan button to stop the scan.
2	Press the Scan button again to start scanning again. The Deleted Nuisance Channel is restored to the scan list.

PRIORITIZING A SCAN LIST MEMBER

You may want your radio to scan a specific channel more frequently for calls. Your dealer can prioritize scan list members for you. Check with your dealer for details.

Priority Channel	Scanning Sequence
None specified	Ch1➠Ch2➠Ch3➠ Ch4➠...Ch1
Channel 2	Ch2➠Ch1➠Ch2➠Ch3➠ Ch2➠Ch4➠Ch2➠...Ch1

Even though your radio has switched to a non-priority channel, it will still check for activity on the priority channel. If activity is detected, the radio will switch to the priority channel.