SAMCOM
MADE IN FAITH

CP-500

On-site Business Portable Radio

User Guide

INTRODUCTION

Thank you for purchasing our products. Combined the latest technology along with a sturdy mechanical frame, our radios provide cost-effective communications for the people who need to stay in touch with the working team such as retail stores, restaurants, campuses and schools, construction sites, manufacturing, shows and trade fairs, property and hotel management and more, they are the perfect communication solutions for all of today's fast-paced industries.

We sincerely appreciate your interest on our products, and strongly suggest you to read the instruction carefully. Your comment will be highly valued. Please read through the manual in order to get familiar with the device and learn the features of this model.

Main Features

- IP55 rating water resistance & dust protection
- Rugged and heavy-duty design
- 2200mAh high capacity battery pack
- 16 channels
- 50 CTCSS tones and 214 DCS codes
- PTT ID / DTMF-ANI
- Low battery alert
- Voice annunicator
- Inbuilt VOX for hands-free communication
- Channels and priority scan
- Battery save
- Lone worker mode
- Emergency alarm
- Time-out timer
- Busy channel lock-out
- PC programmable

CONTENTS

SAFETY INFORMATION

Please read this information before using your radio. Failure to do so could result in personal injury, death, and/or damage to your radio, accessories and/or other property.

Radio Care

Advice
● Do not use options or accessories not specified.
● Ensure that the radio is used within the parameters for which it was designed.
● Turn the radio OFF before connecting optional accessories.

Warning
Turn the radio OFF in the following locations:
● In explosive atmospheres (flammable gas, dust including metallic & grain powders etc).
● Whilst taking on fuel or while parked near a fuel station.
● Near explosives or blasting sites.
● In aircraft, medical institutions or near persons known to be wearing a pacemaker.

Caution
● Do not disassemble or modify the radio for any reason.
● Do not transmit while touching the antenna terminal or any exposed metallic parts of the aerial as this my result in burn.
● Please check and observe regulation in your country with regards to use whilst driving.

End of Life Disposal
● When your radio reaches the end of its useful life, please ensure that the unit is disposed of in an environmentally friendly way.

Battery Care

Precautions
● Turn the radio OFF before charging.
● Charge the battery pack before use.
● Do not recharge the battery pack if it is already fully charged as this will use one its charge cycles and may shorten its life.
● Charge the battery in accordance with the instructions enclosed with your charger.
● Do not charge the radio and/or battery pack if they are wet.

The battery pack includes potentially hazardous components. Please:
● Do not disassemble or reconstruct battery.
● Do not short-circuit the battery.
● Do not incinerate or apply heat to the battery.
● Do not immerse the battery in water or get it wet by other means.
● Do not charge the battery near fires or under direct sunlight.
● Use only the specified charger and observe charging requirements.
● Do not pierce the battery with any object or strike it with an instrument.
● Do not use the battery pack if it is damaged in any way.
● Do not reverse-charge or reverse-connect the battery.
● Do not touch a ruptured or leaking battery.

If liquids from the battery get on your skin or into your eyes, immediately:
● Wash your eyes out with fresh water avoiding rubbing them.
● Seek medical treatment.

Notes:
● If a battery is not to be used for an extended period of time (several months) remove the battery pack from the equipment and store in a cool and dry location part charged. Do not fully discharge the battery before storage.
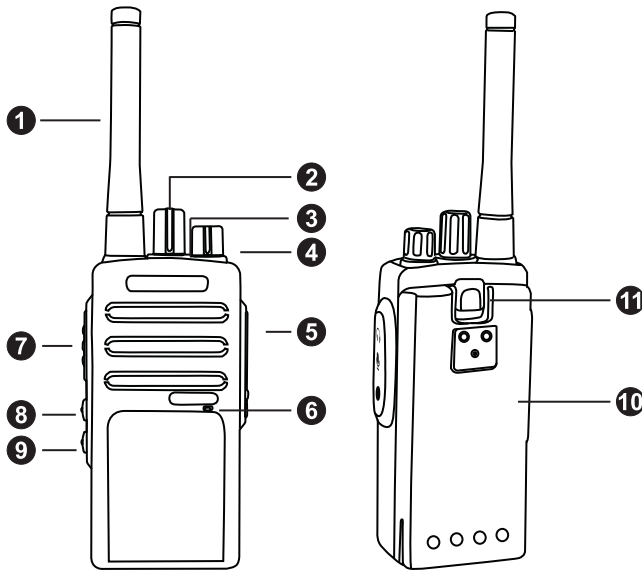
● Each charge cycle reduces the battery's life. Minimize the number of times you charge your battery especially in hotter environments which further shorten a battery's life.

RADIO OVERVIEW

Package Includes
1pcs radio
1pcs rubber antenna
1pcs rechargeable Lithium-ion battery pack
1pcs AC adapter & desktop charger kit
1pcs belt clip
1pcs user's manual

At a Glance

1 – Antenna
Provide attached SMA rubber flexible antenna or anther 50Ω impedance antenna.
Note: It may cause the damage to your radio if the antenna is connected inappropriately.

2 – Channel Selector Knob
Select the radio's different channels.

3 – LED Indicator
Give radio battery, TX & RX, VOX, scan and other status.

4 – On/Off/Volume Knob
Turn the radio ON or OFF and to adjust the radio's volume.

5 – Audio Accessory Jack (Motorola 2 Pin Connector)
Connect compatible audio accessories.

6 – Microphone
Speak clearly into the microphone when transmitting.

7 – PTT (Push-To-Talk) Button
Press and hold down this button to transmit and talk, release it to receive and listen.

8 – Side Button P1
The button **P1** is a general button that can be configured by the programming software. The default setting is '**Monitor**' feature.

9 – Side Button P2
The button **P2** is a general button that can be configured by the programming software. The default setting is '**Scan**' feature.

10 – Lithium-Ion Battery Pack
Radio comes equipped with a rechargeable Lithium-ion battery pack. This battery should be fully charged before initial use to ensure optimum capacity and performance. Batteries are designed specifically to be used with a supplied charger and vice versa.

11 – Battery Latch
Push down battery latch to release battery pack.

GETTING STARTED

Install and Remove Battery Pack

Installing Battery (Figure 1)
1. Turn the radio OFF.
2. With the top side up on the battery pack, fit the tabs at the bottom of the battery into the slots at the bottom of the radio's body.
3. Press the top part of the battery towards the radio until a click is heard.

Removing Battery (Figure 2)
1. Turn the radio OFF.
2. Push down the battery latch and hold it while removing the battery.
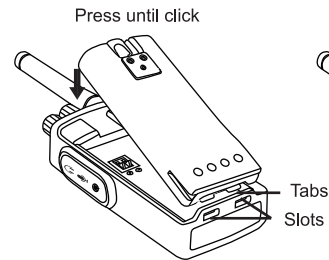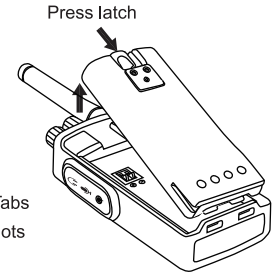3. Pull the battery away from the radio.

Press until click

Press latch

Tabs
Slots

Figure 1   Figure 2

Install and Remove Antenna

Installing Antenna (Figure 3)
Screw the antenna into the connector at the top of the radio by holding the bottom of the antenna, and turning it clock-wise until secure.

Removing Antenna (Figure 4)
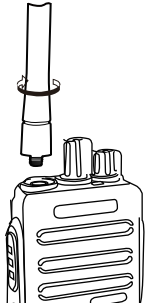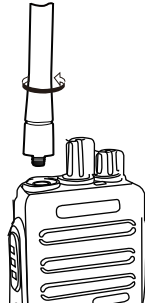Rotate the antenna counter clockwise by holding the bottom of antenna.

Figure 3   Figure 4

Install and Remove Belt Clip

Installing Belt Clip (Figure 5)
Align the screw eyelets of the belt clip with those on rear of radio and fasten the belt clip with enclosed screws.

Removing Belt Clip (Figure 6)
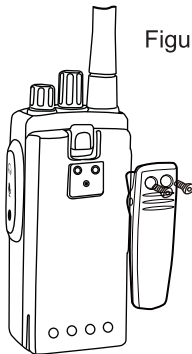Loosen the screws to remove the belt clip.
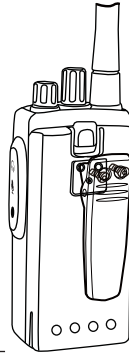
Figure 5   Figure 6

AC Adapter and Desktop Charger
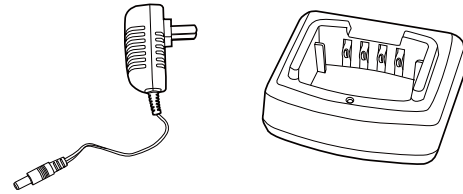
The radio is equipped with 1pcs AC adapter and 1pcs desktop charger.

Charging the Battery Pack
To charge the battery pack, place it in the supplied desktop charger.

Radio Body

AC Adapter
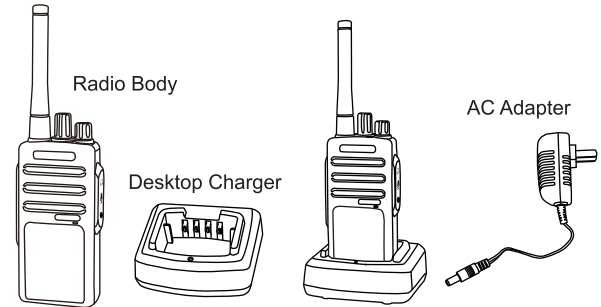
Desktop Charger

1. Place the desktop charger on a flat surface.
2. Insert the connector of the AC adapter into the charger port on the back of the desktop charger.
3. Plug the AC adaptor into a power outlet.
4. The charger is ready for charging if the indicator LED lights red for one second and turns off. If the indicator LED is flashing, the charger is not ready.

5. Place the battery into the charger aligning the battery slots with the charger guide rails.
6. The indicator LED lights red when charging. If the battery capacity is too low, the indicator LED flashes red. The battery first trickle charges and turns to normal charging automatically.
7. The battery is fully charged when the battery LED light is green. The charger stops charging automatically.

Notes:
● when you charge a battery attached to the radio, turn the radio OFF to ensure a full charge.
● the estimated charging time of the battery with charger is about 5 hours.

BASIC OPERATION

Turn the Radio ON/OFF
To turn on the radio, rotate on the On/Off/Volume Knob clockwise. The radio plays power up audio and channel number. To turn off the radio, rotate the On/Off/Volume Knob counterclockwise until you hear a 'Click' sound.

Adjusting Volume
Turn the On/Off/Volume Knob clockwise to increase the volume, or counterclockwise to decrease the volume.
Note: Do not hold the radio too close to the ear when the volume is high or when adjusting the volume.

Selecting a Channel
To select a channel, turn the Channel Selector Knob until you reach the desired channel. An audible voice indicates the selected channel if the channel annunciation is enable. Each channel has its own frequency, privacy code and other settings.

Receiving a Call and Talking
1. Select a channel by rotating the Channel Selector Knob until you reach the desired channel. An audible voice indicates the selected channel.
2. Make sure the PTT button is released and listen for voice activity.
3. The LED indicator stays solid green when the radio is receiving a call.
4. To respond, hold the radio vertically 1 to 2 inches (2.5 to 5 cm) from mouth. Press the PTT button to talk; release it to listen.
5. When transmitting, the LED indicator stays solid red or yellow.

LED Indicators

Radio Working Status and LED Indicators

Radio Status	LED Indicator
Low Battery	Red Heartbeat
Transmit (TX) in High Power	Solid Red
Receive (RX)	Solid Green
Scanning	Green Heartbeat
Cloning Mode	Yellow Heartbeat
Source Radio Cloning in Progress	Red Heartbeat
Target Radio Cloning in Progress	Green Heartbeat
PC Programming/Reading Data	Red Heartbeat
PC Programming/Writing Data	Green Heartbeat

ADVANCED OPERATON

Monitor

This feature enables you to hear all calls even with unmatched CTCSS/DCS.

Scan

Scan allows you to hear conversations on all channels. When the radio detects a transmission, it stops scanning and goes to the active channel. This allows you to listen and talk to people in that channel without having to channel manually. If there are transmissions on another channel, you will not hear that activity once the radio has stopped scanning. Once the activity on transmitting channel stops, the radio waits for 5 seconds before resuming scan again.

Squelch

The Squelch function suppresses noises from free channels and allows to receive even weak signals, It has 10 different levels that can be set by programming software. It is set on level 5 by default.

Priority Scan

When the feature is activated, the radio checks in the background whether a signal is present on the priority channel. Each programmed channel can be selected to be the priority channel. When the priority channel is activated, the channel scan is automatically interrupted when a signal is present on the priority channel. The radio remains adjusted to the priority channel until the signal finishes.

TX Power Level

This feature allows you to select between high and low transmit power in each channel.

Battery Save

When it is activated, the radio decreases the amount of power used after no signal is present and no operations are being performed for 5 seconds. When a signal is received or an operation is performed, this feature turns off temporarily.

PTT ID

With this feature is activated, the radio will send an ID code when pressing or releasing the PTT button, allowing another radio and management control centers to identify it.
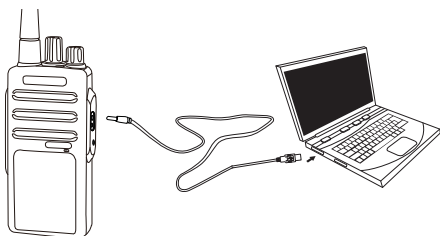
VOX

The VOX feature enables hands free conversations without using PTT, just speak in the direction of the microphone and the communication will be automatically activated. The VOX sensitivity can be adjusted in 10 different levels.

Programming Software

The easiest way to program or change features in your radio is via its programming software and programming cable. The programming software is available for free as downloadable software at our website.

To program, connect the radio with your PC via the programming cable, as shown picture as below.

TROUBLESHOOTING

Problem	Possible Reasons and Potential Solutions
No Power	Recharge or replace the battery pack; Extreme operating temperatures may affect battery life.
Hearing other noises or conversation on a channel	Confirm CTCSS/DCS is set; Frequency or CTCSS/DCS may be in use; Change settings: either change frequencies or CTCSS/DCS on all radios; Make sure the radio is at the right frequency and privacy code when transmitting.
Audio quality not good enough	Radio settings might not be matching up correctly. Double check frequencies, CTCSS/DCS and bandwidths to make sure they are identical in all radios.
Limited talk range	Steel and/or concrete structures, heavy foliage, buildings or vehicles decrease range. Check for clear line of sight to improve transmission; Wearing radio close to body such as in a pocket or on a belt decreases range; Change location of radio. UHF radios provide great coverage in industrial and commercial buildings. Increasing power provides greater signal range and increases penetration through obstructions.
Can not transmitted or received	Make sure the **PTT** button is completely pressed when transmitting; Confirm that the radios have the same channel, frequency, private code and bandwidth settings; Recharge, replace and/or reposition batteries; Obstructions and operating indoors, or in vehicles, may interfere, change location; Verify that the radio is not in Scan.
Heavy static or interference	Radios are too close, they must be at least seven feet apart; Radios are too far apart or obstacles are interfering with transmission.
Low battery	Recharge or replace the battery pack; Extreme operating temperatures affect battery life.
Desktop Charger LED light does not blink	Check that the radio/battery is properly inserted and check the battery/charger contacts to ensure that they are clean and charging pin is inserted correctly.
Cannot activate VOX	VOX feature might be set to OFF; Use the programming software to ensure that the VOX sensitivity level is not set to '0'; Accessory not working or not compatible.
Battery does not charge	Check desktop charger is properly connected and correspond to a compatible AC adapter; Check the charger's LED indicators to see if the battery has a problem.

SPECIFICATIONS

General

Frequency Range	136-174MHz / 350-390MHz 400-480MHz / 465-520MHz
Channel Capacity	16 Channels
Channel Bandwidth	12.5 / 25KHz
Operating Voltage	7.4V DC
Dimensions (H x W x D)	130 x 57 x 35mm
Weight with battery	250g

Transmitter

RF Power(H/L)	≤ 5W(H) / ≤ 1W(L)
Frequency Stability	±1.5ppm
Spurious & Harmonics	-36dBm < 1GHz, -30dBm > 1GHz
FM Hum & Noise	≥ 40dB(W) / ≥ 36dB(N)
Modulation Deviation	≤ 5KHz(W) / ≤ 2.5KHz(N)
Adjacent Channel Power	≥ 70dBC(W) / ≥ 60dBC(N)
Audio Frequency Response	+1 ~ -3dB
Audio Distortion	< 5%

Receiver

Sensitivity (12 dB SINAD)	≤ 0.2μV(W) / ≤ 0.3μV(N)
Adjacent Channel Selectivity	≥ 70dBC(W) / ≥ 60dBC(N)
Audio Distortion	< 5%
Radiated Spurious Emissions	< -54dBm
Intermodulation Rejection	70 dB
Audio Output	1W @ 16 ohms

Hereby, we declare that our radio is in compliance with the essential requirements and other relevant provisions of RE Directive 2014/53/EU.

WARRANTY INFORMATION

Warranty Period
Radio Body: 12 months from date of purchase.
Battery Pack: 6 months from date of purchase.
Note: Please retain your receipt as your proof of purchase will be required to valid warranty claim.

Warranty Exclusions
This warranty will not apply in relation to:
● Failure to provide a proof of purchase
● Product has been modified, changed or serial number has been removed
● If any damage is caused by the use of non approved accessories
● Product that has been replaced by an unauthorized person
● Product failure due to customer misuse, abuse or abnormal use
● Failure by the customer to take reasonable care
● Failure due to not using the product in accordance with instructions stated in the manufacture's user guide.
● Product failure due to recommended installation procedures not being followed as stated in the manufacture's user guide.

More warranty relative information please read our Warranty Policy on the website.