INTRODUCTION

The model CP-850 is a cost-effective communication tool meant for both first time and intermediate users. This rugged and heavy-duty radio is equipped with the necessary features to ensure reliable communication at an affordable price, ideal for business operators who need the basic and long-range communications.

MAIN FEATURES

- Rugged, heavy-duty and durable design
- IP54 rating splash and dust proof
- 3000mAh Li-ion battery and life up to 70 hours
- 16 programmable channels
- 50 CTCSS tones & 210 DCS codes in TX and RX
- High/low output power selectable
- Built-in VOX for hands-free communications
- Voice prompt
- Enhanced privacy code encryption
- Voice compander & scrambler
- Unknown frequency pairing
- Channels scan
- Battery saver
- 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

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 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.
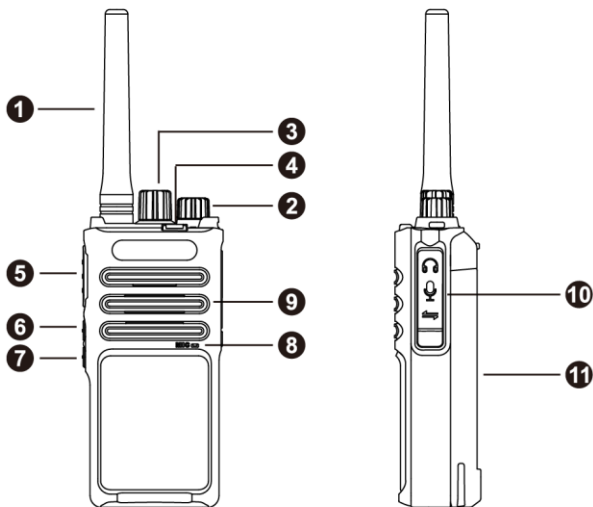- Seek medical treatment.

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 & hand strap
1pcs user's manual

At a Glance

1. Antenna

Provide attached SMA rubber flexible antenna.

Note: It may cause the damage to your radio if the antenna is connected inappropriately.

2. On / Off / Volume Knob

Turn the radio ON or OFF and to adjust the radio's volume.

3. Channel Selector Knob

Select the radio's different channels.

4. ED Indicator

Give radio transmit, receive, battery and other status.

Radio Status	LED Indicator
Transmit (TX)	Solid red
Receive (RX) & Monitor	Solid green
PC programming / Reading data	Green heartbeat
PC programming / Writing data	Red heartbeat
Channel scanning	Green heartbeat
Low battery	Red heartbeat

5. PTT (Push-To-Talk) Button

Press and hold down this button to transmit and talk, release it to receive and listen.

6. Side Button P1

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

7. Side Button P2

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

8. Built-in Microphone

Speak clearly into the microphone when transmitting.

9. Built-in Speaker

10. Audio Accessory Jack (Kenwood 2 Pin Connector)

Connect compatible audio accessories, such as

microphones, earpieces, etc
11. Rechargeable Li-ion **Battery Pack**

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.

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

Transmission and Reception
1. Make sure that no one else is currently talking on the selected channel.
2. Keep **PTT** button firmly pressed.
3. Speak normally in the direction of the microphone.
4. When you have finished, release the **PTT**.
5. When the radio is in reception mode (**PTT** not pressed) you will automatically receive any communication.

Note: during transmission and reception, as far as possible, try to keep the antenna in vertical position and to avoid

obstacles towards the direction of the other party.

ADVANCED OPERATON

Monitor
The Monitor feature is for temporarily opening the squelch in order to listen to signals that are too weak to open the squelch. By opening the squelch you will listen the communication "chopped" by the squelch. In order to activate the Monitor function, so as to listen to all traffic on the selected channel, Short press the side button **P1** once. Short press it again to disable this function.

Scanning Channels
The radio can automatically search for signals throughout the bands by scanning, i.e. selecting the channels in sequence. Short press the side button **P2** to start scanning. When a signal is detected, the scanning pauses on that channel and you can transmit by pressing **PTT** button.
If you want to stop it, short press the side button **P2** again. The radio will go back to the channel from which the scanning originally started.

Battery Save
The battery saving feature enables a reduction in the consumption of up to 50%. Battery saving comes on automatically when the radio does not receive any signal for more than 5 seconds. When the batteries are discharged, replace the batteries or recharge the battery pack.

VOX Function
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.

The Same Model Frequency Pairing
This feature enables to copy the radio profiles including 16 channels and code settings from leader radio A to member radios B, C, D…etc without any accessories among the same model radios.

1. Member radios: switch to Channel 3 and power off the radio. Keep pressed the **PTT** button and turn on the radio, until you see the LED indicator solid greens. The radio is ready to be paired. Multiple radios can be paired simultaneously.

2. Leader radio: switch to Channel 2 and power off the radio. Keep pressed the **PTT** button and turn on the radio, until you see the LED indicator red heartbeats. The radio broadcasts channel and code settings for other radios to pair.

3. When member radios received the leader radio sending message, their LED will turn to green heartbeat status and enter data validation. After that the member radios will restart automatically.

The Different Model Frequency Pairing
When you need to communicate with another brand radio, but you don't know its channel frequency and privacy code, the CP-850 still can copy the channel frequency and code setting from other brand radio.

1. Screw off the antenna from the radio.
2. Switch to Channel 1 and power off the radio.
3. Keep pressed the **PTT** button + side button **P1** and turn on the radio, until you see the LED indicator green heartbeats. Now radio is ready to be pairing. Then use another brand

radio to transmit, CP-850 will search the frequency and code then store on the Channel 1 automatically.

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	UHF: 433 / 446 / 400-480MHz
Channel Capacity	16 Channels
Channel Bandwidth	12.5 / 25kHz
Operating Voltage	7.4V DC
Dimensions (H x W x D)	119 x 55 x 35mm
Weight with battery	250g

Transmitter

RF Power(H/L)	Low: ≤2W / High: ≤10W
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	70dB
Audio Output	1W @ 16Ω

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.