User Manual

M50 PoC Mobile Radio

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http://www.kirisun.com

NOTE：

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PoC Mobile Radio

M50

User Manual

Thank you for choosing Kirisun PoC mobile radio.

We believe that the product will bring much convenience to your work and life.

Kirisun vehicle-mounted mobile radios adopt advanced technology and fine technique.

We hope that you will be satisfied with the quality and functions of the product.

Notice

◆ Please read the manual carefully before using the product. We consider that you have acquainted with the manual when you start to use the product.

◆ Please keep the manual well for further reference.

◆ The intellectual property right of all parts of the product, including accessories, is owned by Kirisun and its authorized subjects. Without permission of Kirisun and such subjects, no copy, extraction or translation of such parts is allowed.

◆ Kirisun reserves the right to change the specifications of software and hardware mentioned in the manual without prior notification. The specifications and information in the manual is only for your reference.

◆ Despite of careful verification, the manual might contain mistakes. Kirisun reserves the right of final interpretation of the manual.

Safety Precaution

To prevent fire, personal injury and damage to the radio, please abide by the followings.

◆ According to governmental decrees, it is prohibited to operate radio transmitters without permission within the area of its jurisdiction. Violation to such stipulations may result in penalty or arrest. Maintenance of the product can only be performed by professional technicians.

◆ For safety, it is important for a user to learn knowledge of common hazards before using a radio transmitter.

◆ Power off the radio in an explosive environment with dangerous gas, dust or mist, for example, a gas station where you refuel or park a vehicle.

◆ Never disassemble the radio by yourself.

◆ Keep the radio away from continuous direct sunshine. Do not place the radio near a heater.

◆ Do not place the radio in a place with much dust, moist or splash of water, or on an unstable surface.

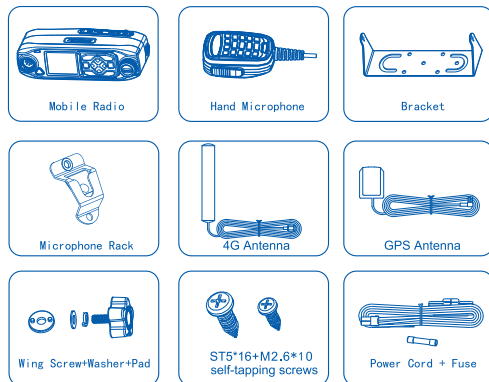◆ In case the radio discharges smell or smoke, power off the radio immediately and contact the local dealer.

Contents

1. Unpacking

Open the packing box carefully and check the parts as listed below. If any item is lost or damaged, please contact the dealer.
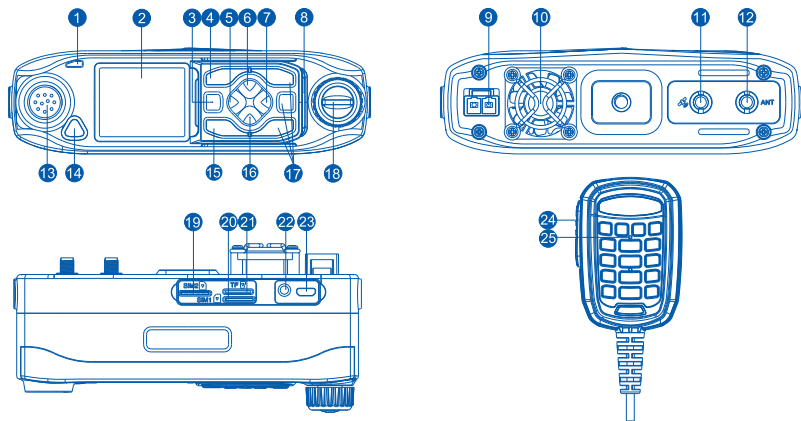

Mobile Radio	Hand Microphone	Bracket
Microphone Rack	4G Antenna	GPS Antenna
Wing Screw+Washer+Pad	ST5*16+M2.6*10 self-tapping screws	Power Cord + Fuse

Please check the following items in the package.

SN	Item	Quantity
1	Radio	1
2	Hand Microphone	1
3	Bracket (with four M5*16 self-tapping screws)	1
4	Power Cord	1
5	4G Main Antenna	1
6	GPS Antenna	1
7	ST5*16 self-tapping screw	4
8	Wing screw (including flat washer, spring washer and plastic pad)	2
9	Fuse	1
10	3M Adhesive Sticker	1
11	Certificate of Approval	1
12	User Manual	1

2. Overview

2.1 Appearance

SN	Item	SN	Item
1	LED Indicator	14	Emergency Alarm Key
2	LCD Screen	15	Return Key
3	Power Key	16	Down Key
4	Menu Key	17	P1~P3 (Programmable Keys)
5	Left Key	18	Volume Knob
6	Up Key	19	SIM Card Slot 2
7	Right Key	20	SIM Card Slot 1
8	Speaker	21	TF Card Slot
9	Power Interface	22	Earphone Jack
10	Fan	23	USB Port
11	GPS Antenna Interface	24	PTT Key
12	Antenna Interface	25	Hand Microphone
13	Hand Microphone Connector		

2.2 Installation

Attentions:

- The radio should be installed in a position where it can be used conveniently and personal injury can be avoided while driving a vehicle in poor road condition.
- While drilling holes, protect the internal wires of a vehicle or of other devices from being damaged.
- Leave enough space behind the radio for wiring.
- Make sure the power cord is long enough so that the radio can be maintained with the power connected.
- While replacing the fuse, make sure a fuse meeting requirements is used.
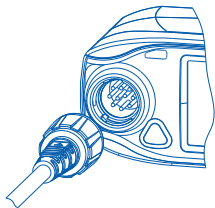
Installation Steps
1. Fix the bracket at a position in a vehicle where operation is convenient via the four M5*16 self-tapping screws.

2. Fix the mobile onto the bracket via the two wing screws.
3. Wire the 3-meter power cord, connect its open end to the engine battery or other power (voltage is no more than 26V). Make sure the red wire is connected to the anode and the black wire is connected to the cathode. Install the supplied fuse, and connect the power plug to the power interface at the rear of the radio.
4. Connect the 4G antenna and the GPS antenna respectively according to the indications at the rear of the radio.
5. Plug the hand microphone (with the direction sign up) into the corresponding interface of the radio, and rotate clockwise the cover lock on the plug. When the lock contacts the slot on the radio, press it a bit and continue to rotate it until it is tightened.
6. Fix the magnetic microphone rack at a position for convenient operating and safe driving via the three M2.6*10 self-tapping screws to fix the microphone stand onto a position where operation is convenient, and have the microphone attracted to the rack.

Installing/Uninstalling Hand Microphone

To install the hand microphone, plug the hand microphone (with the direction sign up) into the corresponding interface of the radio, and rotate clockwise the cover lock on the plug. When the lock contacts the slot on the radio, press it a bit and continue to rotate it until it is tightened.

2.3 Programming Keys

The programmable keys P1, P2 and P3 can be set as shortcut keys through programming.

The following functions can be achieved through programming keys.

Shortcut Key	Operation	Function
P1	Press	Broadcast group name
	Press and hold	Download and play back video records
P2	Press	Broadcast user name
	Press and hold	Enter individual-call mode
P3	Press	Enable/disable Bluetooth
	Press and hold	Enable/disable Wi-Fi

2.4 LED Indicator

The states of the LED indicator are described in the following table.

Indicator State	Device State
Red light on	A. No SIM card is installed, or it is installed improperly (with voice prompt "No SIM card is installed"). B. Fail to unlock the PIN code of the SIM card.
Green light on	A. During a call (i.e. individual/group/all call). B. The device is powered on.
Yellow light on	A. The device is in individual-call standby state. B. The device is not configured on the server (with voice prompt "Not configured"). C. The device is expired. D. The device is in standby state or call setup state under duplex talk.
Red light flashes fast	A. Network registration fails because of an inactivated SIM card or overdue charge. B. Device registration fails because of poor wireless network connection.

Green light flashes slow	Network registration is successful, and the device enters standby state.
No indication	The device is powered off.

2.5 Icons

The following screen icons are used to indicate the state of the radio.

Icon	Description
	2G/3G/4G received signal strength indication
	Wi-Fi received signal strength indication
	Searching GPS satellite signals
	GPS signals acquired
	In group calling

Icon	Description
👤	In individual calling
🔊	In all calling
▭	Under dispatching
✉	Unread short message

3. Basic Functions

3.1 Powering On/Off

Powering On

● When the radio is off, supply a voltage of 12~24V, and the radio will be powered on automatically within about 30s.

● When the radio is in soft off state, you can start it by pressing ⏻ and holding for 3s before release.

● Powering Off

When the radio is on, you can power it off by pressing ⏻ and holding for 5s before release.

3.2 Standby Mode

Press ⏻, and the radio will enter standby mode so as to save battery consumption to the greatest extent.

3.3 Adjusting the Volume

In the main interface, rotate the Volume knob clockwise to increase the volume or counterclockwise to decrease it.

3.4 Selecting a Group

In the main interface, you can switch to another group in the zone by pressing ▲/▼ on the

hand microphone or by pressing ◀/▶ on the radio.

In the main interface, select 【Menu】-【Group List】and then a group.

3.5 Initiating a Call

If the current channel has been mapped (under the management platform), you can call the

default contract of the channel by pressing the PTT key on the hand microphone.

3.6 Receiving a Call

If the current channel has been mapped (under the management platform), the radio will output

voice after receiving an individual call or a group call on the channel.

3.7 Delayed Callback Admission

Use this function to delay admitting the radio to a group call for a period of time.

3.8 Priority Call

You may set different priorities for different radios, so that a radio with a higher priority can

initiate a call before a radio with a lower priority does and interrupt an ongoing call.

3.9 Call Types

● Group Call

After the radio is powered on, it enters group-call standby state, and the radio may be in a valid group with green light flashing slowly or an invalid group (that is not configured) with red light on.

To make a group call, take the following steps.

(1) Selecting a Group

Select a group by pressing ▲/▼ on the hand microphone or by pressing ◀/▶ on the radio.

(2) Initiating Group Call

Make sure the radio is in normal state (i.e. green light flashes slowly), and then press the PTT key and hold. Then,

● If another radio in the group is online, a group call will be initiated, with green light on and the group name and call type icon ⚏ will be displayed on the screen.
When a callee receives the call, it will have green light on and the group name, the group type and the caller name displayed on the screen.

When the call is over, the callee will ring a short tone "Di" and green light will flash slowly.

● If no radio in the group is online, green light will flash once and "No answer" will be displayed on the screen. Release the PTT key to end the call, and the radio will enter group-call standby state.

● Individual Call

To make an individual call, take the following steps.

(1) Setting Contact List

Under the management platform, set contacts for the radio.

(2) Entering Individual-Call Mode

Take one of the following methods to enter individual-call mode.

● Press the shortcut key P2 and hold.

● In the main interface, select【Menu】and then【Contacts】.

(3) Selecting a Contact

Go to the Contact interface, select a contact, and then press the【OK/Menu key】on the hand microphone or on the radio.

(4) Initiating Individual Call

Make sure the radio is in normal state (i.e. green light flashes slowly), and then press the PTT key and hold. Then,

- If the callee is online and idle, an individual call will be initiated, with green light on and the callee name and call type icon   will be displayed on the screen.
  When the callee receives the call, it will have green light on and the caller name displayed on the screen.
  When the call is over, both the caller and the callee will ring a short tone "Di" and green light will flash slowly.

- If the callee is offline or is busy, green light will flash once and "No answer" will be displayed on the screen. Release the PTT key to end the call, and the radio will return to the previous interface.

After an individual call ends, the caller will return to its previous state. Within 5s after an individual ends, the callee may call the caller back by pressing the PTT key, or exit individual-call state and return to its previous state without any operation.

Note:

An individual call has a higher priority than a group call does. An individual call can be made cross two groups, no matter which group the callee is in.

The default call duration for an individual call is 40 seconds, which can be modified through a configuration tool. If call duration exceeds this value, the call will end automatically.

- All Call

An all call is of the highest priority. When an all call is initiated, other calls (including group calls and individual calls) will be released.

To make an all call, take the following steps.

(1) Selecting a Group

If an all-call group has been configured for the radio under the management platform, you may select the group by pressing the 【Menu】key to enter the Menu interface and then selecting 【Group List】.

(2) Initiating All Call

Make sure the radio is in normal state (i.e. green light flashes slowly), and then press the PTT key and hold. Then,

● If a the other radio in the group is online (in idle, individual-call, group-call or duplex transmission), an all call will be initiated, with green light on and the group name and call type icon displayed on the caller screen. When a callee receives the call, it will switch to all-call mode, and will have green light on and the group name, group type and caller name displayed on the screen. When the call is over, the callee will ring a short tone "Di" and green light will flash slowly.

● If no the other radio in the group is online, green light will flash once and "No answer" will be displayed on the caller screen. Release the PTT key to end the call, and the radio will return all-call standby state

After an all-call ends,

● A callee will exit all-call state and return to its previous state if no radio (either the caller or a callee) calls within 30s; the caller will keep waiting for an all-call unless it exits the group (through the menu or by rotating the Channel knob).

● If the caller exits the group (in all-call standby state or all-call state), all callees will also exit all-call state and return to their previous states. Change of group types will be shown on screens.

Note:

It is suggested that only a special user is privileged to initiate an all call.

The default call duration for an all call is 30 seconds, which can be modified through a configuration tool. If call duration exceeds this value, the call will end automatically.

3.10 Downloading and Playing Back Video Records

● To download and play back the latest 5 voice records, enable voice recording and playback under the management platform, and then press and hold the shortcut key P1.

● To view and play back the latest 30 call records, in the main interface select Menu and then Call Records.

3.11 GPS Function

The radio is positioned through a built-in GPS module, and positioning information is submitted to the management platform. Real-time position and track of the radio can be displayed on a GIS map under the platform or via dispatcher software.

Enabling/Disabling GPS Function

In the main interface, select【Menu】, Settings and then GPS On/Off, and then press the【Menu】key on the hand microphone/radio or the Volume knob to enable or disable GPS function.

3.12 Wi-Fi Function

Enabling/Disabling Wi-Fi

In the main interface, select【Menu】, Settings and then【Wi-Fi】, and then the Menu key on the hand microphone/radio or the Volume knob to enable or disable Wi-Fi function.

Setting Wi-Fi Network Password

Enable Wi-Fi, select Scan to scan nearby Wi-Fi networks. Select a network, and you will be prompted to set a password. Press OK to go to the password setting interface. Set a password by inputting numbers or English letters using the microphone keypad. (You can switch to another input mode by pressing #.)

Viewing and Deleting Wi-Fi Networks
You can view or delete saved networks by selecting Saved Networks.

3.13 Bluetooth

Enabling/Disabling Bluetooth
In the main interface, select Menu, Settings and then Bluetooth, and then press the Menu key on the hand microphone/radio or the Volume knob to enable or disable Bluetooth.

Pairing
Enable Bluetooth, select Scan to scan nearby Bluetooth devices. Select a device, and you will be prompted for pairing. Press OK to start pairing the device and the radio.

Viewing Paired Devices

You can view paired devices by selecting Paired Devices.

3.14 Fan

In the main interface, select Menu, Settings and then Fan, press the Menu key on the hand microphone/radio or the Volume knob, and then select Enable, Disable or Auto.
After selecting Auto, select 45°C, 55°C or 65°C (i.e. the fan is on when the radio reaches the temperature, and is off when the radio is under the temperature).

3.15 Backlight

In the main interface, select Menu, Settings and then Backlight Level, press the Menu key on the hand microphone/radio or the Volume knob, and then select Low, Medium or High by pressing arrow keys.

3.16 Alarm Modes

Selecting Silent Receiving or/and Silent Sending
In the main interface, select Menu, Settings and then Alarm Modes, press the Menu key on the hand microphone/radio or the Volume knob, and then select Silent Receiving or/and Silent Sending.

Silent Receiving
When silent receiving is enabled, there will be LED indication but no voice prompt when an alarm is received.
When silent receiving is disabled, there will be LED indication and voice prompt when an alarm is received.

Silent Sending
When silent sending is enabled, there will be LED indication but no voice prompt when an alarm

is sent.
When silent sending is disabled, there will be LED indication and voice prompt when an alarm is sent.

Alarm Message
When an alarm is sent/received, a textual message will be generated on the caller/callee. To view sent/received alarms, go to "Menu"➔ "Message Records" ➔ "SOS Messages".

Sending an Alarm
To send an alarm, press the orange Emergency Alarm key.

3.17 Language Setting

In the main interface, select Menu, Settings and then Language Setting, press the Menu key on

the hand microphone/radio or the Volume knob, and then select Chinese, English, Turkish or Greek.

3.18 Device Information

In the main interface, select Menu, Settings and then Device Info, press the Menu key on the hand microphone/radio or the Volume knob, and then view the IMEI NO., software version and system version.

3.19 Advanced Functions

Activation, stunning, killing and monitoring of the radio and voice playback can be achieved via dispatcher software.

4. Technical Specifications

General	
Communication System & Frequency Bands	**Version 1（EMEA & Asia & AUS）**
	TDD-LTE：Band 40
	FDD-LTE：Band 1/3/4/5/7/8/20/28A/28B
	WCDMA：Band 1/5/8
	CDMA 1X/EVDO：BC0
	GSM/GPRS/EDGE：850/900/1800 MHz
	Version 2（Amercia）
	TDD-LTE :Band1/2/4/5/7/12/17/19/28A/28B;
	WCDMA:Band 1/2/4/5
	GSM/GPRS/EDGE：850/900/1900 MHz
Communication System & Frequency Bands	-20℃ ~ + 50℃

Storage Temperature	-40℃ ~ + 80℃	
Operating Voltage	DC12-24V	
Dimension (H*W*D)	152.6mm*43.4mm*49mm	
Weight	≤250g (radio only)	
Screen	160*128 pixels, monochrome	
Water and Dust Resistance	IP54	
Transmitter		
Transmitting Power	GSM850/900 MHZ	33dBm (+2/-2dB)
	DCS1800 MHZ	30dBm (+2/-2dB)
	CDMA 1X/EVDO	23dBm~30dBm
	WCDMA	24dBm (+1/-3dB)
	FDD-LTE/ TDD-LTE	23dBm (+2/-2dB)
Audio Distortion	5% (typical)	

Receiver		
Receiving Sensitivity	GSM/GPRS/EDGE	≤ -102dBm
	CDMA 1X/EVDO BC0	≤-104dBm
	WCDMA	B1≤-106dBm B5≤-104dBm B8≤-103dBm
	FDD-LTE	≤-97dBm (bandwidth: 10M)
	TDD-LTE	≤-94dBm (bandwidth: 20M)
Audio Power	1W	
Audio Distortion	5% (typical)	

5. Troubleshooting

Failure Description	Reason	Solution
Startup failed	Loose power plug	Make sure the plug is in position.
	Battery/supply voltage below 6V	Ensure a supply voltage of at least 6V.
	Burnt fuse	Replace the fuse with a new one, make sure correct connection of the anode and cathode of power supply, and then power on the radio.
Low, interrupted or no volume while receiving traffic	Low supply voltage	Fully charge the battery before using the radio, or change for power supply with a voltage of 10.8V
	Low volume	Turn up the volume.

Failure Description	Reason	Solution
	Loosen antenna or not in position	Power off the radio and install the antenna properly.
	Blocked or destroyed speaker	Clean the outside of the radio. If the problem remains, contact your dealer or an authorized maintenance provider for examination and repair.
Talk failed	Incorrect platform parameter settings	- Incorrect channel settings Set parameters properly and try again. - Wrong default call group Select a right group and try again.
GPS positioning failed	No GPS signals received at the position	Move to an open and flat area.

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