# KIRISUN

# INSTRUCTION MANUAL

**FM MOBILE TRANSCEIVER**

# PT8000

KIRISUN   ELECTRONICS   (SHENZHEN)   CO.,LTD

# NOTE

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# INSTRUCTION MANUAL
## PT8000
### VHF/UHF MOBILE RADIO

**MANDATORY SAFETY INSTRUCTIONS TO INSTAL-**
**-LERS AND USERS**
● Use Only manufacturer or dealer supplied antennas.
● Antenna minimum safe distance: 108 cm.
● Antennas used for this transmitter must not exceed an
   antenna gain of   3 dB.

**The FCC (Federal Communications Commission) has**
**adopted a safety standard for human exposure to RF**
**energy which is below the OSHA (Occupational Safety**
**and Health Act) limits.**
● Antenna mounting: The antenna supplied by the manu-
   -facturer or radio dealer must not be mounted at a location
   such that during radio transmission, any person can come

Closer than the above indicated minimum safe distance to the antenna (i.e. 108cm).

● To comply with current FCC RF Exposure limitations, the antenna must be installed at or exceeding the minim-- um safe distance indicated above, and in accordance with the requirements to the antenna manufacturer or supplier.

● Vehicle installation: The antenna can be mounted at the center of a vehicle metal roof or trunk lid if the minim- um safe distance is observed.

Antenna substitution: Don't substitute any antenna for the one supplied or recommended by the manufacturer or radio dealer. You may be exposing person(s) to excess-- ive radio frequency radiation. You may contact your radio dealer or the manufacturer for further instructions.

## ⚠ Warning

Maintain a separation distance from the antenna to person(s) at least 108cm.

" This transmitter is authorized to operate with a maximum duty factor of 50%, in a typical push-to-talk mode, for satisfying FCC RF exposure compliance requirements. "

**Caution:**
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
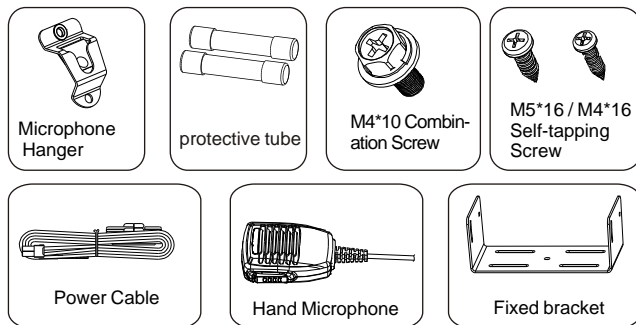
# CONTENTS

# 1 . Package-opened Inspection and Installing

Please check the host in the package and the supplied accessories in the following table before using. Any articles are found lost or damaged, please contact the distributor without delay.

## 1.1　Supplied Accessories

| Accessories | Quantity |
| --- | --- |
| Fixed bracket | 1 |
| Power Cable | 1 |
| Hand Microphone | 1 |
| Microphone Hanger | 1 |
| M4*10 Combination Screw | 4 |
| M4*16 Self-tapping Screw | 2 |
| M5*16 Self-tapping Screw | 4 |
| Instruction Manual | 1 |
| Protective tube | 2 |

| Microphone Hanger | protective tube | M4*10 Combin-ation Screw | M5*16 / M4*16 Self-tapping Screw |
| --- | --- | --- | --- |

| Power Cable | Hand Microphone | Fixed bracket |
| --- | --- | --- |

## 1.2　Preparation

1.2.1  Connection of Power Cable

＊ First of all, please check whether there is a hole for the power cable on the insulating board. If no, please bore the board with the suitable drill bit and fix a rubber grommet on it.

＊ Afterwards, please have the cable pass through the insulating board and lead from the car into the car engine. Connect the red conductor to the positive terminal of the accumulator and the black conductor to the negative terminal.

＊ At last, ring the remained conductor and fix it.

**Note: Please maintain the sufficient relaxation of the power cable to make it convenient to dismantle the radio in the state of power connection.**

1.2.2  Radio Installing

**Warning: For passengers' safety, please fix the radio firmly on the fixed bracket so that the radio will not be loosened in case of collision.**

＊ The fixed bracket is taken as an example. Draw the position and drill a hole on the instrument panel first, and then install the fixed bracket with 4 M5*16 self-tapping screws. (Note: please fix the radio at the position convenient for operation and control, and leave an enough space for fixation and connection of the cable.)

＊ Slide the radio into the fixed bracket and fix it with 4 M4*10 combination screws (plus plain washer and spring washer). (Different combinations of fixing holes are selectable to adjust the radio to the proper height and visual angle.)
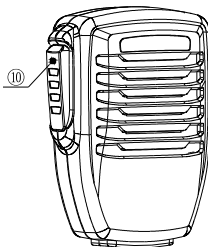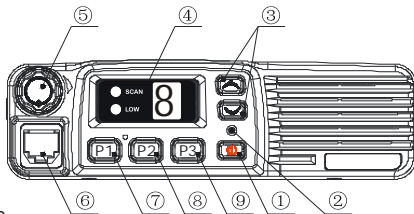
＊ Connect the antenna and the power cable to the radio.
＊ Install the microphone hanger at the position easy to use, with
2 M4*16 self-tapping screws. (The microphone and its cable should
be fixed at the position not affecting safe driving.)
＊Connect the microphone to the microphone jack on the front
panel of the radio and put it on the hanger.

**Note: When replacing the protective tube for the power cable, please use the one of the same specification without fail. It is not allowed to change it into the tube of higher capacity.**

# 2  Radio Overview

## 2.1 Description of External View

① ⏻ power button
Press this button for
a long time (more than
1.5 seconds) to switch
The radio on/off.

② LED indicator
The red indicator will light while
transmitting; the green indicator
Will light when it receives the carrier.

③ ⌃/⌄ button (programmable button)

④ Display screen
For details, see Display .

⑤ Volume Control knob
To be used to adjust volume.

⑥ Microphone/Programming Interface

⑦ P1button (programmable button)
⑧ P2 button (programmable button)
⑨ P3button (programmable button)
⑩ PTT button (on the hand microphone)
Press the PTT button first, and then speak to the microphone to transmit the voice to the other. Loosen to receive.
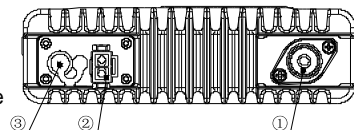
## 2.2 Display Screen

| Display | Description |
|---|---|
| SCAN indicator | Scan indication: on when scan is enabled. |
| LOW indicator | Power level indication: on when in low power. |
| 8 | Indicates the current channel in normal use, ranging from 1~8. Indicates the current squelch level when squelch selection is enabled,ranging from 0.~9. Displays "b " when Public Address is enabled. Displays "-" when the radio has no channel. Displays "u " when the radio is in the remote stun status. Displays "h " when the radio is in the remote kill status. |

| Display | Description |
|---------|-------------|
|  | Displays "P" when the radio enters the PC Programming Mode. Displays "t" when the radio enters the PC Adjustment Mode. Displays "C" when the radio enters the Wired Clone Mode。 |

## 2.3 Rear Panel

① Antenna Interface

② Power Interface

③ External Speaker Interface

③    ②    ①

## 3. Basic Operation

1.Startup:

Press the red POWER button for a long time (at least 1.5 seconds) to switch the radio on/off

2.Volume:

Press the MONITOR or Squelch Off button to listen to the background noise first, and then adjust the volume by turning the volume control knob.

3.Channel：

The radio can provide 8 general channels. Press the CHANNEL UP or CHANNEL DOWN button to select the channel.(Refre to P74 Programmable Button Function)

4.Transmission:

To send a call, press the PTT button and speak to the microphone

in the normal voice. Please keep the microphone about 3 or 4 cm far from your mouth. After speaking, please loosen the PTT button.

5. Receive:

The radio will return to the receiving state after you loosen the PTT button. The distributor may have set the CTCSS/DCS signaling in your radio. On the channels with CTCS S/DCS are set, you can only hear the call from other radio with the same CTCSS/DCS.

## 4. Programmable Button Function

**P1，P2，P3，** ▲/▼ can be programmed as one of the following functions.

| | |
|---|---|
| 0. None | No function |
| 1.Channel Up | Select the next channel |
| 2.Channel Down | Select the previous channel |
| 3.Talk-around | Switch the radio mode between talk-around and repeater. |
| 4.Call Button1 | Sends the DTMF/2Tone code assigned to call 1 button. |
| 5.Call Button2 | Sends the DTMF/2Tone code assigned to call 2 button. |
| 6.Lone worker | Enables Lone worker function |
| 7.Emergency Alarm | Press the button programmed as "Emergency Alarm" to set alarm tone according to the programming software or send your own ID or background voice to your partner or the system. |
| 8.Emergency AlarmOff | Press this button to quit the Emergency Alarm mode. |
| 9.Scan | Start/end the scanning function of system. |
| 10.Nuisance Delete | Press this button Nuisance Delete when the radio enables the scan function and stays at the noise channel. |
| 11.Hi-Low Power Switch | Press to switch between high and low power of the sen ding power of the radio, when the "LOW" is on the display, |

| | the current sending power is low. |
|---|---|
| 12.Monitor momentary | Hold to disable CTCSS/DCS signaling according to the setting  to resume normal operation. |
| 13.Monitor | Press to disable CTCSS/DCS signaling to receive signals that cannot be heart in normal operation, press again to resume normal operation. |
| 14.Squelch  off momentary | Hold to enable squelch and loosen to resume normal operation. |
| 15.Squelch  off | Press this button to open the squelch. Press it again to return to the normal operation. Press this button in the selective call state to quit such a state. |
| 16.Lone  worker reset | After enabling the Lone worker, press this button to reset the Lone worker timer and the timing resumes. |
| 17 .Public Address | Start/end the public address function. Press this button and the function will be activated. Press the PTT button and speak to the micro-phone so that you can hear your voice through the external speaker.Press this button once again and return to the normal user mode. |
| 18.Squelch Level Selection | Press this button to enter the Squelch Level Adjustment Mode first, and then press the  / button to adjust the level. Press the PTT button to save the selected squelch level and quit this mode. Press any other button to quit without saving. |

## 5. Radio call

A.Press the button programmed as "call Button 1" or "call Button 2" to send the preset code .

B.Press "PTT" and talk with the microphone in the normal voice.
Please keep the microphone about 3-4cm away from your lips.
When finish talking, release "PTT".

## 6.  Talk-around

In the communication network, you can expand communication range through the repeater, but when the mobile radio is out of the communication range, you can connect with other radio in the talk-around method.
Switch the talk-around or repeater mode through "Talk-around" button.

## 7. Scan

The radio can be programmed to scan multiple channels to receive signals.

### 7.1 Start/End Scan Function

Press the button programmed for "Scan" to enable scanning. When the scan function is enabled, the "SCAN" indicator is on and the channels being scanned are also displayed. Press the "Scan" button again to disable scanning and the"SCAN" indicator will be out.

### 7.2 Nuisance Delete

If a channel continuously generates noise or interference, press the button to remove this channel from the scan list temporarily. Note: the priority channel can't be removed and the last one in the scan list, either.Quit the Scan mode and enter it again, the deleted channel will be added to the scan list again.

## 8. Public Address

Press the button programmed for "Public Address", "b" will be displayed.Press the PTT button, the voice from the MIC of the radio will be directly sent to the external speakers through the interface on the back.

Press the "Public Address" button again to disable the public address function.

## 9. Lone worker

If Lone worker is set to be enabled, press the button "Lone worker" to enable the Lone Worker Mode. Start the Lone worker timer and when the preset Lone worker time is reached, the radio will alarm, after the alarm time, the radio will enter the Emergency Alarm Mode.

In the Lone worker Mode, press the "Lone worker" button again to quit the Lone worker mode.

In the Lone worker Mode, press the button programmed for "Lone worker reset"（the specific button to select lone worker reset mode）or any button (any button to select lone worker reset mode), the Lone worker timer will reset and start timing again.

## 10. Emergency Alarm

Press the button programmed for "Emergency Alarm" (the time of pressing must be longer than the de-bounce time of the emergency alarm switch) to enter the Emergency Alarm mode. "E" will be displayed. You can set alarm tone according to the programming

software or send Your own ID or background voice to your partner or the system.

In the Emergency Alarm Mode, press the button "Emergency Alarm Off" to quit the Emergency Alarm Mode and disable the alarm tone or stop sending it and resume normal operation.

## 11. Remote  kill, stun, activate  and  revive

If the radio received DTMF code programmed as remote stun, the radio will enter the remote stun status, after replying according to the setting, "u" will be displayed. The radio can only receive signals and cannot send signals. If the radio received DTMP code programmed as remote un-stun, the radio will quit the remote stun status and enter normal operation.

If the radio received DTMF code programmed as remote kill, the radio will enter the remote kill status, after replying according to the setting, "h" will be displayed. The radio cannot send or receive signals. If the radio received DTMP code is programmed as revive, the radio will quit the remote kill status and enter normal operation.

## 12. Wired Clone Mode

If the wired clone function is enabled, the radio will not quit after entering the wired clone mode. To return to normal user mode, the user needs to restart the machine.

The operating steps go as follows:

1. Press [P1] buttons for power-on until show "C" and enter the

clone mode. If the function is disabled, it will enter the user mode.

2. Connect the slave radio with the wired clone cable first, and then turn on.

3. Press button [P2] on the master radio for starting clone. During transmitting the data, the master radio lightens red, and the slave radio lightens green and indicates "P". After the slave radio recei--ving all the data, the red light on the master radio is off, and the slave radio restarts.

4. You can keep cloning according to step 3 above.

## 13. Trouble Shooting Guide

| NO. | Problem | Solution |
|---|---|---|
| 1 | Power on Failure | A. The power cable is not connected with the accumulator or the host reliably. Please connect the power cable reliably.<br>B. The protective tube of power cable is burnt out. Please change it.<br>C. The power button is of poor contact. Please change the silica gel button or PCB button.<br>D. The rechargeable battery is out of power. Please recharge or change a new one.<br>E. CPU is broken, Please change the IC. |
| 2 | Phase lock loop unlocked (Beeping) | A. Channel frequency beyond the range, reset channel data.<br>B. The crystal X1 of phase lock loop is broken. Please change it.<br>C. The oscillator tube is broken. Please change it.<br>D. The IC3 of phase lock loop is broken. Please change IC. |
| 3 | No talkback | A. The frequency is not right. Please reselect the channel of the same frequency.<br>B. The CTCSS/DCS code is not the same. Please reset it.<br>C. It is out of the effective communication range. |
| 4 | No receiving signal | A. The antenna is not in good contact. Please fasten the antenna head. |

| NO. | Problem | Solution |
|---|---|---|
|  |  | B. The high-frequency amplifying tube Q18 is broken. Please change it.<br>C. The squelch level is set to high Please reset the squelch level.<br>D. The mixed tube Q19 is broken. Please change it.<br>E. The FM IC6 is broken. Please change IC. |
| 5 | The red transmission Indicator lights but no sound is heard. | A. Power module IC1 damaged, no power output, please change the module.<br>B. MIC damaged, please change it. |
| 6 | The green receiving indicator lights but no sound is heard. | A. The speaker is broken. Please change it.<br>B. The audio power amplifier IC7 is broken. Please change IC. |

## 14. Major Specifications

Frequency Range:　136MHz~174MHz　　438MHz~490MHz

　　　　　　　　　　400MHz-450MHz　　470MHz~512MHz

Channel Number:　8

Channel Spacing:　25kHz (wide band)/12.5kHz (narrow band)

Operating Voltage:　13.6V Dc±10%

Operating Temperature: -25℃-+55℃

External Dimension: machine only: 150mm*53mm*130mm;

　　　　　　　　　　　plus fixed bracket: 165mm*62mm*130mm

Weight: machine only: 1030g;

　　　　　Plus fixed bracket: 1310g

**Kirisun**

## DECLARATION
## OF CONFORMITY

CE 0678 ⚠

We,  Kirisun Electronics(Shenzhen) Co., Ltd.
    6/F, Bldg.H-2,East Industrial Zone Of  Overseas
    Chinese Town,Shenzhen 518053,  China

Declare on our sole responsibility that this equipment complies with
the essential requirements of the Radio and Telecommunication
Terminal Equipment Directive,1999/5/EC,and that any applicable
Essential Test Suits measurement have been performed.

Description of equipment: FM MOBILE TRANSCEIVER
Model No.:  PT8000

This compliances is based on conformity with the
 following  harmonised standards or documents:
 (1). EN 60950
 (2). EN 301 489-1/-5
 (3). EN 300 086-1/-2

Shenzhen, 6 MAY 2008                    WenLiang, Fu
Place and date of issue                    General Manager

                                Signature
                                Kirisun  Electronics Co., Ltd

## NOTE