



INSTRUCTION MANUAL

PT7200

FM HANDHELD TRANSCEIVER







Side Button 1 Null Channel Annunciation Whisper Talk-around CALL 1/2/3/4 Lone Work Man-down Alarm Scan Temporarily Delete Noise Channel Transport High/Low Power Switch Squelch Level Check Monitor Momentary/Call Cancel Monitor/ Call Cancel Squelch Momentary/Call Cancel Squelch / Call Cancel Key Lock Compander Scrambler Battery Power Check Rental Time Check Side Button 2 Null Channel Annunciation Monitor/ Call Cancel Whisper Squelch Momentary/Call Talk-around CALL 1/2/3/4 Cancel Squelch / Call Cancel Lone Work Key Lock Scan Temporarily Delete Noise Channel Compander Transporth Scrambler Squelch Level Check **Battery Power Check** Monitor Momentary/Call Cancel Rental Time Check



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FM HANDHELD TRANSCEIVER

We are very grateful for your purchasing was brand twoway radios produced by Kirisun Electronics (Shenzhen) Co., Ltd.

We believe two-way radio, which always incorporates the latest technology, can bring great convenience to your life and work:

We also believe that the quality and function of way twoway radio can meet your demands for reliable communication.

PRECAUTIONS

Please observe the following precautions to prevent fire, personal injury, and radio damage.

Do not operate your radio while taking on fuel, or being charged.

Do not expose the radio for a long period to direct sunlight, nor place the radio close to heating appliances.

Do not place the radio in excessively dusty areas, humid





FCC INFORMATION

Warning: Modifying, tampering and/or adjusting this or replacement of any transmitter component (crystal, semiconductor, etc.) in this unit could result in a violation of the rules. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Warning:

PT7200-02 is a occupational equipment. And it operate with a duty factor not exceeding 50%. PT7200-02 cannot worn on the body.

The working frequency of the two-way radio (USA Version) must compliance with the requirement of subpart C of Part 90.

areas, or on unstable surfaces.

Do not modify this radio for any reason.

Refer service to qualified licensed or certificated technicians only.

Notice to the User:

- Government laws prohibit radio communication without permission in government districts.
- Illegal operation is subject to punishment by fine and/or imprisonment.
- Refer service to the well-trained professional technicians only.

Safety

It is important that the user is aware of and understands hazards common to the operation of any radios.

Warning!

Turn off your radio before entering any area with a potentially explosive atmosphere (where the air contains gas, dust and smog, etc.), such as while taking on fuel, or while parking at a gasoline service station.

Precautions in Use

Please comply with the following attentions to avoid fire, bodily injury and damage to the radio.

· The radio is recommended to transmit for 1 minute and





receive for 4 minutes. Long time transmitting or continuous working in high power mode will make the rear side of the radio generate heat.

- Please don't disassemble or assemble the radio under any circumstances.
- Please don't expose the radio to direct sunlight for a long time;
 don't place the radio near any heating devices, either.
- Please don't put the radio in extremely dusty, moist or dabbling places; don't place it on any unstable surfaces, either.
- If the radio emits smoke or strange odors, turn it off and remove the battery from the radio and promptly contact your local authorized Kirisun dealer.

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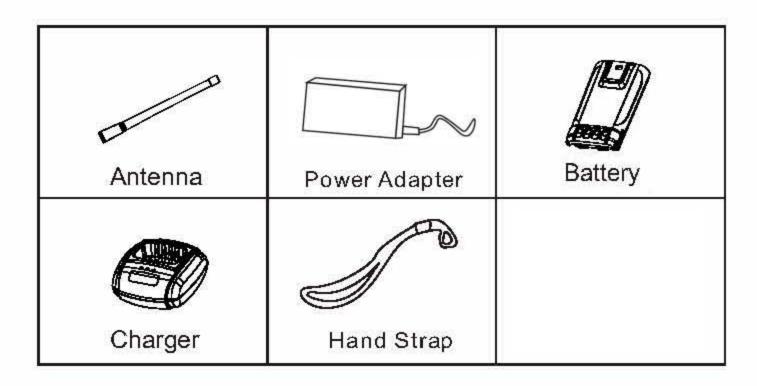


UNPACKING AND CHECKING EQUIPMENT

Carefully unpack the radio. We recommend that you identify the items listed in the following table before discarding the packing material. If any damage has occurred during shipment, please contact the dealer immediately.

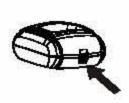
SUPPLIED ACCESSORIES

ITEM	QUANTITY		
Antenna	1		
Power adapter	1		
Charger	1		
Hand strap	1		
Li-Polymer battery	1		
Instruction manual	1		

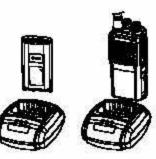


PREPARATION

♦ CHARGING THE BATTERY PACK



Plug the power adapter into the proper AC wall outlet; and insert the cable of the power adapter into the adapter socket on the charger; then 3 LED light for 1 second. Green LED lights after it enters normal work.



Insert the battery or the radio to be charged into the charger slot. Turn off the radio before insert it into the charger.

Make sure the battery is in good contact with the charger terminals. When the red indicator lights, the charger begins to charge the battery.

After charging for about 5 hours, the red indicator turns dim and the green indicator lights indicating the battery has been fully charged.

Leave the battery in that sate of green indicator for 1~2 hours before you remove it from the charger to achieve the best performance of the battery. Then you can disconnect the power adapter from the AC outlet.

Yellow LED lights when charging temperature or circuit is abnormal and the charger enters protection state. Please stop charging in such situation. Remove the battery from the charger and cut off charger power.

Notice:

- * The battery is not fully charged in the factory, and please charge the new battery when you use the radio for the first time.
- * The radio is supplied with a KB-70A Ni-MH/KB-70B Lithium battery manufactured by KIRISUN.





- * When you charge the battery for the first time after purchasing or long storage (over 2 months), you should repeat charging it several times to achieve the normal battery capacity.
- * Do not recharge the battery if it has been fully charged or the battery power doesn't become low, otherwise it might affect the battery life or performance. Remove the battery from the charger after charging.
- * When using KB-70A, if the radio enters low power warning state, please recharge the battery. Do not use the radio in low power state, which will affect the battery life and performance.
- * The built-in protection circuit in the battery KB-70B will cut off power when power appears low. If you charge it in the charger then, the red indicator won't light immediately. About 1~5 minutes later, the charger indicator will become normal.

◆ INSTALLING /REMOVING THE BATTERY PACK

Installing the Battery Pack

Match the 2 bulges of the battery pack with the corresponding slots at the rear bottom of the radio.

Installing the Battery Pack

Then firmly press the battery pack downwards to lock it in place until a click is heard.

Removing the Battery Pack

To remove the battery pack, push the latch upwards and then pull the battery away from the radio.

Notice:

- * Do not short-circuit the battery terminals or dispose exhausted battery In fire.
- * Do not disassemble the battery casing.

♦ INSTALLING THE ANTENNA

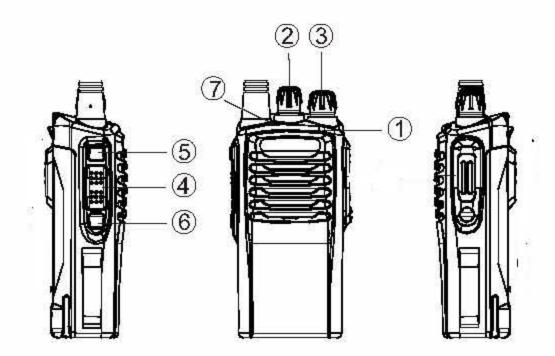
Screw the antenna into the connector at the top of the radio by holding the bottom of the antenna and turn it clockwise until secure.







RADIO OVERVIEW



1 LED Indicator

Lights red when transmitting; lights green when receiving.

Flashes orange when receiving the identical 5-Tone Signalling.

Flashes red when battery power appears low.

2 Channel Selector

Rotate to select channel 1~16.

3 Power/Volume Knob

Turn clockwise to switch on the radio.

Turn counterclockwise till a click is heard to switch off the radio.

Rotate to adjust the volume after turning on the radio.

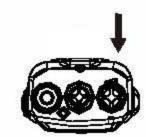
4 PTT (PUSH-TO-TALK) Button

To make a call, press and hold the PTT button, then speak into the microphone in normal voice. Release the PTT button to receive signals.

- (5) Side Button 1 (Programmable Button)
- Side Button 2 (Programmable Button)
- 7 Top Button (Programmable Button)

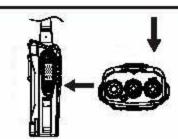
Used to connect the optional speaker/microphone.

BASIC OPERATIONS



Switch On

Switch on the radio by turning the Power/Volume switch clockwise till a click is heard, then the radio will be in the state of stand by and you will hear a beep if the dealer has set it. And then you will hear voice annunciation of the current channel number.



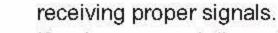
Adjust Volume

Press the monitor button to listen to the background noise and rotate the Power/Volume switch to adjust volume.



Select Channels

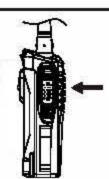
Rotate the channel selector to select channels. You will hear voice from the speaker while



If voice annunciation of channel number has been set, the radio will annunciate the current channel number.







Make a Call

To make a call, select the desired channel, press and hold the PTT button, and speak in normal voice. Please keep your mouth 3~8 cm away from the microphone.

Receive a Call

Release the PTT button to receive a call. Select the desired channel, adjust the volume to a proper level, and then you can receive others' voice.

PROGRAMMABLE BUTTON FUNCTION

The dealer can program the side button 1, side button 2 and the top button with the following auxiliary functions:

Null (No Function)
Channel Annunciation

Whisper

Talk-around

CALL 1/2/3/4

Lone Work

Emergency Alarm

Cancel Emergency Alarm

Man-down Alarm

Scan

Temporarily Delete Noise Channel

Call Forward

High/Low Power Switch
Squelch Level adjust / Check
Monitor Momentary/Call Cancel
Monitor/ Call Cancel

Squelch off Momentary/Call Cancel

Squelch off/ Call Cancel

Key Lock

Compander

Scrambler

Battery Power Check

Rental Time Check

The dealer can program the following functions:

Null

No Function is programmed.

Chan Annunciation

Pressing this key to switch on and off the channel annunciation function.

Whisper

After pressing this key, receiver also can hear you even you speak lightly; Press key again will disable the whisper mode.

Talk Around

After pressing this key, the radio will transmit with the RX frequency.

 7°





CALL 1/CALL 2/CALL3/CALL4

Press the side button set as "CALL 1/CALL 2/CALL3/CALL4" to transmit the stored coding.

Lone Work

When the radio is set in Lone Work, it will sounds pre-alert tones before the Lone Work time expires, and the user should press any key on the radio within the Reset Time, indicating the user is safe, otherwise, the radio will activate emergency alert automatically.

Emergency Alarm

When you press the top button set as "Alarm" the radio can sound alarm tone or transmit ID code or background tone to your partners or the system, both of which can be chosen in radio programming by PC software.

Cancel Emergency Alarm

Press the top button set as "Alarm" to cancel Emergency Alarm.

Man-down Alarm

Press this key to enter man-down alarm mode, which is optional function.

Scan

A) Press the button set as "Scan" to start scanning. When in scanning, the radio checks signals on each channel; it stops scanning and pauses on the channel on which signals are detected until the signals disappear. If a delay time has been set between the interval of signal disappearing and scanning restarting, the radio will keep staying on that channel if it receives any signals during the delay time.

- B) The working channel of the radio will revert to the following channels automatically when you press PTT button during scanning. The dealer can select one among the following six options.:
- 1) Start channel

When pressing PTT button, the radio will transmit from the channel described in the Start.

2) Selected channel

When pressing PTT button, the radio will transmit from the channel selected.

3) Last called

When pressing PTT button, the radio will transmit from the last channel that received a call.

4) Last used

When pressing PTT button during the scanning, the radio will transmit from the last channel you used to talk.

C) Priority Scan

During scanning, if the priority channel has been set on the radio, when the priority channel receives signals the radio will automatically switch to the priority channel even the normal channel is receiving signals at that time. And the radio will stay on the priority channel till the signals disappear. The dealer can set the delay time between signal disappearing and continuing scanning.

Temporarily Delete Noise Channel

When scanning pauses on a channel, press and hold the button programmed as "Temporarily Delete Noise Channel" to delete this channel temporarily from the scanning list.

Note: The priority channel cannot be deleted. And when the number of scanning channels is less than 2, you cannot delete any





channel, either.

After exiting scanning mode and entering it again, the temporarily deleted channel will be added in the scanning list again.

Call Forward

Press this key to enter mode.

High/Low Power Switch

Press the key set as "High/Low Power Switch" to switch between high and low power.

Squelch Level Adjust / Check

Press and hold the key set as "Squelch Level Check" to hear broadcast of the squelch level of the current channel. Press the key set as "Programmable Squelch" to change squelch level. Press once to increase one grade (cycle of 9-0; when in level 0 a beep sounds; if the channel has not been set with Signalling, squelch keeps long active.) and store the change.

Monitor Momentary/Call Cancel

Press the side button set as "Monitor Momentary" to turn off CTCSS, DCS, and 5-Tone and to hear the signals that cannot be heard when in work mode. Release the Monitor key to return to work mode.

When in selective call state, press this key to exit selective call.

Monitor/ Call Cancel

Press the side button set as "Monitor" to turn off CTCSS, DCS, and 5-Tone and to hear the signals that cannot be heard when in work mode. Press again the Monitor key to return to work mode. When in selective call state, press this key to exit selective call.

Squelch off Momentary/Call Cancel

Press the button set as "Squelch off Momentary" to open the squelch; release it to exit.

When in selective call state, press this key to exit selective call

Squelch / Call Cancel

Press the button set as "Squelch off" to open the squelch; press it again to exit.

When in selective call state, press this key to exit selective call

Key Lock

Press the button set as "Key Lock" to lock or unlock the keys.

Compander

Press the button set as "Compander" to switch between compander and Normal mode.

Scrambler

Press the button set as "Scrambler" to select scrambler function to protect communication privacy.

Battery Power Check

Press the button set as "Battery Power Check" to hear the current power level. One, two, three or four sound to indicate different power level separately. (One means the power is insufficient.)

Rental Time Check

Press the button set as "Rental Time Check" and you will hear one, two, three or four sound to indicate the rest rental time. (One means the rental time is insufficient.)





■ VOX (Voice Operated Transmission)

VOX allows hands-free transmission on the radio when using the appropriate earphone/headset.

Two types of VOX are available: built-in and external.

If VOX has been set, when speaking voice reach the preset volume,

VOX will activate the radio to transmit automatically.

■ Wired Cloning Mode

To enter the clone mode, wired cloning function should be set on both host and sub radio.

Wired cloning procedures are as follows:

- 1) Press and hold the Side Button 1 and 2 on the host radio while turning on the radio; about 2 seconds later, orange indicator flashes twice and the radio enters cloning mode.
- Press once the PTT button on the host radio, and then the sub radio to receive data will enter Wired Cloning Mode.
- 3) In the cloning mode, the host radio lights red indicator and the sub radio lights green indicator.

Note:

During the course of cloning, if the radio models or software versions doesn't match, the host radio flashes red indicator (0.25s On 0.25s Off), and the sub radio restart; if no data is transferred, the host radio flashes red indicator (0.25s On 0.25s Off), and the sub radio restart.

■ RADIO SETTING

- ◆ TOT (Time-out Timer)
 - 1) TOT (Time-out Timer)

- A) Time-out timer is to prevent any caller from occupying one certain channel and radio transmitting overlong.
- b) You can program the time-out timer, i.e. the time the radio can transmit continuously. If the radio has been transmitting continuously longer than the preset time, the radio will stop transmitting and warning tone sounds, and please release the PTT button.
- 2) TOT Re-key
- a) TOT re-key specifies the time when transmission is prohibited after the time-out timer is activated.
- b) During the time of transmitting prohibition, if you press the PTT button, warning tone sounds and transmitting is prohibited.
- 3) TOT Pre-alert
- a) Before the time-out timer stops transmitting, the radio sounds pre-alert tone.
- b) After the alarm tone, if the transmitting time is longer than the preset time limit, the time-out timer will be activated.
- 4) TOT Reset
- a) TOT Reset is the delay time between releasing the PTT button and resetting the time-out timer.
- b) If the time of releasing the PTT button is shorter than the TOT Reset, the countdown of transmitting prohibition will continue.

Battery Save

The dealer can program the battery save type.

If the battery save function has been set, 10 seconds after no signals being received or no operations being conducted, the radio enters the battery save mode. It will exit the battery save mode automatically after receiving signals or being conducted.





Battery Save Types: 1:1, 1:2, 1:4 and OFF.
Battery save function can decrease the battery power consumption.

Low Power Warning

Low power warning tone sounds and LED flashes when the battery power goes below the preset value and you need to recharge the battery. In very low battery status transmission is prohibited.

Channel Annunciation

The dealer can activate or prohibit this function. Two types of Chinese and English annunciation are available.

When switching to a channel by rotating the channel knob, the current channel number will sound.

CTCSS/DCS

The dealer can set CTCSS/DCS on the radio channels to ignore calls on the same channel from irrelevant radios.

Note:

Using a CTCSS/DCS channel doesn't mean your calls are private. If the CTCSS/DCS tones of other radios are identical with those on yours, they can hear your calls.

User Template

A user template includes PTT code-transmitting, encoding, decoding, Busy Channel Lockout, Call 1/2/3/4, RX squelch mode, TX conditions and decoding conditions, etc. Maximum 16 user templates are available on this radio.

RX Squelch Mode

The dealer can set conditions under which the speaker will be activated from the following 4 options:

- 1) CTCSS/DCS and Audio Squelch: The speaker will be activated only when both CTCSS/DCS and the selective Signallings match.
- 2) Audio Squelch: The speaker will be activated when the selective Signallings match.
- CTCSS/DCS Squelch: The speaker will be activated when CTCSS/DCS match.
- 4) Carrier Squelch: The speaker will be activated when carrier wave presents

DTMF

The dealer can set DTMF Signalling into encoding sequence. If DTMF is set in the encoding template, press the corresponding programmable button "Call 1", "Call 2", "Call 3", or "Call 4" o transmit the coding.

♦ 5-Tone Signalling

The dealer can activate or inactivate this function by programming.

5-Tone has 9 encoding formats: CCIR1, CCIR2, ZVEI1, ZVEI2, SVEI3, EEA, EIA, USER DEFINED 1, and USER DEFINED 2. The last tow formats are user defined.

1) 5-Tone Decoding

The decoding template is 5-tone decoding. Received tone telegram matches the decoding template, decoding succeeds. When receiving proper 5-tone Signalling, squelch will be activated according to the "RX Squelch Mode" defined by the user. You

15 16·





can receive the call and LED flashes orange.

After the radio decoding succeeds, the radio will work according to the decoding call response set by the dealer.

2) 5-Tone Encoding

Encoding template consists of at least one and at most three encoding sequences, and each decoding sequence can be set with 5-Tone, and DTMF. If it is set with 5-Tone, you need to program its content.

If the PTT ID on the channel you select has been set with 5-Tone, 5-Tone Signalling will be transmitted when making a call. Or transmit 5-Tone signal by pressing the Call 1/2/3/4 button,, which can be set by the dealer.

■ TROUBLE SHOOTING GUIDE

NO. PROBLEM		SOLUTION		
1	The radio cannot be switched on or no display after switched on.	 Battery pack may not be installed properly. Remove the battery pack and install it again. Battery power may be insufficient. Recharge or replace the battery pack. 		
2	The battery power consume quickly after charging.	The battery life is finished; please replace it with a new battery pack.		
3	Cannot talk to or hear others in your group.	 The frequency or QT/DQT Signallings are not identical and please reprogram it. Make sure the SP un-mute setting of the selective Signalling 5-Tone in user solution is proper. Out of the communication range. 		
4	Other voices from non-group members are heard on the channel.	 Change the QT/DQT tone, and make sure change the tone on all radios in your group. Please set 5-Tone selective Signalling on the channel. 		
5	Communication range is too short.	 Make sure the antenna is well connected. Make sure the antenna is the original one. Check if the battery power is in the normal state. Ask your local dealer to adjust the squelch level. 		





6	Unable to transmit.	 Make sure the PTT button has been pressed completely. Battery power may be insufficient. Recharge or replace the battery pack. Transmitting frequency has not been set on the channel or the radio has been remote killed.
7	Noise is too loud.	 Battery power may be insufficient. Recharge or replace the battery pack. Out of the communication range.

■ MAJOR SPECIFICATIONS

PT7200				
Frequency Range (MHz)	USA: 406.1~454MHz 456-470MHz EURO: 406.1~430MHz 440-470MHz			
RF Power	3.5W(H)/1W(L)			
Spurious and Harmonics	≤-70 dB			
Frequency Stability	± 2.5ppm			
Maximum Frequency deviation	±5kHz (W)/ ±3.5kHz (M)/ ±2.2 kHz (N			
Max Antenna Gain	2.0dBi			
Receiver Sensitivity	Narrow Band≤0.28μV / Wide Band ≤0.25μV			
Adjacent Channel Selectivity	≥60dB (N)/ 70dB (W)			
Intermodulation Reject Ratio	≥65dB			
Maximum AF Output Power	≥1000mW			
Number of Channels	16			
Battery (Standard)	DC 7.4V			
Dimension (WXHXD)	54.5mm×113 mm×35mm			
Weight	355g (With battery and antenna)			





■ SETTINGS (set by the dealer)

Observation Tec	Carried Man
Model:	Serial No.:
HOUGH.	Octivi No

1) Channels List

Channel	Transmitting Frequency	Receiving Frequency	QT/DQT Decode	QT/DQT Encode	Power	Channel Spacing	User Solution
1							
2					723	50 V	
3	4				7)5		
4							
5					5)2		
6					2/6	The state of the s	
7					23		
8					373		
9			3		35	52	
10					59		
11					3/5	4.0	
12							
13							
14			*			12	
15					91	46	
16					**		

2) Optional Functions Time-out Time (TOT) 15-600s Squelch Level 1-9 Voice Annunciation	
Chinese ☐ En	glish⊟
Battery Save	
OFF 🛭 1:1	2-2
1:2 🗖 1:4	
3) Auxiliary Function Button Settin	gs:
Top Button	
Null	
Channel Annunciation	
Whisper	
Talk-around	
CALL 1/2/3/4	
Lone Work	
Emergency Alarm	
Cancel Emergency Alarm	
Man-down Alarm	
Scan	
Temporarily Delete Noise Channe	
Transport	
High/Low Power Switch	
Squelch Level Check	
Monitor Momentary/Call Cancel	
Monitor/ Call Cancel	
Squelch Momentary/Call Cancel	
Squelch / Call Cancel	
Key Lock	
Compander	
Scrambler	
Battery Power Check	
Rental Time Check	