HQT

SHENZHEN HQT SCIENCE & TECHNOLOGY CO., LTD.

For more information, please visit **http://www.hqt-tech.com**

HQT

User Manual

TH-2890

Professional Two-way Radio

Hello

Thanks for purchasing HQT TH-2890. This radio boasts of good design, powerful, stable performance and is easy to operate. We are confident that the quality and functionality of this radio will satisfy you.

To make your full understanding of the machine before use, please read this manual carefully.

Welcome to use

HQT two-way radio

- Ergonomic & Light design
- 199 Channels
- LCD Display with Backlight
- Dual frequency Channel Receiver
- Frequency Reverse
- Keyboard Operation
- VFO/MR Mode

- FM Radio
- Remote Stun/Kill
- CTCSS/CDCSS
- 2 Programmable Keys
- Auto Battery Save
- Wired Clone
- PC Programming

TH-2890

More detailed product information

More professional technique support

HQT on-line Service Center

HQT service network provides more information about on-line service of HQT two-way radio.

More detailed product information
To deepen your understanding of the functions of this radio.

More plentiful product models
To display more plentiful product models, so that you can understand the details of these products in advance and make decisions correctly according to the requirement of work.

For more details, please visit: www.hqt-tech.com
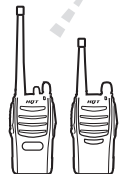
More plentiful product models

More optional accessories

More professional technique support

- User manual and brochures
  To provide download or on-line reading of the latest user manuals and brochures in covering detailed information of two-way radios.

- Software download
  To provide downloading of the latest programming software from HQT website. Your two-way radio can be connected to the computer with programming cable to manage or edit the parameters of channel frequency and other items.

- On-line learning
  To offer guidelines for detailed setting of the two-way radio.

More optional accessories
To provide various kinds of accessories, which can offer more comfortable operation and more remarkable performance of the radio to you.

Statement

HQT endeavors to achieve the accuracy and completeness of this manual. As for any inaccuracies and omissions that may possibly occur, the right to interpretation is reserved to Shenzhen HQT Science & Technology Co., Ltd.

The design or specification of this product is subject to be modified by Shenzhen HQT Science & Technology Co., Ltd. without prior notice.

It is prohibited to copy, transmit, excerpt and store in any retrieval system, or translated to any languages without written authorization of HQT.

Contents

Safety Matters

Please read rules below. Nonobservance of these rules may cause danger or violation of law.

- Using this radio must comply with regulations of local government.

- Turn off the radio before you enter places of flammable or explosive environment.

- Do not replace or charge battery pack in places of flammable or explosive environment.

- Turn off the radio before you approach blast area and detonator area.

- Do not use the damaged antenna which may cause lightly burn on skin.

- Only qualified technician are allowed to maintain this two-way radio. Do not disassemble the radio by yourself.

- To avoid problem caused by electromagnetic interference or electromagnetic compatibility, please turn off the radio in places with "radio Transmiting Equipment Prohibited" mark, such as hospitals or other health care places. When taking a plane, turn off the radio if required.

- In a car with air bag, do not place the radio within possibly involved area when air bag expands.

- Do not expose the radio to direct sunlight or near heating devices for a long time.

- Keep the radio vertical and speak near the microphone during transmitting.

- Make sure that the antenna is 2.5 cm away from the body during transmitting if you carry the radio on your body.

Check Product

Please take the radio out of the box carefully. We recommend that you check the box for the items listed below before the disposal of packaging materials. If there is any item lost or damaged in handling, please contact distributor to confirm.

Items
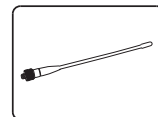
Radio TH-2890 Qty: 1	Antenna Qty: 1	Battery Qty: 1	Charger Qty: 1	Adapter Qty: 1
Strap Qty: 1	Belt Clip Qty: 1	Warranty Card Qty: 1	User Manual Qty: 1	Certificate Qty: 1

Note: Frequency is marked on the color circle at the bottom of the antenna.

Get Acquainted

Battery Information

Suitable Battery Type

Please charge with HQT approved battery; for using other batteries may burst and cause personal damage.

☞ Note:

1.Do not short-circuit the battery terminals or dispose the battery in fire. Never attempt to disassemble the battery pack.

2.Charge the battery in 0-45℃ temperature. Otherwise the battery may not be fully charged.

3.Turn off the radio equipped with battery before charge. Use the radio while charging may interfere with the talk.

4.Do not pull/plug the adapter and the battery during charging to avoid interfere with the charging procedure.

5.When the battery power consumes quickly even if it is fully and correctly charged, it means the battery life is over and please replace with new battery.

6.Do not charge if the battery or radio is wet. Before charge, you should dry it with cloth to avoid danger.

⚠Warning:

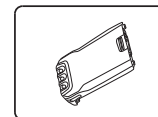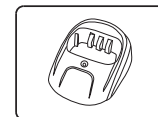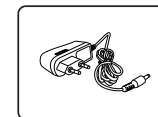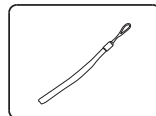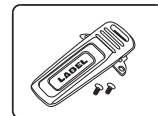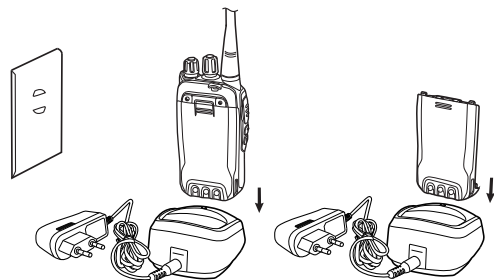Conductive metals such as jewelry, key or decorating lace may result in short circuit and generate a large quantity of heat when coming to contact with battery electrodes. Treat any battery carefully especially when placing it into pocket, wallet or other metal container.

Charge Operation

Please charge as follows:

1.Turn off the radio.

2.Plug the AC connector of adapter into an AC output socket.

3.Vertically insert the battery or radio equipped with battery into the charger. Make sure the charger and battery is well contacted.

4.After the charger is electrified, the LED glows red and that means the charger is ready for normal charging; if the LED flashes red, it means the remaining battery power is too low and a trickle charge is in process. And after the battery power reached a certain mount during trickle charge, the charger automatically turns to normal charge mode.

5. The battery is fully charged when LED glows green. The charger stops charging automatically.

☞ Note:

Trickle charge is not allowed to exceed 30 minutes. If the LED is still flashing in red after 30 minutes, it means that the charger cannot provide power to the battery. Check if the battery or charger is damaged.

Cautions in Charging

1.The battery is not charged in factory. Please charge the battery before initial use or after long-time storage.

2.Repeat charging 2 to 3 times will make the battery reach its best capacity. Please replace or charge the battery if battery power is low.

3.When the battery power consumes quickly even if it is fully and correctly charged, that means the battery life is over and please contact your dealer and buy new HQT approved battery.

Antenna Information

● Stubby antenna is suitable for short-distance communication; thin and long antenna will provide best communication performance. Also it is more comfortable to carry on the waist.

● The communication range may be shortened in rainy days or in forest. Please make preparations for that.

Radio Overview
Screen

Reverse Frequency

DTMF Encoder

2Tone/5Tone signaling

CDCSS signaling

CTCSS signaling

Low power

Middle power

High power

+/-Receive Frequency Dispersion

VOX

Dual Receiver Mode

Tone

Keyboard Lock

Battery Power Indicator

Channel or Function No.

HML CT DCS 52T DTR + VOX D

▶430.000 75 188 25 N ▲★

▶144.000 75 188 25 N ▲★

Channel Scan/Add

Channel No.

Busy Channel Lock/Unlock

Indicative narrowband channels

Signal Strength Indication

Transmitter-Working

Receive-Working

A/B Switch

Remark:

▭ Full   ▯ ▭ Power Remaining   ▭ Battery exhausted. Please change battery or charge

❶ PPT Key

❷ Programmable SK1

❸ Programmable SK2

❹ Earphone Jack

❺ Antenna

❻ Channel Selector

❼ Flashlight

❽ LCD

❾ Function Key

❿ Number Keys

⓫ Up/Down key

⓬ Power Switch/
Volume Controller

⓭ LED Indicator

⓮ Speaker

⓯ Microphone

⓰ Exit key

⓱ Lock key

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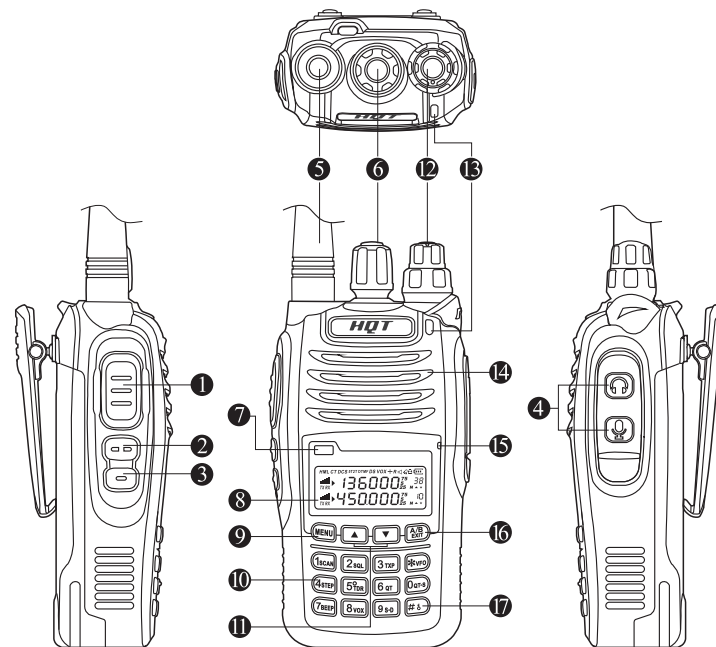
Basic Operation

Power On / Off

Rotate the power control button clockwise until a "Du" sound and a "Ka Ta" sound to notice that the radio's power is on; Rotate it anti-clockwise until a "Ka Ta" sound means to be able to turn off the radio.

Volume Adjustment

Rotate the power control button/volume controller clockwise to turn on the radio, rotate further to adjust the volume.

Note: You can monitor background noise under the monitor mode, and then adjust the volume.

Monitor

Weak signal that is hardly heard during normal operation process can be monitored by pressing [SK2].
Volume can be adjusted by rotating the power control button/volume controller even there is lack of signal.
Release [SK2] to go back to normal operation.

Make A Call

To make a call, hold down [PTT] key and speak into the microphone with normal voice. Please keep the microphone 5cm away from your mouth.
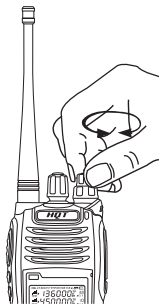
Note:1.Hold down [PTT] key and LED glows red, the radio begins to transmit.
2.If LED flashes red, the battery power is insufficient. The radio can not transmit when battery power is not enough for normal operation.

Receive A call

Release [PTT] key when receiving a call. You can hear

some one is calling you while your current channel is still busy. If the calling signal is weak and you have set a higher level squelch level you would probably not hear anything.

Emergency Alert

This function is enabled by key settings. Long press [SK1] to open the function. The radio will send out alarm code and make alarm sound. Alarm code will be sent time after time during every alarm period.

FM Radio

Enter the FM radio Mode by input FM radio frequency or menu options

Dual Audio Decoding

The machine has dual audio coding function; you can input number under launch state or other function.

Flashlight

Factory default settings: short-press SK1 key, light is flashing; Long-press SK1 key, light is always on (used for lighting).

Side Key Custom-setting

User can set customization features for SK1, SK2 through programming software.
(1)Long-press can set following function:
OFF, Monitor momentary, Stopwatch, Scan, FM Radio, QT Scan, Alarm, Flashlight.
(2) Short-press can set following function:
OFF, Monitor, Stopwatch, Scan, FM Radio, QT Scan, Flashlight.

Shortcuts Operation

No.	Name	Function Selection			Screen Display		Setting		Select	Optional Parameter Description		Confirm		Return to the standby mode
1	Scan Setting	MENU	→	1	→	▸SCAN OFF	→	MENU	→	Press ▲ or ▼ to select	OFF: Scan off ON: Start Scan	→	MENU	→	A/B EXIT
2	Squelch Level Setting	MENU	→	2	→	▸SQL-LE 4	→	MENU	→	Press ▲ or ▼ to select	Squelch Level 0~9	→	MENU	→	A/B EXIT
3	Transmit power selection	MENU	→	3	→	▸TXP HIGH	→	MENU	→	Press ▲ or ▼ to select	HIGH: high power MID: middle power LOW: low power	→	MENU	→	A/B EXIT
4	Step frequency settings	MENU	→	4	→	▸STEP 5k	→	MENU	→	Press ▲ or ▼ to select	12.5K	→	MENU	→	A/B EXIT
5	Reception Mode	MENU	→	5	→	▸RxMode DUAL	→	MENU	→	Press ▲ or ▼ to select	SINGLE: single receive mode DUAL: dual receive mode	→	MENU	→	A/B EXIT
6	Transmitting and receiving anti-interference	MENU	→	6	→	▸C-CDC OFF	→	MENU	→	Press ▲ or ▼ to select	50 groups of Analog anti-interference code (67.0Hz~254.1Hz) 105 sets Digital tamper-proof code (D023N~D754N) 105 sets Reverse Digital tamper-proof code (D023N~D754N)	→	MENU	→	A/B EXIT
7	Tone Setting	MENU	→	7	→	▸BEEP ON	→	MENU	→	Press ▲ or ▼ to select	OFF: tone off ON: "bi" voice	→	MENU	→	A/B EXIT
8	VOX Setting	MENU	→	8	→	▸VOX OFF	→	MENU	→	Press ▲ or ▼ to select	VOX level1~9 OFF: VOX off	→	MENU	→	A/B EXIT
9	Beat Frequency direction settings		→	9	→	▸SFT-D OFF	→	MENU	→	Press ▲ or ▼ to select	+: plus frequency difference -: minus frequency difference OFF: off transmitter function	→	MENU	→	A/B EXIT
10	Beat Frequency settings		→	10	→	▸OFFSET 00.000	→	MENU	→	Press ▲ or ▼ to select	0~99.995MHz optional	→	MENU	→	A/B EXIT

#	Function			Display					Setting
11	Tamper-proof code frequency scan	MENU → 11 →		QT.S CTCSS	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	CTCSS：Analog anti-interference code scanning DCS N：Digital anti-interference code scanning DCS I：digital reverse anti-interference code scanning
12	Receiving anti-interference code	MENU → 12 →		R-CDC OFF	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	50 sets of Analog anti-interference code (67.0Hz~254.1Hz) 105 sets of Digital tamper-proof code (D023N~D754N) 105 sets of Reverse Digital tamper-proof code(D023N~D754N)
13	Launch anti-interference code	MENU → 13 →		T-CDC OFF	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	50 sets of Analog anti-interference code (67.0Hz~254.1Hz) 105 sets Digital tamper-proof code (D023N~D754N) 105 sets Reverse Digital tamper-proof code(D023N~D754N)

#	Function			Display					Setting
14	Back-light	MENU → 14 →		LED OFF	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	ON：turn on OFF：turn off
15	Automatic backlight	MENU → 15 →		AUTOLED ALL	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	KEY：press key to turn on backlight ALL：all action (including side key and signal-receipt) turn on backlight OFF：turn off automatic backlight
16	Whether to receive in FM mode	MENU → 16 →		DW ON	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	ON：receive OFF：Disable reception
17	Emission limit	MENU → 17 →		TOT 100	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	OFF：close 30s,60s, 90s,120s,150s,180s, 210s,240s,270s,300s
18	Keypad-Automatic locking	MENU → 18 →		AUTOLK OFF	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	ON：turn on OFF：turn off
19	Scan method	MENU → 19 →		SC-REV CO	→ MENU →	Press ▲ or ▼ to select	→ MENU →	A/B EXIT	TO：time scan CO：Carrier scan SE：Search for scan

20	Scan Add	MENU → 20 →	`SC ADD OFF`	→ MENU →	Press ▲ or ▼ to select	On：scan add OFF：scan delete	→ MENU →	A/B EXIT
21	Busy channel lock	MENU → 21 →	`BCL OFF`	→ MENU →	Press ▲ or ▼ to select	WAVE：Carrier CODE：QT/DQT(Tamper-proof code) OFF：close Frequency mode is valid	→ MENU →	A/B EXIT
22	Single Audio Code	MENU → 22 →	`TBST 1000Hz`	→ MENU →	Press ▲ or ▼ to select	4 frequency optional：1000Hz,1450Hz, 1750Hz，2100Hz	→ MENU →	A/B EXIT
23	narrow-band	MENU → 23 →	`WN WIDE`	→ MENU →	Press ▲ or ▼ to select	NARROW：narrow band(12.5K)	→ MENU →	A/B EXIT
24	Voice delay	MENU → 24 →	`VOXDEY 2.0 S`	→ MENU →	Press ▲ or ▼ to select	0.3s~5.0s，long-press up/down key by 2secs to go into quick select mode	→ MENU →	A/B EXIT
25	DTMF	MENU → 25 →	`PTTID OFF`	→ MENU →	Press ▲ or ▼ to select	On：turn on DTMF OFF：turn off DTMF	→ MENU →	A/B EXIT

26	DTMF Working Mode	MENU → 26 →	`DTMF OFF`	→ MENU →	Press ▲ or ▼ to select	BOT：The beginning of the transmitter transmitting DTMF code OFF：DTMF off BOTH：transmit DTMF code when beginning and end of transmitter EOT：The end of the transmitter transmitting DTMF code	→ MENU →	A/B EXIT
27	Start code of DTMF transmission	MENU → 27 →	`BOTCODE 1234567`	→ MENU →	Press ▲ or ▼ to select	edit start code of DTMF transmission	→ MENU →	A/B EXIT
28	End code of DTMF transmission	MENU → 28 →	`EOTCODE 1234567`	→ MENU →	Press ▲ or ▼ to select	edit END code of DTMF transmission	→ MENU →	A/B EXIT
29	DTMF Side tone	MENU → 29 →	`DTMFST ON`	→ MENU →	Press ▲ or ▼ to select	On:turn on DTMF side tone；OFF:turn off DTMF side tone	→ MENU →	A/B EXIT
30	Anti-noise mode	MENU → 30 →	`RUNMODE 1`	→ MENU →	Press ▲ or ▼ to select	edit start code of DTMF transmission	→ MENU →	A/B EXIT
31	Voice tail eliminate	MENU → 31 →	`TAILOFF ON`	→ MENU →	Press ▲ or ▼ to select	edit END code of DTMF transmission	→ MENU →	A/B EXIT