

Scan

The default setting is OFF. When scan turns on, rotate the channel-selecting knob to channel 16, the indicator light turns green, the radio will scan automatically from channel 1 to 15. When there is signal in the scanning channel, it stops in the channel for talk. You can set it through the menu "Scan information" of the "Optional Features" in the software for TH-F6.

- 1) **Scan mode:** "Carrier/OFF" can be selected. If selecting off, when it rotates to channel 16, it is channel mode. If selecting "Carrier", when it rotates to channel 16, it is scan mode.
- 2) **Receive recovery time (sec):** the time intervals to recover scanning after the end of receive, from 0.5 to 64.5 seconds, or Scan Pause can be selected. (The default setting is 4S)
- 3) **Transmission recovery time (sec):** the time intervals to recover scanning after the end of transmission, from 0.6 to 64.5 seconds or Scan Pause can be selected. (The default setting is 3.5S)

Squelch function

The squelch level will determine the signal strength to open the speaker of the radio. If the squelch level is lower, the background noise of opening the radios speaker will be higher, and the corresponding communication range will be further, but the anti-interference capacity will be weaker.

The default setting of squelch level is 4, you can adjust it through the menu "Squelch Level" of the "Optional Features" in the software for TH-F6. Level 0 to 9 can be selected. 0 is the lowest level.

Time out timer (TOT)

The purpose of TOT is to prevent any radio from talking in one channel for a long time, and to prevent the transceiver from being damaged because of continuous transmission.

If the transmitting time exceeds the TOT pre-set time, the radio will sound "Du". Release the PTT switch to stop the "Du" tone. Press the PTT switch again to resume transmission. The default setting of TOT is 180 seconds. You can edit the function through the menu "Radiate Time Out Timer (s)" of the "Optional Features" in the software, 5 minutes in maximum.

CTCSS/DCS

CTCSS and DCS is the sub-audio signaling, to prevent the radio from receiving unwanted signal in the same channel.

When the CTCSS/DCS is set, then within the communication range, you can only receive signals from the same channel with the same CTCSS/DCS setting. When the CTCSS/DCS is not set, you will get all the signal from the same channel within the communication range. You can set the CTCSS/DCS through the menu "QT/DQT ENC" or "QT/DQT DEC" of the "Channel Setting" in the software.

Empty channel prompt

When the current channel is empty, a "Du" tone will sound continuously to alert you, and the channel can not be used.

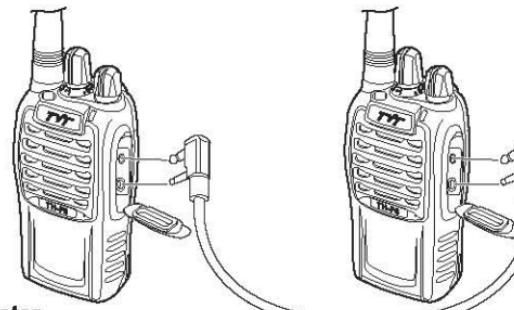
Power protection function

When the radio is in normal use or maintenance, the transmission will be prohibited if the working voltage is beyond the normal supplying voltage. Lower than 6V or higher than 9V, the transmission will be prohibited.

Wire clone function

- 1) Please open this function via software or by the local dealer first.
- 2) Connect the main radio (cloning radio) and the sub-radio (radio being cloned) with a cloning wire, and turn on the sub-radio.
- 3) Press and hold the [bottom key] of the main radio to power on, about 3 seconds later, the indicator light turns red, release the [bottom key], the indicator light flashes red and green, the main radio is ready for wire-clone.
- 4) Press the [bottom key] of the main radio again; the indicator of main radio will blink red, while the sub-radio will blink green. When the red indicator of main radio and the green indicator of the sub-radio stop, the wire clone is finished.
- 5) Change a new sub-radio, connect with the main radio well, press the [bottom key] of the main radio to continue cloning.

Note: If the red indicator light of main radio and green indicator light of sub-radio blink at the same time, the wire clone fails.



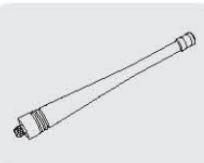
By duplicator

Optional accessories
Trouble shooting guide
Maintaining
Specification

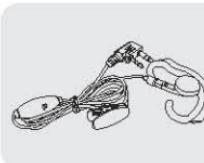
<http://www.tyt888.com>

Optional accessories

We can offer you more accessories to convenience you and improve your working efficient. All TYT radio accessories are made with high standard, and will help improve your radios performance.



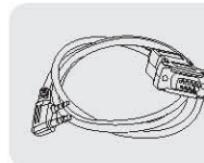
Antenna (VHF)



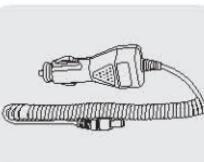
Earphone



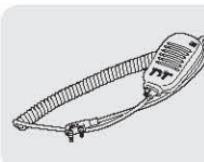
Clone Cable



Program Cable



Car charger



Mic/speaker



Eliminator



Program software

Trouble shooting guide

Troubles	Solution
No Electrical Source	<ul style="list-style-type: none">• The battery has been exhausted. Replace or recharge the battery.• The battery is installed incorrectly. Remove it and install again.
The operating time becomes short, even the battery is fully charged.	<ul style="list-style-type: none">• Replace the battery.
Not able to communicate with the transceivers of the same group.	<ul style="list-style-type: none">• Confirm the QT/DQT is the same.• The distance is outside of range.
The voice of another group can be heard.	<ul style="list-style-type: none">• Change all QT/DQT of the group.
Other radios can not receive the TX signals or receive signals in a low volume.	<ul style="list-style-type: none">• Switch the volume knob to the highest level• The microphone may be damaged, send it to the local dealer for check.
Noise is always heard.	<ul style="list-style-type: none">• The distance is outside of range. Turn on the radio in nearer range and try again.

Maintaining

Your radio is of exquisite design and workmanship, and should be treated with care. The following suggestions will be helpful for you:

- Keep dry. Rainwater or damp will corrode electronic circuits.
- Do not throw, beat or shock the radio. Rough treating will ruin internal electronic boards and structure.
- Do not carry the radio by the antenna or external microphone.
- Only use supplied or authorized antenna. Using unauthorized antenna or modifying the accessories may damage the radio.
- Clean the radio with lint-free cloth to avoid bad connection.
- Please close the accessory jack cover when the radio is not used.
- The button, knobs and case will become dirty after long time use, please clean with neutral detergent and stupe. Never use high corrosive chemicals.

Note: The above suggestions are applied to your battery, charger and other accessories. If any item can not work, please go to your nearest authorized repairing agents for maintenance.

Specifications

Item	LS-450
Frequency Range	U: 400-470MHz
Channel Capacity	16 (15+S)
Mode of operation	Simplex or semi-duplex
Channel Spacing	25.0kHz (Wideband) /
Frequency Stability	± 2.5ppm
Operating Temperature	-25°C ~+55°C
Antenna Impedance	50Ω
Battery	1500mAh
Operating Voltage	7.5V
RF Output Power	UHF: 5W
Audio Distortion	< 5%
Receiving Sensitivity	0.15µV (Wideband) / 0.18µV (Narrow band)
Adjacent Ch. Selectivity	65dB (Wideband) / 55dB (Narrow band)
Intermediation	55dB
Maximum Audio Output Power	> 0.6w
Dimensions (W x H x D)	115 x 59 x 34mm
Weight (Include battery & antenna)	198g

Note: Specifications will be revised without notice due to technical improvement. Thank you.

User's Manual

Glossary list

Frequency list

Service and support

<http://www.tyt888.com>

Frequency list

Model:

Serial No:

Frequency	TX frequency	TX CTCSS/DCS	RX frequency	RX CTCSS/DCS
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Glossary

Items	Description
CTCSS/DCS	CTCSS/DCS is a sub-audio signaling. If the CTCSS/DCS of two radios are the same, the speaker will turn on and the sounds can be heard. Otherwise, the sounds can not be heard.
Monitor	With this function, the radio can receive signals even the CTCSS/DCS is different.
Scan	A way to hear the voice of all channels.
Busy channel lock (BCL)	When the current channel is being used by other radios, the radio can not transmit in the same channel to avoid interfering other users.
Wire clone	To clone the data of one radio to another radio.
Time out timer (TOT)	The purpose of TOT is to prevent any radio from talking in one channel too long. By limiting the transmit time, it can prevent the radio from being damaged caused by continuous transmission.
Squelch	Squelch is to settle the problem of communication quality and background noise. It is to filter excessive background noise, to eliminate or restrain the background noise when there is no signal. The speaker will keep silent when there is no signal, and the squelch circuits is off. But when the speaker sounds, the squelch turns on.

Items	Description
Squelch level	The noise strength is in corresponding relation with the signal strength in receiving, the stronger the signal is, the weaker the noise will be. The proportion of strongest noise and the weakest noise is divided into several levels, and the users can select the desired level.
Whisper	If the whisper function is ON, when the radio is inserted with earphone, you can speak with a low voice, your partners can still hear you clearly.
Emergency alert	When an individual need emergency help, it will emit emergency alert to other radios in the same group. The other radios will sound emergency alarm when receiving the alert.
PTT ID	Turn on PTT ID, when you press or release the PTT switch, the radio sends out its PTT ID for other radios to recognize it and managed by the control center.

Service and support

TYT Electronics Co., Ltd (hereinafter referred to as "our company") will provide long-term support for our products, which includes maintenance during warranty period, paid repair after the warranty period, and provision of spare parts.

Product quality assurance and limited warranty

First: Our company solemnly promises: The purchaser (hereinafter referred to as customer) who buys two-way radios and accessories from us, from the purchase date, under normal use and maintenance, if the defective products arising from deficiencies of any material or workmanship, they will enjoy the following quality assurance within the time limit:

- 1) The radio is guaranteed for 12 months from purchase date.
- 2) The accessories (include antenna, battery and charger) are guaranteed for 6 months from purchase date.

Second: Any of the following circumstances, does not belong to the scope of quality assurance:

- 1) Defect or damage caused by abnormal or non-formal use
- 2) Defect or damage caused by misuse, accident, water or negligence
- 3) Defect or damage caused by improper testing, operation, maintenance, installation, modification or adjustment
- 4) Defective or damaged antenna caused by non-material or processing problems
- 5) Battery short-circuit, any damage or unseal phenomenon of the battery case, or not using our company manufactured charging facility to charge battery
- 6) Defect or damage caused by unauthorized repair or disassembly
- 7) Product with the purchase date or product serial numbers being erased or hard to identify
- 8) Normal wear and tear

Third: To apply for quality assurance within the product warranty or product maintenance procedures after the product warranty, you must carry products, purchase invoice and warranty card to sales agent for maintenance or replacement. If it is inconvenient to you, please contact our customer service center, or check our website or send directly to our company.

Fourth: The shipping and handling charge for product warranty borne by our company within the warranty period.

Fifth: The shipping and handling charge for product warranty borne by the users outside the warranty period.

Sixth: The product maintenance outside the warranty period, our company charges by product costs associated with material prices.

Seventh: Regarding the problems caused by the product quality, our company only to bear the price of compensation, without assuming responsibility for other areas.

Eighth: This provision applies to the territory of The People's Republic of China (not including Hong Kong, Macao special administrative regions or Taiwan region) to purchase TYT authentic products.

Ninth: All products and warranty information, product features and specifications can be revised anytime without notice.

Notes:

1. Please read the users manual before using the radio
2. Do not use damaged antenna, only use our supplied or authorized antenna
3. Please shut off its power in explosive or flammable areas.
4. Do not contact the battery with metal objects, greasy items or corrosive materials.
5. Do not immerse the battery or radio in liquid or throw them into the fire
6. Only use our company's produced or supplied battery, charger, adaptor and earphone.

Customer service center

Add: Bldg 22 Daxiamei Industrial Park, Nan'an, Fujian Postal code: 362300

Tel: 0595-86766928 Fax: 0595-86767928



Warranty card

Customer's name: _____ Gender: _____

Add and postal code: _____

Customer's Tel: _____

Model: _____

Serial number: _____

Purchasing date: _____

Invoice No.: _____

Dealer: _____ Stamp: _____

Add and postal code of the dealer: _____

Contact Tel: _____

Handling people: _____

Note:

1. This warranty card is only applicable to two-way radio of the above-listed model and serial number.
2. The warranty card is an important document for the end-user to enjoy warranty service, please keep it well.
3. The warranty card shall be filled and chopped by the dealer, or it is invalid.

Thank you for buying TYT two-way radios, we will do our best to provide you with a stable, clear and efficient wireless communication services. In order for you to enjoy a better quality warranty service, please focus on the following information:

The products warranty period begins from the purchasing date, if product failure under normal use within warranty period occurs, according to the contents of this warranty, (the radio is guaranteed for 12 months, accessories 6 months), please carry the warranty card originals and purchase Invoice to TYT designated authorized warranty repair station for warranty service.

The following situations occur during warranty period will be Implemented In paid service:

- (1) Failure to produce the warranty card
- (2) The card has altered traces or inconsistent with the product
- (3) Defect or damage caused by abnormal or non-normal use
- (4) Defect or damage caused by misuse, accident, water or negligence
- (5) Defect or damage caused by improper testing, operation, maintenance, installation, disassembly or adjustment
- (6) Defect or damage caused by unauthorized repair or disassembly
- (7) Defect or damage caused by force majeure
- (8) Wear and tear under normal use

When you are in need of repair, please send the radio, warranty card and purchase Invoice together by post or take directly to TYT designated authorized service stations, shipping costs should be borne by the user.

Maintenance record

Carry-in date			
Completion date			
Fault description			
Maintenance staff numbers			
Maintenance personnel No.			
Signature			

This warranty card to be kept by the user, no replenishment if lost