



# TD-H3

TWO WAY RADIO

USER MANUAL

— Ham Radio —



## PREFACE

Thank you for purchasing TD-H3. It is a dual band/dual display/dual watch radio. Combining the latest technology in radio communication along with a sturdy mechanical frame, This product is the ideal and effective solution for the professionals who need to stay in touch with the working team (in construction sites, buildings, shows, trade fairs or hotels) or for leisure users that just want to keep up with friends and family.

### IMPORTANT NOTICE

To help you ward off bodily injury or property loss that may arise from improper operation, please read all the information carefully before using our products. This contains instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulation.

#### Safety Information for Radios

Your wireless handheld portable transceiver contains a low power transmitter. When the talk button is pushed, it sends out radio frequency (RF) signals. The device is authorized to operate at a duty factor not to exceed 50%. In August 1996, the Federal Communications Commissions (FCC) adopted RF exposure guidelines with safety levels for handheld wireless devices.

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## 1. GETTING STARTED

### 1.1 Regulations and Safety Warnings

#### FCC Licensing Information

This device complies with Part 97 and 15 of the federal Communications Commission (FCC) Rules. Operation is subject to the condition that that this device does not cause harmful interference. The radio operates on radio frequencies that are regulated by the Federal Communications Commission (FCC). To transmit on these frequencies, you are required to have a license issued by the FCC. To obtain forms, call the FCC forms hotline at: 1-800-418-3676 or go to <http://www.fcc.gov> For questions concerning commercial licensing, contact the FCC at 1-888- CALL-FCC (1-888-225-5322).

Before filling out you application, you must decide which frequency you can operate on.

**NOTICE: Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.**

#### FCC Regulatory Conformance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Verification of harmful interference by this equipment to radio or television reception can be determined by turning it off and then on. The user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

**WARNING! MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.**

### **EU Regulatory Conformance**

As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the Directive 2014/53/EU. All applicable EU regulations are regarded (2006/66/EC, 2011/65/EU, (EU)2015/863, 2012/19/EU). **NOTE: It can be operating under 2000m.**

WARNING! European Users should note that operation of this unit in Transmit mode requires the operator to have a valid Amateur Radio License from their respective Countries Amateur Radio Licensing Authority for the Frequencies and Transmitter Power levels that this Radio transmits on. Failure to comply may be unlawful and liable for prosecution. At this subject, refer to the "EU" specification guide 2014/53/EU.

*Please note that the above information is applicable to EU countries only*

### **Compliance with RF Exposure Standards**

The radio complies with the following RF energy exposure standards and guidelines:

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR § 1.1307, 1.1310 and 2.1093
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95.1:2005; Canada RSS102 Issue 5 March 2015
- Institute of Electrical and Electronic Engineers (IEEE) C95.1:2005 Edition

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## **RF Exposure Information**

**WARNING!** Read this information before using the radio. In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters.

Those guidelines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of the radio complies with the FCC guidelines and these international standards.

Never allow children to operate the radio without adult supervision and the knowledge of the following guidelines.

**WARNING!** It is up to the user to properly operate this radio transmitter to insure safe operation. Please adhere to the following:

Use only the supplied or an approved antenna. Unauthorized antennas, modifications, or attachments could impair call quality, damage the radio, or result in violation of FCC regulations.

Do not use the radio with a damaged antenna.

If a damaged antenna comes into contact with the skin, a minor burn may result. Please contact your local dealer for a replacement antenna.

### **Hand-held Operation (Held-to-Face)**

This device was evaluated for typical hand-held (held-to-face) operations with a 1 inch spacing from the front of the radio. For hand-held operation, the radio should be held 1 inch from the user's face in order to comply with FCC RF exposure requirements.

### **Body-worn Operation**

This device was evaluated for body-worn operations with the supplied belt-clip accessory. (All necessary accessories are included in the package; any additional or optional accessories are not required for compliance with the guidelines.) Third party accessories (unless approved by the manufacturer) should be avoided as these might not comply with FCC RF exposure guidelines.

For more information about RF exposure, please visit the FCC web site at [www.fcc.gov](http://www.fcc.gov).

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## 1.2 Main features

- Dual displayed, Dual watch, Dual band
- Operating modes: UHF/VHF, UHF/UHF, VHF/VHF
- CTCSS and DCS codes research
- Squelch adjustable in 9 levels
- 199 Programmable Channels
- 50 CTCSS tones and 105 DCS codes
- 1750Hz tone for repeaters
- SOS Emergency function
- Full dot matrix LCD display screen
- Built-in FM Radio (76.0-108.0MHz)
- VOX, Scan, Dual Watch functions
- 2pin Kenwood accessory jack
- Channel or frequency mode selection
- TOT (Time out timer)
- DTMF function
- Setting and storing of channel names
- Busy Channel Lockout function (BCL)
- VOICE: vocal indication of the function selected
- Frequency step: 2.5/5/6.25/10/12.5/25KHz
- Frequency offset (adjustable): 0-69.990MHz
- Power Save
- Bluetooth Programming
- 5W/2W RF output adjustable

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## About Range

This product series radios are designed to give you maximum range under optimum conditions.

- Maximum Range: Little to No sight Obstruction.
- Medium Range: Partial Obstruction to line of sight.
- Short Range: Major Obstruction to Line of Sight.

### Optimum Conditions are:

- Over water
- Open rural areas without obstructions
- Flat areas where you can see the other person

### To ensure you get maximum range:

- Be sure to use fresh or fully charged batteries - low batteries will cause low power conditions.
- Be sure to set your radio to use Hi power.

## 1.3 Maintenance

Your Two Way Radio is an electronic product of exact design and should be treated with care.

The suggestions below will help you to fulfill any warranty obligations and to enjoy this product for many years.

- Do not attempt to open the radio for any reason! The radio's precision mechanics and electronics require experience and specialized equipment; for the same reason, the radio should under no circumstances be realigned as it has already been calibrated for maximum performance. Unauthorized opening of the transceiver will void the warranty.
- Do not store the Radio under the sunshine or in hot areas.
- High temperatures can shorten the life of electronic devices, and warp or melt certain plastics.
- Do not store the radio in dusty and dirty areas.
- Keep the Radio dry. Rainwater or damp will corrode electronic circuits.
- If it appears that the Radio diffuses peculiar smell or smoke, please shut off its power immediately and take off the charger

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or battery from the radio.

- Do not transmit without antenna.

## 2. BATTERY INFORMATION

### 2.1 Charging the Battery Pack

The Li-ion battery pack is not charged at the factory; please charge it before use. Charging the battery pack for the first time after purchase or extended storage (more than 2 months) may not bring the battery pack to its normal maximum operating capacity. Best operation will require fully charging/ discharging the battery two or three times before the operating capacity will reach its best performance. The battery pack life may be depleted when it's operating time decreases even though it has been fully and correctly charged. If this is the case, replace the battery pack.

### 2.2 Charger Supplied

Please use the specified charger provided by our company. Other models may cause explosion and personal injury. After installing the battery pack, and if the radio displays low battery with a voice prompt, please charge the battery.

### 2.3 Use Caution with the Li-ion Battery

- Do not short the battery terminals or throw the battery into a fire. Never attempt to remove the casing from the battery pack, as our company cannot be held responsible for any accident caused by modifying the battery.
- The ambient temperature should be between 5°C-40°C (40°F - 105°F) while charging the battery. Charging outside this range may not fully charge the battery.
- Please turn off the radio before inserting it into the charger. It may otherwise interfere with correct charging.
- To avoid interfering with the charging cycle, please do not cut off the power or remove the battery during charging until the green light is on.
- Do not recharge the battery pack if it is fully charged. This may shorten the life of the battery pack or damage the battery pack.
- Do not charge the battery or the radio if it is damp. Dry it before charging to avoid damage.

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## WARNING!

**When keys, ornamental chain or other electric metals contact the battery terminal, the battery may become damage or injure a human. If the battery terminals are short circuited it will generate a lot of heat. Take care when carrying and using the battery. Remember to put the battery or radio into an insulated container. Do not put it into a metal container.**

### 2.4 How to Charge

- Plug the AC adaptor into the AC outlet, and then plug the cable of the AC adaptor into the DC jack located on the back of the charger. The indicator light blinks orange and is then ready to charge a battery.
- Plug the battery or the radio into the charger. Make sure the battery terminals are good in contact with charging terminals. The indicator light turns to red--- charging begins.
- It takes approximately 2-5 hours to fully charge the battery. When the lamp lights green, the charging is completed. Remove the battery or the radio unit with its battery from socket.

**When charging a radio (with battery) the indicating lamp will not turn into green to show the fully charged status if the radio is powered on. Only when the radio is switched off will the lamp indicate normal operation. The radio consumes energy when it is power-on, and the charger cannot detect the correct battery voltage when the battery has been fully charged. So the charger will charge the battery in constant voltage mode and fail to indicate correctly when the battery has been fully charged.**

### 2.5 LED Indicator

STATUS	LED
No Battery	Green and red alternately flashing
Charge Normally	Red
Fully Charged	Green

**NOTE : Trouble means battery too warm, battery short-circuited or charger short-circuited.**

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## 2.6 How to Store the Battery

- a. If the battery needs to be stored, keep it in status of 80% discharged.
- b. It should be kept in low temperature and dry environment.
- c. Keep it away from hot places and direct sunlight.
  - » Do not short circuit the battery terminals.
  - » Never attempt to remove the casing from the battery pack.
  - » Never store the battery in unsafe surroundings, as a short may cause an explosion.
  - » Do not put the battery in a hot environment or throw it into a fire, as it may cause an explosion.

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## 3. INSTALLATION OF ACCESSORIES

Before the radio is ready for use we need to attach the battery pack, as well as charge the battery.

### 3.1 Installing the belt clip

- a. At the back of the radio there are two parallel screws mounted above the battery, remove these and thread them through the holes on the belt clip as you screw them back into the radio body.
- b. Removing the Belt Clip: Unscrew counter-clockwise to remove the belt clip.

### 3.2 Installing the battery pack

Before attaching or removing the battery make sure your radio is turned off by turning the power/volume knob all the way counter-clockwise.

- a. Make sure the battery is aligned in parallel with the radio body with the lower edge of the battery about 1-2cm below the edge of the radio.
- b. Once aligned with the guide-rails, slide the battery upward until you hear a click as the battery locks in place.

#### **Remove the battery pack**

To remove the battery, press the battery release below the battery pack.

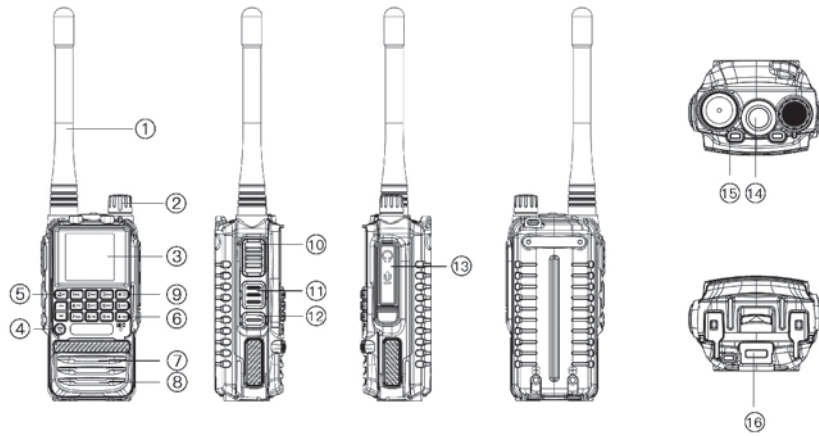
### 3.3 Installing the Additional Speaker/Microphone (Optional)

Pry open the rubber MIC-Headset jack cover and then insert the Speaker / Microphone plug into the double jack.

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## 4.RADIO OVERVIEW



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### 4.1 Buttons and controls of the radio

1. Antenna
2. Power Switch / Volume control: Rotate to switch on/off the radio and adjust the volume
3. LCD screen
4. VFO/MR/Exit: Channel Mode/Frequency Mode
5. BL Key: Bluetooth programming function
6. A/B key: press to switch A/B band
7. Speaker
8. Microphone
9. Keypad: channel mode, enter the channel number; frequency mode, enter the working frequency; menu mode, directly enter the menu items
10. PTT key: Transmit key, hold the key to speak, release the key after speaking, and receive incoming calls.
11. Flashlight /Customized Key: Short Press to use the flashlight, Long press can be customized by writing the frequency software, such as radio, TONE, alarm.
12. FM/NOAA Key: Short Press to enter the FM radio, Long press to enter the NOAA channel.
13. MIC/SP: External speaker/mike jacks.
14. Flashlight
15. Indicator: Red when transmitting; Green when receiving.
16. Battery latch

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