



## INSTRUCTION MANUAL

VHF/UHF DUAL BAND FM TRANSCEIVER

# IC-T70A IC-T70E

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.

Icom Inc.



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## FOREWORD



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Thank you for choosing this Icom product. This product is designed and built with Icom's state of the art technology and craftsmanship. With proper care this product should provide you with years of trouble-free operation.

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## EXPLICIT DEFINITIONS

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WORD	DEFINITION
 <b>DANGER!</b>	Personal death, serious injury or an explosion may occur.
 <b>WARNING!</b>	Personal injury, fire hazard or electric shock may occur.
<b>CAUTION</b>	Equipment damage may occur.
<b>NOTE</b>	Recommended for optimum use. No risk of personal injury, fire or electric shock.

Icom is not responsible for the destruction or damage to the Icom transceiver, if the malfunction is because of:

- Force majeure, including, but not limited to, fires, earthquakes, storms, floods, lightnings, or other natural disasters, disturbances, riots, war, or radioactive contamination.
- The use of Icom transceiver with any equipment that is not manufactured or approved by Icom.

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## FEATURES

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- *Dust-protection/Splash-resistant construction (IP54\*)*

\*Only when the battery pack/case, antenna and jack cover are attached.

- *Built in VOX circuit enabling the VOX operation\* (voice operated transmission)*

\*To use the VOX operation, an optional headset and a plug adapter cable are additionally required.

- *700 mW\* AF power with BTL (bridge-tied load) amplifier*

\*At 10% distortion with a 16  $\Omega$  load (internal speaker)

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## IMPORTANT

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**READ ALL INSTRUCTIONS** carefully and completely before using the transceiver.

**SAVE THIS INSTRUCTION MANUAL—** This instruction manual contains important operating instructions for the IC-T70A/IC-T70E.

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## PRECAUTIONS

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**⚠ DANGER! NEVER** short terminals (or charging terminals) of the battery pack. Also, current may flow into nearby metal objects such as a key, so be careful when placing the battery packs (or the transceiver) in handbags, and so on. Simply carrying with or placing near metal objects such as a key, and so on may cause shorting. This may damage not only the battery pack, but also the transceiver.

**⚠ DANGER! NEVER** use and charge only specified Icom battery packs with Icom transceivers or Icom chargers. Only Icom battery packs are tested and approved for use with Icom transceivers or charged with Icom chargers. Using third party or counterfeit battery packs or chargers may cause smoke, fire, or cause the battery to burst.

**⚠ WARNING RF EXPOSURE!** This device emits Radio Frequency (RF) energy. Caution should be observed when operating this device. If you have any questions regarding RF exposure and safety standards please refer to the Federal Communications Commission Office of Engineering and Technology's report on Evaluating Compliance with FCC Guidelines for Human Radio Frequency Electromagnetic Fields (OET Bulletin 65)

**⚠ WARNING! NEVER** hold the transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting. The transceiver will perform best if the microphone is 5 to 10 cm (2 to 4 inches) away from the lips and the transceiver is vertical.

**⚠ WARNING! NEVER** operate the transceiver with a headset or other audio accessories at high volume levels. The continuous high volume operation may cause a ringing in your ears. If you experience the ringing, reduce the volume level or discontinue use.

**⚠ WARNING! NEVER** operate the transceiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.

**⚠ WARNING! NEVER** connect the transceiver to a power source of more than 16 V DC such as a 24 V DC. This could cause a fire or damage the transceiver.

**⚠ WARNING! NEVER** reverse the DC power cable polarity when connecting to a power source. This could damage the transceiver.

**⚠ WARNING! NEVER** operate or touch the transceiver with wet hands. This may result in an electric shock or may damage the transceiver.

**CAUTION: MAKE SURE** the flexible antenna, battery pack, and jack cover are securely attached to the transceiver, and that the antenna and battery pack are dry before attachment. Exposing the inside of the transceiver to dust or water will result in serious damage to the transceiver.

**DO NOT** use harsh solvents such as benzine or alcohol to clean the transceiver, because they can damage the transceiver's surfaces.

**DO NOT** operate the transceiver near unshielded electrical blasting caps or in an explosive atmosphere.

**DO NOT** modify the transceiver. The specifications may change and then not comply with the requirements of a corresponded regulation. The transceiver warranty does not cover any problems caused by unauthorized modification.

**DO NOT** push [PTT] when you do not actually intend to transmit.

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## PRECAUTIONS

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**DO NOT** operate or place the transceiver in direct sunlight or in areas with temperatures below  $-20^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$ ) or above  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ).

**BE CAREFUL!** The transceiver will become hot when operating it continuously for long periods of time.

**KEEP** the transceiver away from heavy rain, and never immerse it in the water. The transceiver meets IP54\* requirements for dust-protection and splash resistance. However, once the transceiver has been dropped, dust-protection and splash resistance cannot be guaranteed because of possible damage to the transceiver's case or the waterproof seal.

\*Only when the supplied battery pack (or optional battery pack/case), antenna and jack cover are attached.

Even when the transceiver power is OFF, a slight current still flows in the circuits. Remove the battery pack or batteries from the transceiver when not using it for a long time. Otherwise, the installed battery pack or batteries will become exhausted, and will need to be recharged or replaced.

**MAKE SURE** to turn OFF the transceiver power before connecting or disconnecting the supplied or optional accessory.

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## FCC INFORMATION

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### • FOR CLASS B UNINTENTIONAL RADIATORS:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and 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.
- 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.

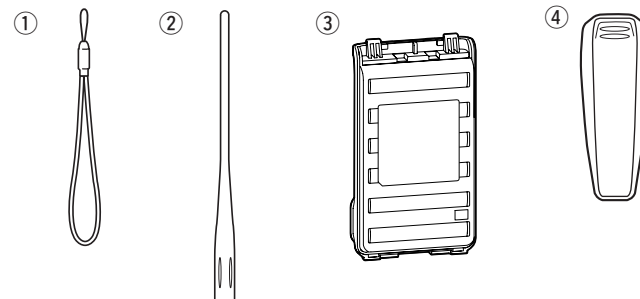
**CAUTION:** Changes or modifications to this device, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

## SUPPLIED ACCESSORIES

The following accessories are supplied with the transceiver.

- ① Hand strap ..... 1
- ② Antenna ..... 1
- ③ Battery pack\* ..... 1
- or
- Battery case\* ..... 1
- ④ Belt clip\* ..... 1
- ⑤ Battery charger\* ..... 1
- or
- Battery charger\* and power adapter\* ..... 1 set

\* Not supplied, or the shape is different, depending on the transceiver version.



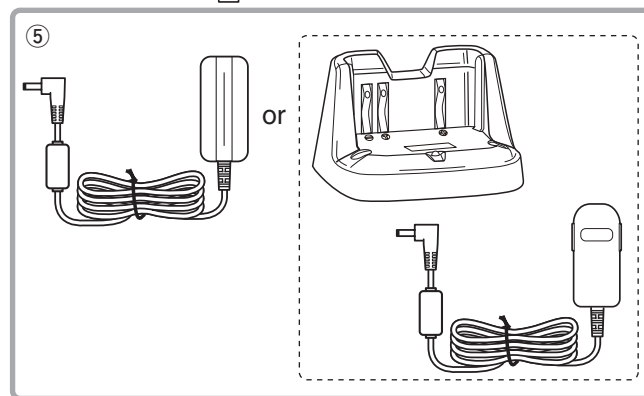
## DISPOSAL



The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these

products as unsorted municipal waste.

Dispose of them according to the laws in your area.



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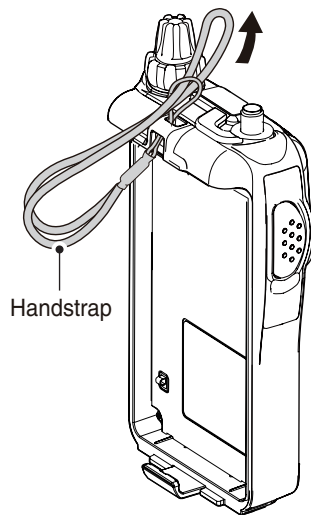
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## ■ Hand strap

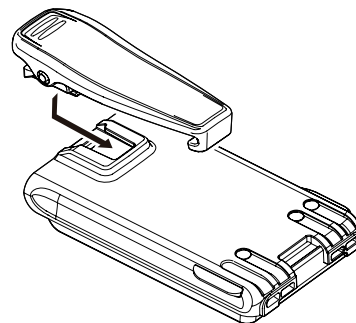
To facilitate carrying the transceiver, slide the hand strap through the loop on the top of the rear panel as illustrated at the right.



## ■ Belt clip

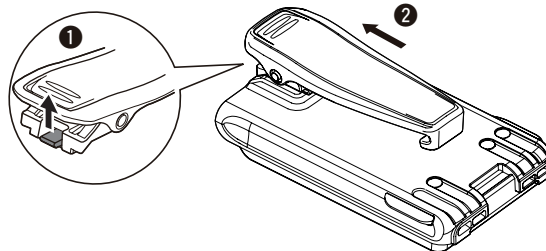
### *To attach the belt clip:*

Slide the belt clip in the direction of the arrow until the belt clip locks in place, and makes a 'click' sound.



### *To detach the belt clip:*

- ① Remove the battery pack from the transceiver, if it is attached. (p. 2)
- ② Lift the tab up (①), and slide the belt clip in the direction of the arrow (②).



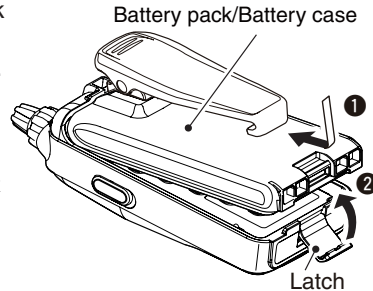


## ■ Battery pack

### *To attach the battery pack:*

- ① Fit the battery pack in the direction of the arrow (①), then close.
- ② Hook the latch until it makes a 'click' sound (②).

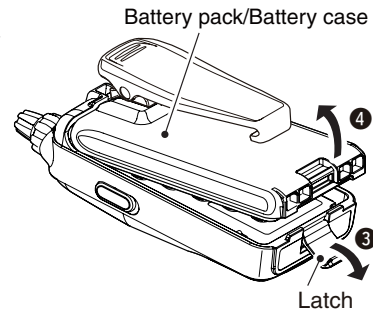
- Charge the battery pack before use. (pp. 12–14)



### *To detach the battery pack:*

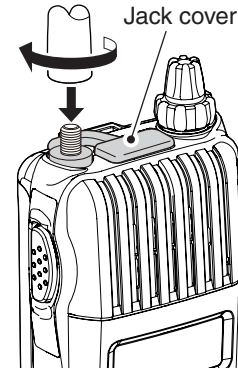
Be careful! The latch is tightly locked, so use caution when releasing it. **DO NOT** use your finger nail. Use the edge of a coin or screwdriver tip to carefully release it.

Unhook the latch (③), and lift up the battery pack in the direction of the arrow (④).



## ■ Antenna

Insert the antenna connector into the antenna base and tighten the antenna screw.

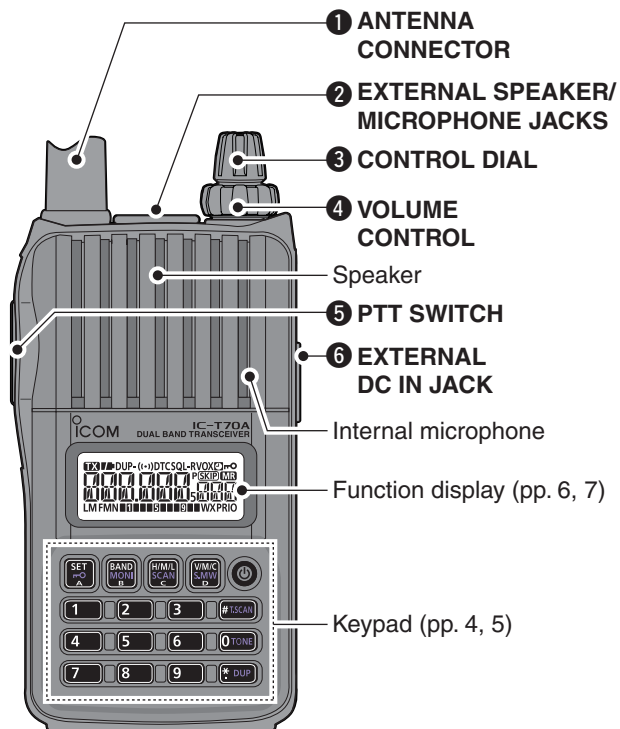


- **NEVER** carry the transceiver by holding only the antenna.
- When the jack is not in use, **keep** the jack cover in place to protect the connector from dust and moisture.

### ✓ *For your information*

Third-party antennas may increase transceiver performance. An optional AD-92SMA ANTENNA CONNECTOR ADAPTER is available to connect an antenna that has a BNC connector.

## ■ Front, top and side panels



### 1 ANTENNA CONNECTOR (p. 2)

Connects to the supplied antenna.

- An optional AD-92SMA adapter (p. 79) is available for connecting an antenna with a BNC connector.

### 2 EXTERNAL SPEAKER/MICROPHONE JACKS [SP/MIC]

Connect an optional speaker microphone, cloning cable, or headset, if desired.

See page 79 for a list of available options.

Be sure to turn power OFF before connecting or disconnecting optional equipment to/from the [SP/MIC] jack.

### 3 CONTROL DIAL [DIAL]

- ➔ Rotate to select the operating frequency. (p. 19)
- ➔ During memory mode operation, rotate to select the memory channel. (pp. 18, 30)
- ➔ While scanning, changes the scanning direction. (pp. 42, 44, 45)
- ➔ While continuing to push **[MONI]**(BAND), sets the squelch level. (p. 17)
- ➔ After pushing **[BAND]** during memory mode operation, selects the programmed bank. (p. 33)
- ➔ During set mode operation, rotate to select the set items. (p. 51)

# Count on us!

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