ICOM

INSTRUCTION MANUAL

DUAL BAND FM TRANSCEIVER

IC-T7H

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.

Icom Inc.

IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

SAVE THIS INSTRUCTION MANUAL—This instruction manual contains important operating instructions for the IC-T7H.

EXPLICIT DEFINITIONS

The explicit definitions below apply to this instruction manual.

WORD	DEFINITION
⚠**WARNING**	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

CE The IC-T7H complies with essential requirements of the 89/336/EEC directive for Electromagnetic Compatibility. This compliance is based on conformity with the ETSI specification ETS300 684 (EMC product standard for Commercially Available Amateur Radio Equipment).

CAUTIONS

⚠**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 in) 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. Hearing experts advise against continuous high volume operation. If you experience a ringing in your ears, reduce the volume level or discontinue use.

NEVER connect the transceiver to an AC outlet or to a power source of more than 16 V DC. Such a connection will damage the transceiver.

NEVER connect the transceiver to a power source that is DC fused at more than 5 A. Accidental reverse connection will be protected by this fuse, higher fuse values will not give any protection against such accidents and the transceiver will be ruined.

NEVER attempt to charge alkaline or dry cell batteries. Beware that external DC power connections will charge batteries inside the battery case. This will damage not only the battery case but also the transceiver.

DO NOT push the PTT when not actually desiring to transmit.

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

AVOID using or placing the transceiver in direct sunlight or in areas with temperatures below –10°C (+14°F) or above +60°C (+140°F).

Place unit in a secure place to avoid inadvertent use by children.

The use of non-Icom battery packs/chargers may impair transceiver performance and invalidate the warranty.

Even when the transceiver power is OFF, a slight current still flows in the circuits. Remove the battery pack or case from the transceiver when not using it for a long time. Otherwise, the battery pack or installed dry cell batteries will become exhausted.

For U.S.A. only

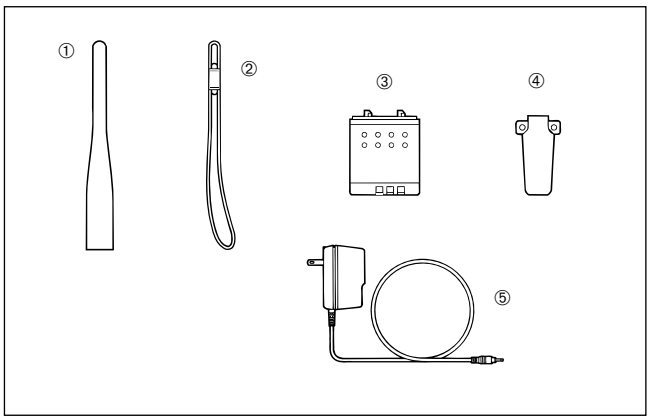
CAUTION: Changes or modifications to this device, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

UNPACKING

Accessories included with the transceiver: **Qty.**

① Antenna.....1
② Handstrap 1
③ Battery pack (BP-173/BP-180) or battery case (BP-170) attached to the transceiver 1
④ Belt clip 1
⑤ Wall charger*.....1

*Not supplied with battery case versions.



Antenna for U.S.A. version differs from that shown above.

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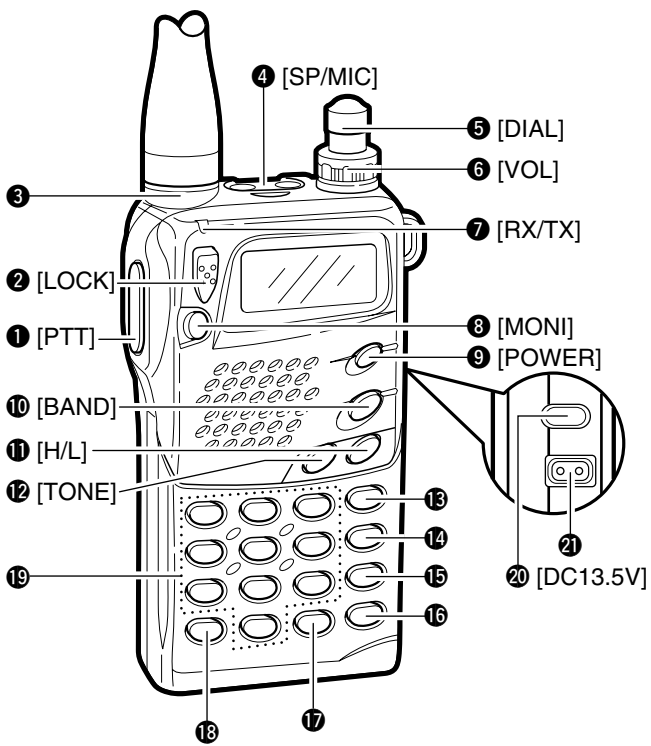
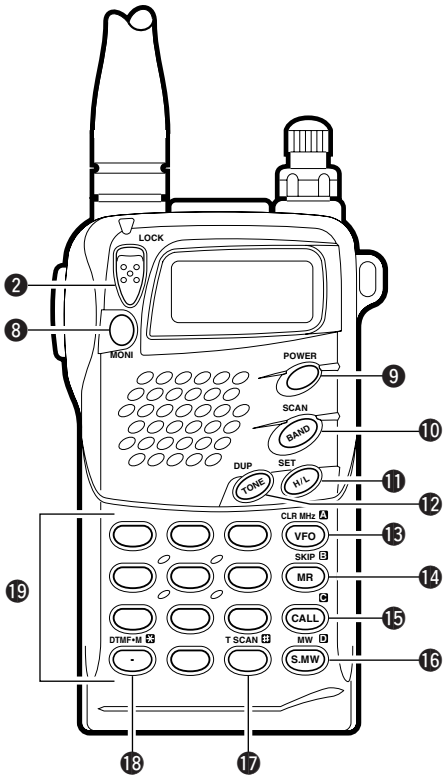
■ Switches, controls, keys and connectors





❶ PTT SWITCH [PTT] (p. 12)
Push and hold to transmit; release to receive.

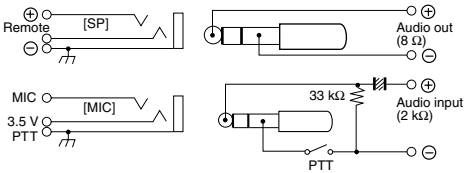
❷ LOCK SWITCH [LOCK]

Slide up to turn the lock function ON.
• [PTT], [VOL], [H/L], [MONI] and [POWER] function even when the lock function is activated.

❸ ANTENNA CONNECTOR (p. 9)
Connects the supplied antenna.

❹ EXTERNAL SPEAKER AND MICROPHONE JACKS [SP/MIC]
Connect an optional speaker-microphone or headset, if desired. The internal microphone and speaker will not function when either is connected. (See p. 28 for options.)

◇ **External connection**



This connection does not apply when a condensor microphone is connected.

❺ TUNING DIAL [DIAL]
Rotate [DIAL] to set an operating frequency, select a memory channel, select set mode contents, change scan direction, etc.

❻ VOLUME CONTROL [VOL]
Rotate [VOL] clockwise to increase volume and counter-clockwise to decrease volume.

❼ RX/TX INDICATOR [RX/TX] (p. 12)
Lights green while receiving a signal or when the squelch is open; lights red while transmitting.

❽ MONITOR SWITCH [MONI] (p. 12)

➥ Push and hold this switch to force the squelch open; release to close it again.
➥ Push twice to keep the squelch open; push again to close it.
➥ While pushing this switch, rotate [DIAL] to set the squelch level.
➥ While pushing [PTT], push this switch to transmit a DTMF memory.

❾ POWER SWITCH [POWER]

Push for 1 sec. to toggle power ON and OFF.
• Battery voltage appears for 1 sec. after power ON.

❿ BAND SWITCH [BAND/SCAN]

➥ Push to toggle between VHF and UHF operation except in memory mode (p. 10).
➥ Push and hold to indicate the selected scan range (or band) and to start scanning (p. 18).
• While scanning, each push of this switch changes the selected scan range.

⓫ OUTPUT POWER SWITCH [H/L(SET)]

➥ Push to toggle between low and high output power (p. 12).
- "LOW" appears when low output power is selected.

➥ Push and hold to enter set mode.

⓬ TONE SWITCH [TONE(DUP)]

➥ Push this switch to activate the following functions in order (pgs. 21, 22).
- Subaudible tone encoder—"T" appears.
- Pocket beep—"T SQL((•))" appears.
- Tone squelch—"T SQL" appears.
- No tone operation—no indicator appears.

➥ Push this switch for 1 sec. to select semi-duplex or simplex operation (p. 13).
- "– DUP" appears during minus duplex operation, "DUP" appears during plus duplex operation and no indicator appears during simplex operation.

➥ For the European version only, while pushing [PTT], push this switch to transmit a 1750 Hz tone burst signal (p. 13).

⓭ VFO/CLEAR KEY [VFO(CLR MHz)A]

➥ Clears some functions, such as digit input before entry, scan, etc.

➥ Push this key to select VFO mode (p. 10).

➥ Push and hold for 1 sec., then rotate [DIAL] to change the MHz digit (p. 11).

➥ While pushing [PTT], this key sends a DTMF "A."

⓮ MEMORY MODE KEY [MR(SKIP)B]

➥ Push this key to select memory mode (p. 12).
- "MR" appears while in memory mode.

➥ While in memory mode, push this key for 1 sec. to toggle the selected memory channel between a skip and a non-skip channel (p. 20).
- "SKIP" appears when the channel is set as a skip channel.

➥ While pushing [PTT], this key sends a DTMF "B."

⓯ CALL MODE KEY [CALLC]

➥ Push this key to select the call channel (p. 15).
- "C" appears while the call channel is selected.

➥ While pushing [PTT], this key sends a DTMF "C."

⓰ SELECT MEMORY WRITE KEY [S.MW(MW)D]

(pgs. 15, 16)

➥ Push this key to enter memory select mode.
- "MR" flashes and the [DIAL] can be used for channel selection (for memory writing or clearing).

➥ Push and hold for 1 sec. to write the set contents into the selected memory channel (or VFO, call channel).

➥ Push then push and hold this key while in memory select mode to erase the contents of the selected memory channel.

➥ While pushing [PTT], this key sends a DTMF "D."

⓱ TONE SCAN KEY [TSCAN#]

➥ Push this key for 1 sec. to start and stop tone decode scan (p. 13).
- When a subaudible tone is detected, the tone frequency is displayed and overwrites the preprogrammed:
  - ➠ tone squelch frequency when the *tone squelch* is in use;
  - ➠ tone encoder (repeater tone) frequency when the *tone squelch* is not in use.

➥ While pushing [PTT], this key sends a DTMF "#."

⓲ DTMF KEY [• (DTMF M✕)]

➥ Enters a decimal for MHz unit during frequency input (p. 10).

➥ Push and hold for 1 sec. to enter DTMF memory mode for programming or recall (p. 17).
- To program use [(H/L)SET].
- To transmit use [MONI] while transmitting.

➥ While pushing [PTT], this key sends a DTMF "✱."

⓳ DIGIT KEYS

➥ Input the specified digit during frequency input, memory channel selection, etc.

➥ Transmit the DTMF code of the specified digit while pushing [PTT].

⓴ EXTERNAL DC POWER JACK [DC13.5V]

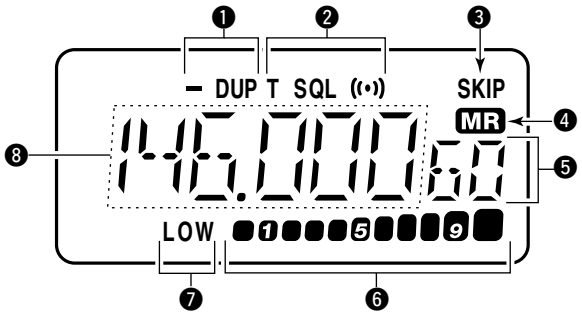
Allows operation with a 4.5 to 16 V DC power source using the optional cables, CP-12L or OPC-254L.

CAUTION: Operation with an external DC power source simultaneously charges batteries inside the battery case or the battery pack. When using dry cell batteries this may cause battery leakage and damage the transceiver; when using a Ni-Cd battery pack this may cause battery overcharging and shorten the life of the battery pack.

㉑ BATTERY PACK RELEASE (p. 8)

Push to open the latch for battery pack removal.

■ Function display



❶ DUPLEX INDICATORS (p. 13)
Appear during semi-duplex operation.
- "– DUP" appears for minus duplex; "DUP" only appears for plus duplex.

❷ TONE INDICATORS (p. 21)
"T" appears when the subaudible tone encoder is in use, "T SQL((•))" appears during pocket beep operation and "T SQL" appears when the tone squelch function is activated.

❸ SKIP INDICATOR (p. 20)
Appears when a selected memory channel is set as a skip channel.

❹ MEMORY MODE INDICATOR (p. 15)
Appears while in memory mode.

❺ MEMORY CHANNEL INDICATOR (p. 12)
Indicates the selected memory channel and other items such as the call channel, key lock indicator, etc.

❻ S/RF INDICATORS (p. 12)
Show the relative signal strength while receiving. and the output power selection while transmitting.

❼ LOW POWER INDICATOR (p. 12)
Appears when low output power is selected.

❽ ALPHANUMERIC READOUTS
Show the selected frequency, set mode contents, etc.

2 BATTERY PACKS AND ACCESSORIES

■ Battery pack charging

The supplied* BP-180 BATTERY PACK includes rechargeable Ni-Cd batteries and can be charged approx. 300 times. Charge the battery pack before first operating the transceiver or when the battery pack becomes exhausted.

*Optional for versions which come with the BP-170 BATTERY CASE.

If you want to be able to charge the battery pack more than 300 times, the following points should be observed:

1. Avoid overcharging. The charging period should be less than 48 hours.
2. Use the battery until it becomes almost completely exhausted under normal conditions. We recommend battery charging just after transmitting becomes impossible.

■ Charging precautions

NEVER attempt to charge dry cell batteries. This will cause internal liquid leakage and damage the battery case and transceiver.

NEVER connect two or more chargers at the same time.

Charging may not occur under temperatures of 10°C (50°F) or over temperatures of 40°C (104°F).

■ About the battery pack

◇ Operating period

Depending on the attached battery pack, the operating period of the transceiver varies. Refer to p. 28 for battery pack specifications.

◇ Battery pack life

If your battery pack seems to have no capacity even after being fully charged, completely discharge it by leaving the power ON overnight. Then, fully charge the battery pack again.

If the battery pack still does not retain a charge (or very little), a new battery pack must be purchased.

***Recycling information** (U.S.A. only)*

The product that you purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Call 1-800-8-BATTERY for battery recycling options in your area or contact your dealer.

Count on us!

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