



INSTRUCTION MANUAL

144 MHz FM TRANSCEIVER

IC-T22A

IC-T22E

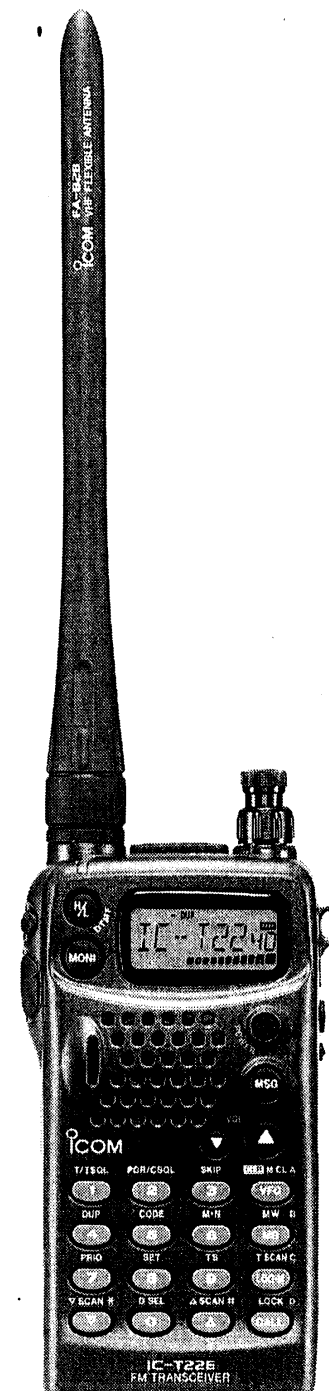
UHF FM TRANSCEIVER

IC-T42A

IC-T42E

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-T22A/E and IC-T42A/E.

This instruction manual uses the IC-T22A/E for most of the example displays. Please note that only the frequency differs from the IC-T42A/E.

EXPLICIT DEFINITIONS

The explicit definitions described 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.

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 using reverse polarity without a fuse (or with a more than 5 A fuse). This connection will ruin the transceiver.

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 allow children to play with any radio equipment containing a transmitter.

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 ($+14^{\circ}\text{F}$) or above $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$).

BE CAREFUL! When transmitting for a long time at high output power, the rear panel will become hot.

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.

UNPACKING

Accessories included with the transceiver:

	Qty.
① Antenna	1
② Handstrap	1
③ Battery pack (BP-171 or 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.

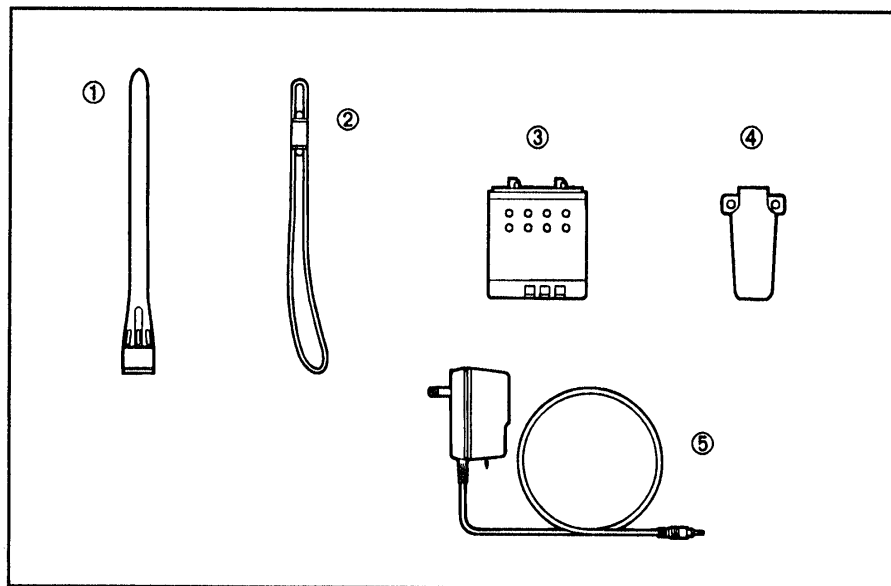


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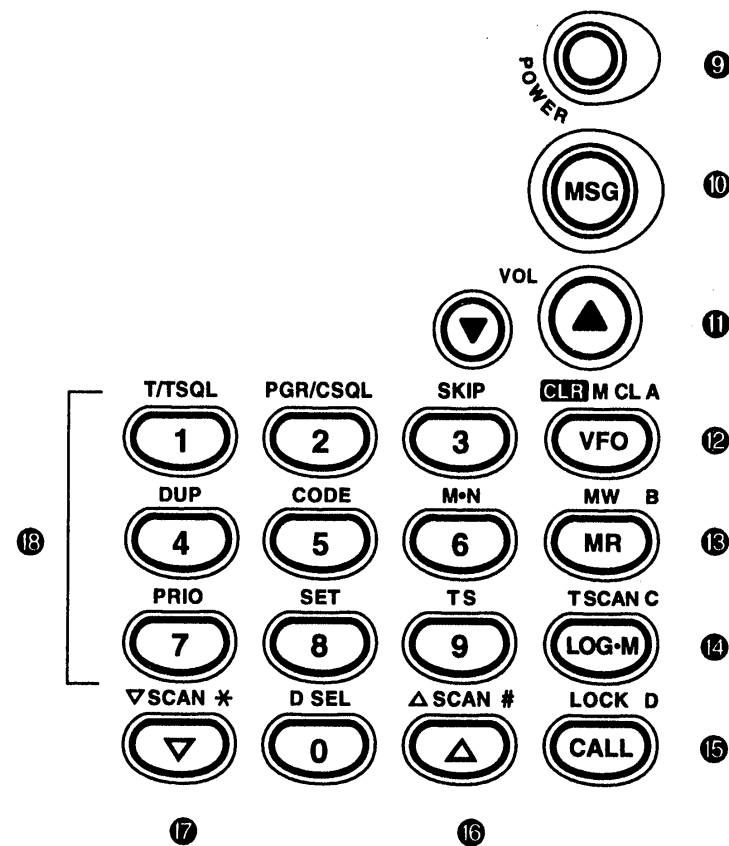
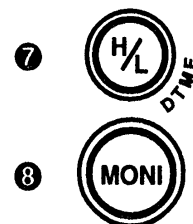
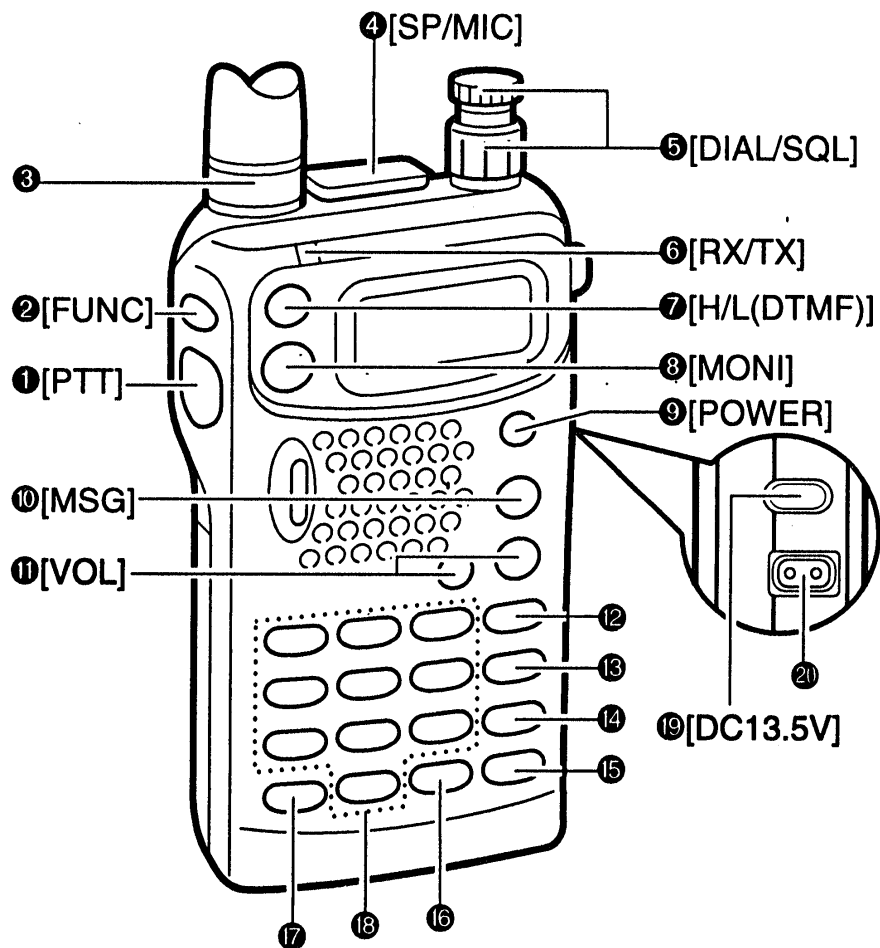
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PANEL DESCRIPTION

Switches, controls, keys and connectors



❶ PTT SWITCH [PTT] (p. 14)

Push and hold to transmit; release to receive.

❷ FUNCTION KEY [FUNC]

While pushing [FUNC], push other keys to activate their secondary functions.

❸ ANTENNA CONNECTOR (p. 10)

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. 38 for options.)

❺ TUNING DIAL [DIAL] AND SQUELCH CONTROL [SQL]

- ➔ Rotate [DIAL] to set an operating frequency, select a memory channel, select set mode contents, change scan direction, etc.
- ➔ Rotate [DIAL] while pushing [MONI] to adjust the audio level (p. 14).
- ➔ Rotate [SQL] clockwise to close and counterclockwise to open the squelch.

❻ RX/TX INDICATOR [RX/TX] (p. 14)

Lights green while receiving a signal or when the squelch is open; lights red while transmitting.

- The green RX indicator can be turned OFF in set mode to conserve battery power.

❼ OUTPUT POWER SWITCH [H/L(DTMF)]



- ➔ Push to toggle between low and high output power (p. 14).
- ➔ While pushing [FUNC] push this key to call up a DTMF memory (p. 20).
- ➔ While pushing [PTT] push this key to transmit a DTMF memory (p. 20).

❽ MONITOR KEY [MONI] (p. 14)



- ➔ Push this key to open the squelch without changing the [SQL] setting.
- ➔ Sets the dial function to volume control when pushing this key.

❾ POWER SWITCH [POWER]



Push for 1 sec. to toggle power ON and OFF.

❿ MESSAGE KEY [MSG]



- ➔ Push this key to call up receive and transmit message memories (p. 29).
 - Rotate [DIAL] to select the desired message memory.
- ➔ While pushing [FUNC] push this key to enter message receive mode (p. 29).
 - "MSG" appears.
 - Pager or code squelch must be activated to receive a message.
- ➔ During transmit, push this key then a message

1 PANEL DESCRIPTION

memory number to transmit the corresponding message (p. 30).

⑪ VOLUME SWITCHES [VOL] (p. 14)

VOL Push these switches to adjust the volume to the desired level.



- "VOL" and the volume level indicators appear.



⑫ VFO MODE KEY [VFO(CLR)(M CLR)(A)]

CLR M CLA ➔ Push this key to cancel most functions, then push again to select VFO mode (p. 11).



- When making a mistake during input, push this key to cancel and start from the beginning.
- ➔ In memory mode, while pushing [FUNC] push this key to clear the selected memory (p. 18).
- ➔ While pushing [PTT], this key sends a DTMF "A."

⑬ MEMORY MODE KEY [MR(MW)(B)]

MW B ➔ Push this key to select memory mode (p. 11).



- ➔ While pushing [FUNC] push this key to enter memory writing mode (p. 17).
- Writing operation is: while pushing [FUNC], [MR(MW)], [DIAL] then push and hold [MR(MW)].
- ➔ While pushing [PTT], this key sends a DTMF "B."

⑭ LOG MEMORY KEY [LOG•M(T SCAN)(C)]

T SCAN C ➔ Push this key to select a log memory or repeater memory (p. 11).



- ➔ While pushing [FUNC] push this key to start tone scan when an optional* tone squelch is in use (p. 31).

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

⑮ CALL MODE KEY [CALL(LOCK)(D)]



- ➔ Push this key to select the call channel (p. 11).
- ➔ Push [FUNC] then this key to toggle the lock function ON and OFF (p. 13).
- "L" appears while the lock function is activated.
- [PTT], [POWER], [VOL], [MONI], [SQL], [H/L] and [FUNC] can still be accessed while the lock function is on.
- ➔ While pushing [PTT], this key sends a DTMF "D."

⑯ UP KEY [Δ(Δ SCAN)]



- ➔ In VFO mode, push this key to increment the frequency according to the selected tuning steps, in memory mode, push this key to increment the memory channel (pgs. 11, 12).
- ➔ Push this key for 1 sec. to start full or memory scan in the "up" direction (p. 22).
- ➔ While pushing [FUNC] push this key to start programmed or memory skip scan in the "up" direction (p. 22).
- ➔ While pushing [PTT], this key sends a DTMF "F."

Count on us!

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