



INSTRUCTION MANUAL

VHF/UHF DIGITAL TRANSCEIVER

IC-80AD

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.





FOREWORD

Thank you for purchasing this fine Icom product. We understand you have a choice of many different radios in the market place. Many hours of research and development went into the design of your IC-80AD, following Icom's philosophy of "technology first."

The IC-80AD VHF/UHF DIGITAL TRANSCEIVER is designed with Icom's superior technology and craftsmanship combining traditional analog technologies with the new digital technology, Digital Smart Technologies for Amateur Radio (D-STAR), for a balanced package.

With proper care, this product should provide you with years of trouble-free operation. We want to take a couple of moments of your time to thank you for making your IC-80AD your radio of choice, and hope you agree with Icom's philosophy of "technology first."

EXPLICIT DEFINITIONS

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

FEATURES

- *DV mode (Digital voice + Low-speed data communication) operation-ready*
 - *Text message and call sign exchange*
 - *Transmitting position data with a GPS receiver*
- *GPS receiver connectable*
 - *Optional HM-189GPS is required*
- *DR (D-STAR Repeater) mode and repeater list allow you to operate a D-STAR repeater simply*
- *Splash-resistant construction (IPX4*)*
 - *Only when the supplied battery pack (or optional battery case), antenna and jack cover are attached.

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-80AD.

PRECAUTIONS

⚠ 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 an earphone, headphones 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.

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

NEVER connect the transceiver to a power source of more than 16 V DC. This will ruin the transceiver.

NEVER connect the transceiver to a power source using reverse polarity. This will ruin the transceiver.

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

DO NOT push the PTT unless you actually intend to transmit.

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

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

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

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

PRECAUTIONS

KEEP away from heavy rain, and never immerse the IC-80AD in the water. The transceiver meets IPX4* requirements for splash resistance. However, once the transceiver has been dropped, splash resistance cannot be guaranteed because of possible damage to the transceiver's case or waterproof seal.

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

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

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.

• Important notes when using GPS receiver

Please do not use the HM-189GPS close to the transceiver's antenna. The transmit signal may cause GPS receiver malfunction.

FCC INFORMATION

• 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.

For U.S.A. only

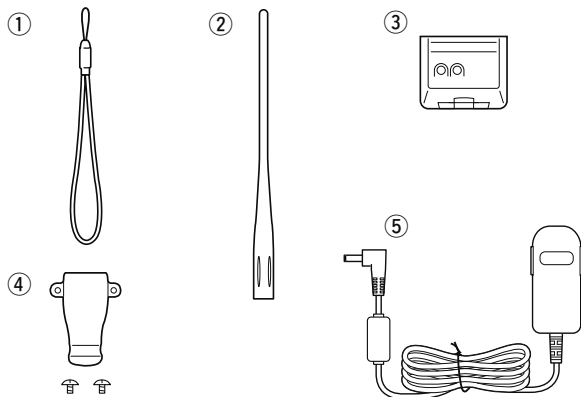
CAUTION: Changes or modifications to this device, not expressly approved by Icom Inc., could void your authority to operate this device under FCC regulations.

SUPPLIED ACCESSORIES

The following accessories are supplied with the transceiver.

- ① Hand strap 1
- ② Antenna 1
- ③ Battery pack (BP-217) 1
- ④ Belt clip 1
- ⑤ Battery charger (BC-167SA/SC/SV)* 1

* The BC-167SA, BC-167SC and BC-167SV have different shapes.



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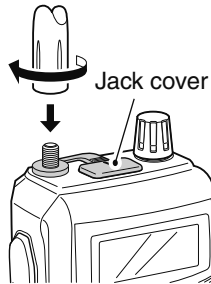
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ACCESSORY ATTACHMENT

1

■ Antenna

Insert the supplied antenna into the antenna connector and screw down the antenna as shown below.



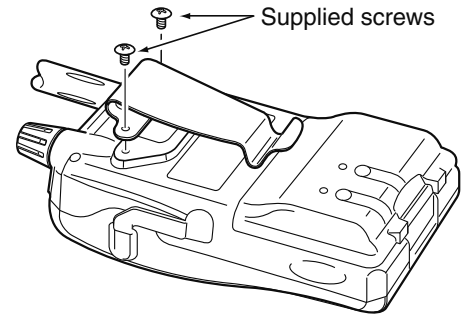
NEVER carry the transceiver by holding the antenna.

KEEP the jack cover attached when jack is not in use 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.

■ Belt clip



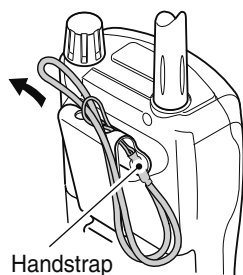
CAUTION:

USE the supplied screws only. Using screws longer than specified could damage the transceiver.

1 ACCESSORY ATTACHMENT

■ Hand strap

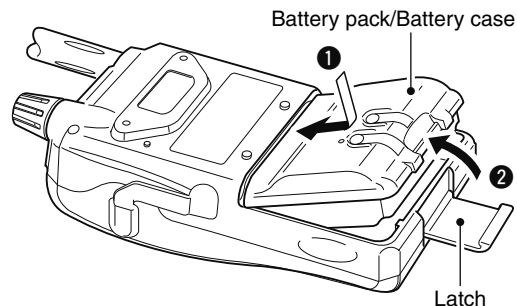
To facilitate carrying the transceiver, slide the hand strap through the loop on the top of the belt clip as illustrated below.



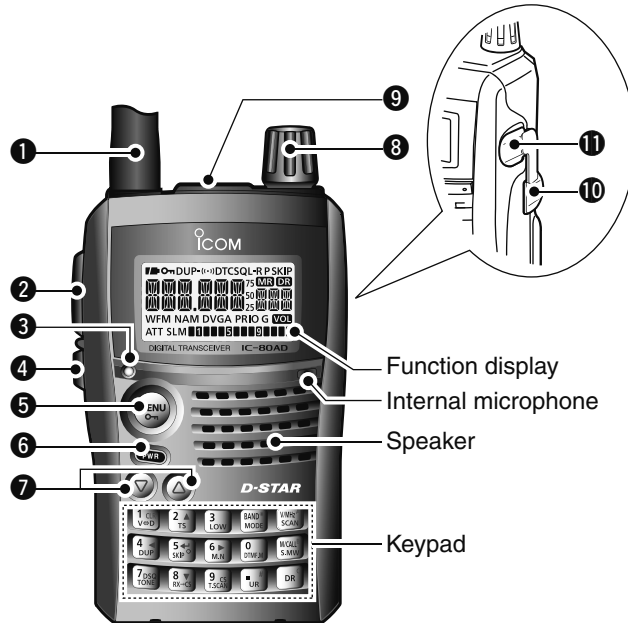
■ Battery pack

Attach the Li-Ion battery pack (BP-217) or battery case (BP-216) as illustrated below.

- Charge the Li-Ion battery pack before use. (pgs. 12, 13)



■ Front, top and side panels



❶ ANTENNA CONNECTOR (p. 1)

Connects the supplied antenna.

- An optional AD-92SMA adapter (p. 163) is available for connecting an antenna with a BNC connector.

❷ PTT SWITCH [PTT] (p. 26)

Push and hold to transmit, release to receive.

❸ TX/RX INDICATOR [TX/RX] (pgs. 24, 26)

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

❹ SQUELCH KEY [SQL] (p. 17)

- Push and hold to open the squelch temporarily and monitor the operating frequency.
- While pushing and holding this key, rotate [DIAL] to adjust the squelch level.

❺ MENU • LOCK KEY [MENU

- Push to enter menu screen indication ON and OFF. (p. 115)
 - Pushing [V/MHz] also exits from menu screen.
- Push and hold for 1 sec. to toggle the lock function ON and OFF. (p. 24)

❻ POWER KEY [PWR]

Push and hold for 1 sec. to turn the transceiver power ON and OFF. (p. 16)

2 PANEL DESCRIPTION



⑦ VOLUME CONTROL KEY [Δ]/ ∇]

- ➔ Adjust audio volume level. (p. 16)
- ➔ [Δ] enters or sends the DTMF code 'D.' (pgs. 143–145)

/// The function of tuning control and volume control can be traded. See page 20 for details.

⑧ CONTROL DIAL [DIAL]

- ➔ Rotate to tune the operating frequency. (p. 22)
- ➔ During memory mode, rotate to select the memory channel. (pgs. 18, 92)
- ➔ While scanning, changes the scanning direction. (pgs. 53, 104, 106, 107)
- ➔ While pushing and holding [SQL], sets the squelch level. (p. 17)
- ➔ After pushing [BAND] during memory mode operation, selects the programmed bank. (p. 96)
- ➔ During menu screen operation, rotate to select the set items or values. (p. 115)

/// The function of tuning control and volume control can be traded. See page 20 for details.

⑨ EXTERNAL SPEAKER/MICROPHONE JACK [SP/MIC]

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

See page 163 for a list of available options.

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

Count on us!

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