



INSTRUCTION MANUAL

VHF/UHF DIGITAL TRANSCEIVER IC-92AD

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 purchase of 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-92AD, following Icom's philosophy of "technology first."

The IC-92AD VHF/UHF FM TRANSCEIVER is designed with Icom's superior technology and craftsmanship combining traditional analog technologies with the new digital D-STAR technologies for a balanced packaged.

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-92AD your radio of choice, and hope you agree with Icom's philosophy of "technology first."

EXPLICIT DEFINITIONS

WORD	DEFINITION
 -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 third-party GPS receiver*
- *Waterproof construction (IPX7)*
- *GPS receiver connectable*
 - *Optional HM-175GPS is required*
- *Simple band scope*
- *Dualwatch operation*
- *Optional PC remote control*

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-92AD.

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 when not actually desiring 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 of chemical agents such as benzine or alcohol when cleaning, as they can damage the transceiver's surfaces.

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.

PRECAUTIONS

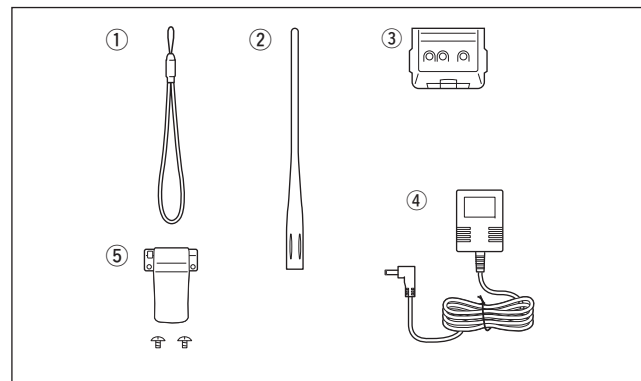
◆ Important notes when using GPS receiver

- Please do not use the HM-175GPS close the TX antenna. The transmit signal may cause GPS receiver malfunction.
- The GPS signal cannot pass through the metal object. When using the HM-175GPS inside a vehicle, you may not receive GPS signal. We recommend to use it window side. Please avoid the areas shown in the following:
 1. DO NOT use where it will block the driver's view.
 2. DO NOT use where the air bags could deploy.
 3. DO NOT use it when becoming the obstacle of driving.
- The Global Positioning System (GPS) is built and operated by the U.S. Department of Defence. The Department is responsible for accuracy and maintenance of the system. Any changes that the Department makes may affect the accuracy and function of the GPS system.
- When GPS receiver is activated, please do not cover the HM-175GPS with any object.
- The GPS receiver may not work if used in the following locations:
 1. Tunnels or high-rise buildings
 2. Underground parking lot
 3. Under a bridge or viaduct
 4. In remote forested areas
 5. Under bad weather condition (rainy or cloudy day)

SUPPLIED ACCESSORIES

The following accessories are supplied with the transceiver.

- | | |
|-------------------------------------|-------|
| ① Hand strap | 1 |
| ② Antenna | 1 |
| ③ Battery pack (BP-256) | 1 |
| ④ Battery charger (BC-167A/E) | 1 |
| ⑤ Belt clip (with screws) | 1 set |



NOTICES

◇ Using the optional HM-175GPS

Noise signals from the HM-175GPS may interfere with the IC-92AD's AM radio or HF band reception.

In this case, set the HM-175GPS's microphone cable as distant to the antenna as far as possible, or turn off the HM-175GPS.

◇ Data output from HM-175GPS

The optional HM-175GPS outputs GPS data (position data, etc.) to IC-92AD at intervals while receiving only. Therefore, the transceiver is not updated GPS data while transmitting.

The transceiver transmits GPS data that was received prior to the last IC-92AD DV mode transmit.

◇ About OPC-1797

- NEVER connect the optional OPC-1797 CONNECTION CABLE with non-Icom article specified.
- When connecting a monaural plug to 2.5 (d) mm, it acts as short and becomes a cause of failure.
- Turn power OFF when connecting or disconnecting the OPC-1797.

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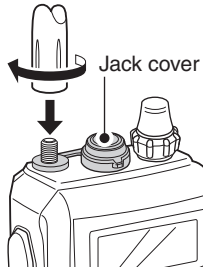
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■ Antenna



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

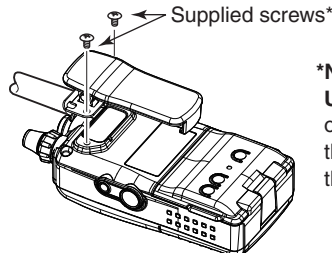
NEVER carry the transceiver by holding the antenna.

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 with a BNC connector.

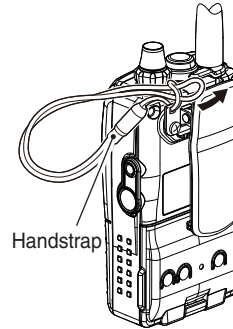
■ Belt clip



*NOTE:

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

■ Hand strap

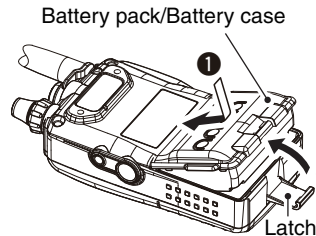


Slide the hand strap through the loop on the top of the belt clip as illustrated at left to facilitate carrying the transceiver.

■ Battery pack

Attach the Li-Ion battery pack (BP-256) or battery case (BP-257) as illustrated below.

- Charge the Li-Ion battery pack before use. (pgs. 10, 11)

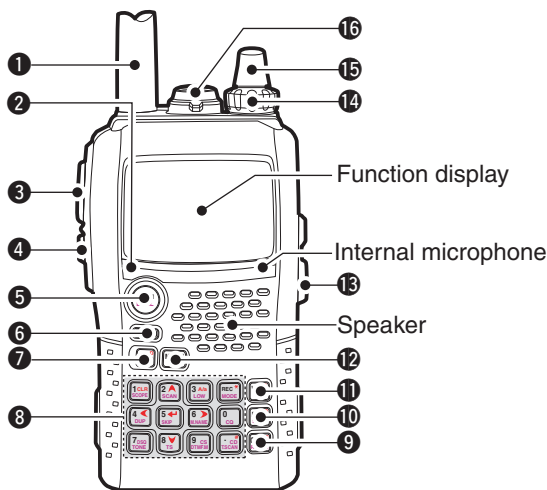


CAUTION!:

NEVER attach or detach the battery pack when wet.

Be careful when releasing the latch. Because the latch is tightly locked, don't use a finger nail to open it—you may injure yourself. Instead, use something relatively flat, like the edge of a coin or the tip of a screwdriver, to carefully release the latch.

■ Front, top and side panels



1 ANTENNA CONNECTOR (p. 1)

Connects the supplied antenna.

- An optional AD-92SMA adapter (p. 137) is available for connecting an antenna with a BNC connector.

2 TX/RX INDICATOR [TX/RX] (p. 24)

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

3 PTT SWITCH [PTT] (p. 24)

Push and hold to transmit, release to receive.

4 SQUELCH KEY [SQL]

- ➔ Push and hold to open the squelch temporarily and monitor the operating frequency. (p. 22)
- ➔ While pushing and holding this key, rotate [DIAL] to adjust the squelch level. (p. 21)

5 MAIN/DUAL KEY [MAIN/DUAL]

- ➔ Push to toggle the main band between A and B bands. (p. 26)
- ➔ Push and hold for 1 sec. to toggle the dualwatch function ON and OFF. (p. 25)

6 POWER KEY [PWR]

Push and hold for 1 sec. to turn the transceiver power ON and OFF. (p. 20)

7 BAND KEY [BAND]

- ➔ During VFO mode operation, push to select an operating frequency band. (pgs. 16, 17)
- ➔ During memory bank mode, push to select a memory bank. (p. 76)
- ➔ Enters or sends the DTMF code 'D'. (pgs. 117, 118)

8 KEYPAD (pgs. 4, 5)

9 CALL/RX→CS KEY [CALL]/[RX→CS](CALL)

- ➔ Push to select the call channel/TV channel/weather channel. (pgs. 16, 28, 128)
- ➔ During DV mode operation, push and hold for 1 sec. to set the received call signs (station and repeaters) for operation. (p. 47)
- ➔ Enters or sends the DTMF code 'C'. (pgs. 117, 118)

10 MEMORY/SELECT MEMORY WRITE KEY [MR]/[S.MW](MR)

- ➔ Push to select memory mode. (p. 15)
- ➔ During memory mode operation, push to toggle between memory and memory bank mode. (p. 76)
- ➔ Push and hold for 1 sec. to enter select memory write mode. (p. 74)
- ➔ Enters or sends the DTMF code 'B'. (pgs. 117, 118)

11 VFO/MHz KEY [VFO]/[MHz](VFO)

- ➔ Push to toggle select VFO mode. (p. 15)
- ➔ During VFO mode operation, push and hold for 1 sec. to select and toggle 1 MHz and 10 MHz tuning steps. (p. 18)
- ➔ Enters or sends the DTMF code 'A'. (pgs. 117, 118)

12 MENU/LOCK KEY [MENU/LOCK]

- ➔ Push to toggle menu screen indication ON and OFF. (p. 93)
- ➔ Push and hold for 1 sec. to toggle the lock function ON and OFF. (p. 25)

13 EXTERNAL DC IN JACK [DC IN]

- ➔ Connects the supplied wall charger, BC-167A/D, to charge the attached battery pack. (p. 10)
- ➔ Connect an external DC power supply through the optional CP-12L, CP-19R or OPC-254L for external DC operation. (p. 13)

14 VOLUME CONTROL [VOL]

- Rotate to adjust the audio output level. (p. 20)

15 CONTROL DIAL [DIAL]

- ➔ Rotate to tune the operating frequency. (p. 18)
- ➔ During memory mode, rotate to select the memory channel. (pgs. 15, 72)
- ➔ While pushing and holding **[BAND]**, selects the operating band in VFO mode. (p. 18)
- ➔ While scanning, changes the scanning direction. (p. 83)
- ➔ While pushing and holding **[SQL]**, sets the squelch level. (p. 21)
- ➔ While pushing and holding **[BAND]**, selects the programmed bank in memory mode. (p. 75)

/// The assigned function for **[VOL]** and **[▲/▼]** can be exchanged in initial set mode. (p. 99)

16 EXTERNAL SPEAKER/MICROPHONE JACK [DATA/SP/MIC]

- Connect a communication cable, optional speaker microphone or headset, if desired.
- See page 137 for a list of available options.

Count on us!

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