



iCOM IP110H WiFi Two Way Radio Instructions

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Thank you for choosing this Icom product.

READ ALL INSTRUCTIONS carefully and completely before using this product.

IMPORTANT

SAVE THESE INSTRUCTIONS— These instructions contain basic operating instructions for the IP110H.




This instruction sheet includes some functions that are usable only when they are set in the Controller. The transceiver may have other functions and operations that are not described in this instruction sheet. Ask your dealer for details.

DO NOT OPEN, JOLT, SHORT, OR INCINERATE, AS THE BATTERY MAY IGNITE OR BURST.

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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	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

Icom is not responsible for the destruction, damage to, or performance of any Icom or non-Icom equipment, if the malfunction is because of:

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

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PRECAUTIONS



DANGER! NEVER operate the transceiver near unshielded electrical blasting caps or in an explosive atmosphere. This could cause an explosion and death.



DANGER! NEVER charge Icom transceivers with non-Icom chargers. Only Icom transceivers are tested and approved for charged with Icom chargers. Using thirdparty or counterfeit 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 it is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting.



WARNING! NEVER operate or touch the transceiver with wet hands. This could cause an electric shock or damage the transceiver.



WARNING! NEVER operate the transceiver with earphones, 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 in your ears, reduce a volume level or discontinue use.

CAUTION: DO NOT operate the transceiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.

CAUTION: DO NOT use harsh solvents such as Benzine or alcohol when cleaning. This could damage the equipment surfaces. If the surface becomes dusty or dirty, wipe it clean with a soft, dry cloth.

CAUTION: DO NOT operate the transceiver unless the jack cap and connector cover are securely attached to the transceiver. Exposing the inside of the transceiver to dust or water will result in serious damage to the transceiver. After exposure to water, clean the transceiver thoroughly with fresh water and dry it completely to remove any water or salt residue.

CAUTION: DO NOT use or leave the transceiver in areas with temperatures below -10°C (14°F) or above $+60^{\circ}\text{C}$ (140°F), or in areas subject to direct sunlight, such as the dashboard.

NEVER leave the transceiver in an insecure place to avoid use by unauthorized persons

DO NOT push [PTT] unless you actually intend to transmit.

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

BE CAREFUL! The transceiver may become hot after continuously transmitting for long periods of time.

BE CAREFUL! The transceiver meets IP67/IP54* requirements for dust-tight and waterproof protection. However, once the transceiver has been dropped, or the waterproof seal is cracked or damaged, dust-tight and waterproof protection cannot be guaranteed due to the fact that the transceiver may be cracked or the waterproof seal damaged, and so on.

* Only when the jack cap and connector cover are attached.

Battery caution

Misuse of Li-ion batteries may result in the following hazards: smoke, fire, or the battery may rupture. Misuse can also cause damage to the battery or degradation of battery performance.



DANGER! NEVER incinerate a used transceiver. Internal battery gas may cause an explosion.



DANGER! NEVER strike or otherwise impact the transceiver. Do not use the transceiver if it has been severely impacted or dropped, or if the transceiver has been subjected to heavy pressure. Battery damage may not be visible on the outside of the case. Even if the surface of the transceiver does not show cracks or any other damage, the cells inside the battery may rupture or catch fire.



DANGER! NEVER leave the transceiver in places with temperatures above 60°C (140°F). High temperature buildup in the battery cells, such as could occur near fires or stoves, inside a sun-heated vehicle, or in direct sunlight for long periods of time may cause the battery cells to rupture or catch fire. Excessive temperatures may also degrade the transceiver's performance or shorten the battery cell's life.



DANGER! NEVER place the transceiver near a fire. Fire or heat may cause them to rupture or explode. Dispose of used battery pack in accordance with local regulations.



DANGER! NEVER solder the charging terminals, or **NEVER** modify the transceiver. This may cause heat generation, and the battery may burst, emit smoke or catch fire.



DANGER! NEVER let fluid from inside the battery get in your eyes. This can cause blindness. Rinse your eyes with clean water, without rubbing them, and immediately go to a doctor.



WARNING! NEVER let fluid from inside the battery cells come in contact with your body. If it does, immediately wash with clean water.



WARNING! NEVER put the transceiver in a microwave oven, high-pressure container, or in an induction heating cooker. This could cause a fire, overheating, or cause the battery cells to rupture.



WARNING! NEVER use a deteriorated transceiver. It could cause a fire.

CAUTION: DO NOT use the transceiver out of the specified temperature range, -10°C ~ +60°C (14°F ~ 140°F). Using the transceiver out of its specified temperature range will reduce its performance and battery cell's life.

CAUTION: DO NOT leave the transceiver fully charged, completely discharged, or in an excessive temperature environment for an extended period of time. You may use the transceiver until the remaining battery capacity is about half, then keep it safely in a cool and dry place.

CAUTION: DO NOT continue to use the transceiver if it emits an abnormal odor, heats up, or is discolored or deformed. If any of these conditions occur, contact your Icom dealer or distributor.

BE SURE to have the battery replaced with a new one approximately five years after manufacturing, even if it still holds a charge. The material inside the battery cells will become weak after a period of time, even with little use. The estimated number of times you can charge the transceiver is between 300 and 500. Even when the transceiver appears to be fully charged, the operating time of the transceiver may become short when:

- Approximately 5 years have passed since the battery was manufactured.
- The battery has been repeatedly charged.

Contact your Icom's local service shop or authorized Icom dealer about the battery replacement.
(Icom global site: <https://www.icomjapan.com/>)

Charging caution



DANGER! NEVER charge the transceiver in areas with extremely high temperatures, such as near fires or stoves, inside a sun-heated vehicle, or in direct sunlight.



WARNING! NEVER charge the transceiver during a lightning storm. It may result in an electric shock, cause a fire or damage the transceiver. Always disconnect the power adapter before a storm.



WARNING! NEVER charge or leave the transceiver in the battery charger beyond the specified time for charging. If the transceiver is not completely charged by the specified time, stop charging and remove the transceiver from the battery charger. Continuing to charge the transceiver beyond the specified time limit may cause a fire, overheating, or the battery may rupture.



WARNING! Occasionally observe the transceiver condition while charging. If any abnormal condition occurs, discontinue using the transceiver.

CAUTION: DO NOT insert the transceiver into the charger if it is wet or soiled. This could corrode the battery charger terminals or damage the charger. The charger is not waterproof.

NOTE: DO NOT charge the transceiver outside of the specified temperature range: 20°C ~ 45°C (68°F ~ 113°F). Otherwise, the charging time will be longer, but the battery will not reach a full charge. While charging, at a point after the temperature goes out of the specified range, the charging will automatically stop.

Bluetooth® INTERFERENCE

Bluetooth uses the 2.4 GHz band. When using the transceiver in the 2.4 GHz band near a Bluetooth device, interference may occur. This may cause a decrease in communication speed, and an unstable connection. In such case, use the transceiver away from the Bluetooth device communication area, or stop using the Bluetooth device.

PRECAUTIONS ON USING THE WIRELESS LAN

- We recommend that users with pacemakers take precautions to be sure that this device does not cause them a problem because of electromagnetic interferences.
- **DO NOT** use this device near microwave ovens. A microwave oven may cause electromagnetic interference to the communications through this device.
- **DO NOT** modify the device. The device warranty does not cover any problems caused by unauthorized modification.

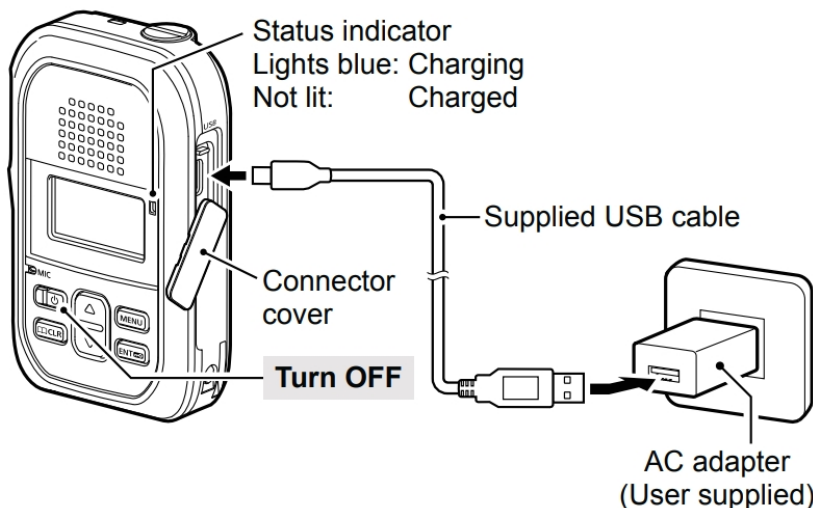
For Canada

- Operation of this device in the 5150–5350 MHz frequency range is restricted to indoor operation only. Outdoor operation in the 5150–5350 MHz frequency range is prohibited.

BATTERY CHARGING

Fully charge the transceiver before using for the first time, or if it has not been used for more than 2 months.

- The charger automatically restarts charging when the battery voltage drops.
- Disconnect the AC adapter from the outlet when the charger is not in use.



NOTE:

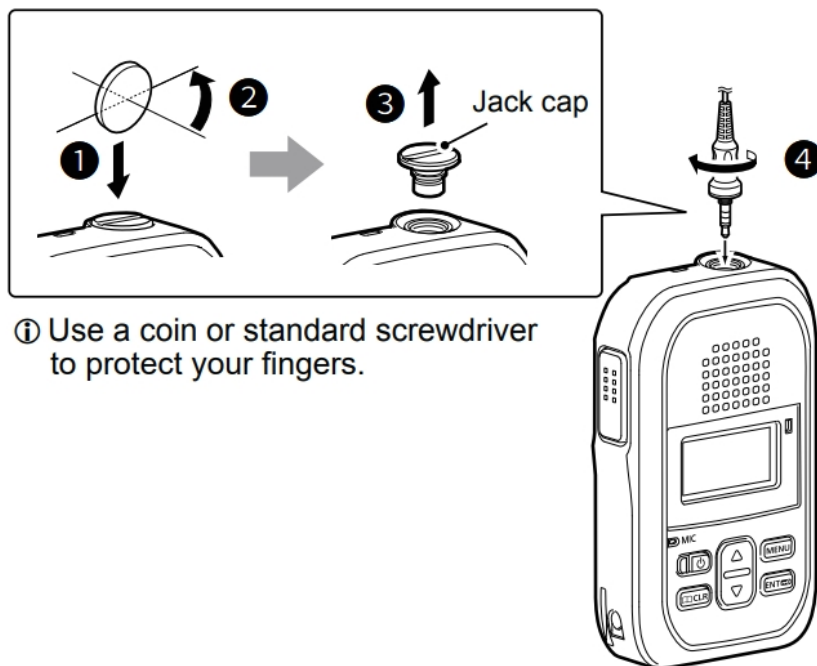
- Use a 5 V/2 A output AC adapter.
- The charging time may differ, depending on the AC adapter. When you use a low output AC adapter, it may take longer to charge, or the transceiver may not be charged.
- Before using the AC adapter, thoroughly read its instructions.

CONNECTING OPTIONAL EQUIPMENT

When connecting optional equipment:

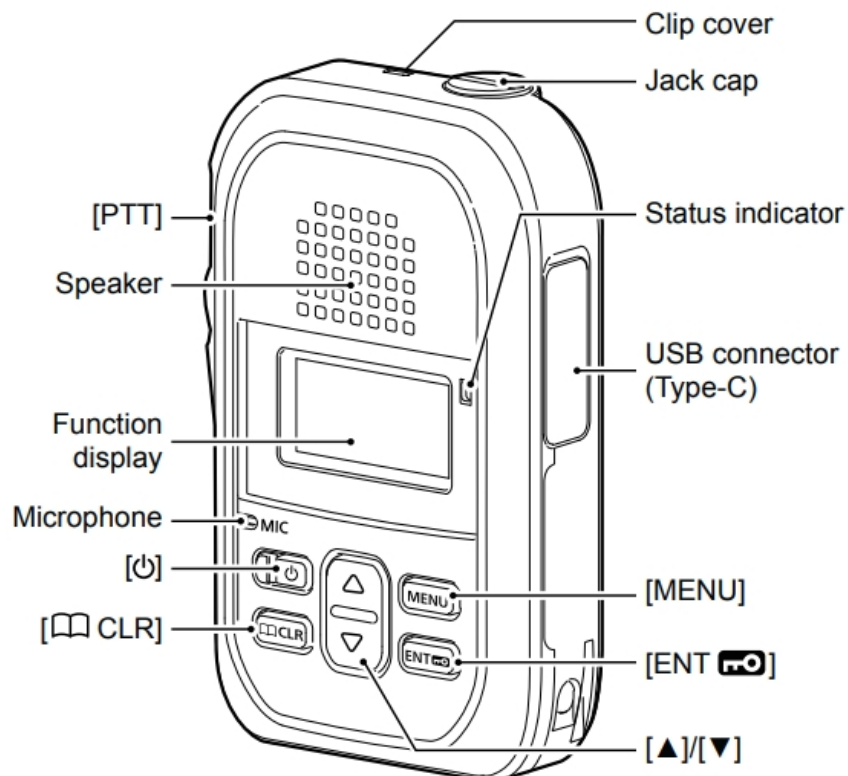
- Be sure to turn OFF the transceiver before connecting or disconnecting optional equipment to or from the jack.
- Remove the cable by holding the plug, not the cable.
- Insert the plug securely when connecting the cable.

CAUTION: Attach the jack cap when no optional equipment is connected.



PANEL DESCRIPTION

NOTE: Instructions and screens on this guide may differ, depending on the Controller settings.



The USB connector does not support USB Power Delivery (USB PD).

Operating keys

[PTT] switch

Hold down to transmit, release to receive.

[] key

Hold down for 2 seconds to turn the transceiver ON or OFF.

[CLR] key*

- In the Standby screen, push to display the ID List screen.
- In the MENU screen, push to return to the previous screen.

[]/[] key

- In the Standby screen, push to adjust the audio level.
- In the MENU screen, push to select a setting item or value.

[ENT]

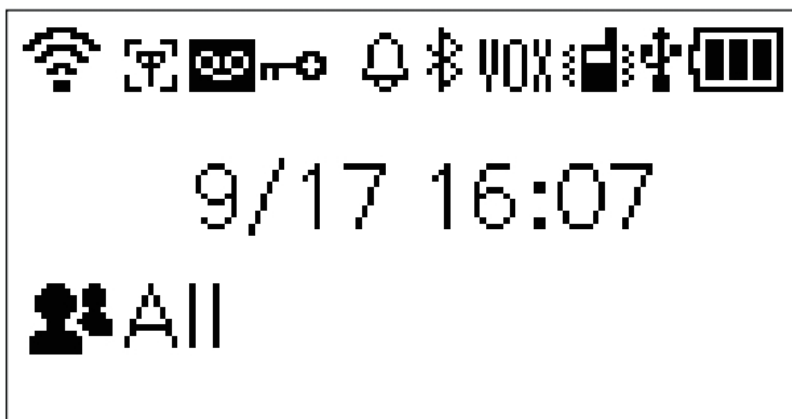
- In the Standby screen, hold down for 1 second to turn the Lock function ON or OFF.
- In the MENU screen, push to set the selected item or option.



[MENU] key*
















- In the Standby screen, push to display the MENU screen.
- In the MENU screen, push to go back to the Standby screen.




* Ask your dealer about the function when holding down the key for 1 second.

FUNCTION DISPLAY

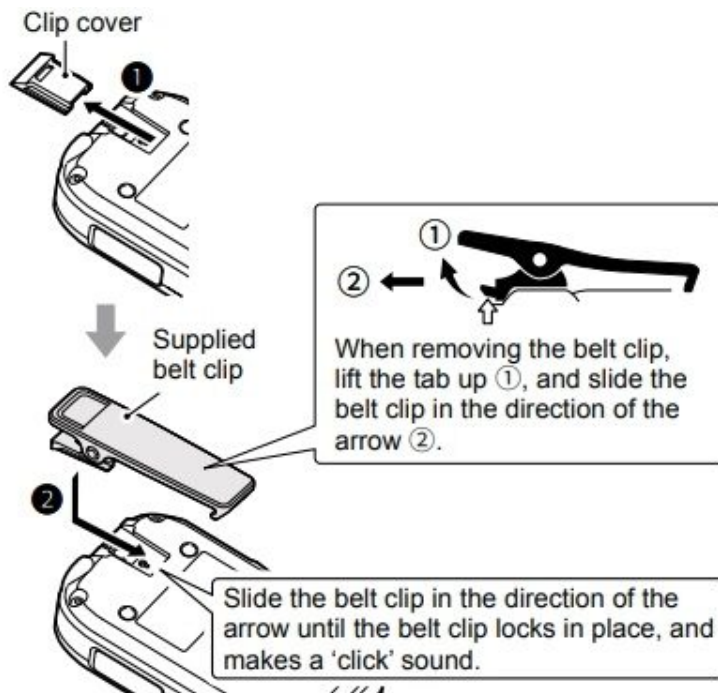


- Represents the signal strength in 3 levels.
- “” blinks when your transceiver is not connected to any Access Points.
- “” is displayed if your transceiver is not registered, or not connected to the Controller

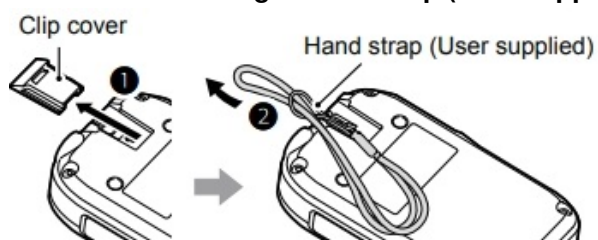
	Displayed when the Area Call function is ON.
	<ul style="list-style-type: none"> • “” blinks when there is new recorded data. • “” is displayed when the Recording function is ON. • “” blinks while recording audio.
	Displayed when the Key Lock function is ON.
	<ul style="list-style-type: none"> • Displayed when the Pocket Beep function is ON. • Blinks when a call is received. This icon blinks until the transceiver returns to the Standby mode after a received signal disappears.
	Displayed when the P-Bell function is used.
	<ul style="list-style-type: none"> • “” is displayed when the Bluetooth function is ON. • “” is displayed when the transceiver is connected to a Bluetooth device.
	Displayed when the VOX function is ON.
	Displayed when transmission is inhibited.
	Displayed when the Vibration function is ON.
	Displayed when the received audio is muted.

	<p>Displayed when a USB device is connected through a USB cable.</p>
	<ul style="list-style-type: none"> • Represents the remaining capacity in 4 steps. • “” is displayed while charging.

ATTACHING THE BELT CLIP




TIP: When attaching a hand strap (User supplied)



BASIC OPERATION

Turning the transceiver ON or OFF

Turning ON:

- Hold down  for 2 seconds.
 - A beep sounds.

Turning OFF:

- Hold down **[⏻]** for 2 seconds.

Adjusting the audio output level:

- Push **[▲]/[▼]** to adjust the audio output level.
 - The volume can be adjusted between 0 and 32.

NOTE: If the output level is set to the minimum, the beep does not sound.

Receiving and transmitting

Receiving:

- When a call is received, the status indicator lights green.
Push **[▲]/[▼]** to adjust the audio output level to a comfortable listening level.

Transmitting:

- While holding down **[PTT]**, speak at your normal voice level.
 - The status indicator lights red while **[PTT]** is pushed.

Talk while receiving a call:

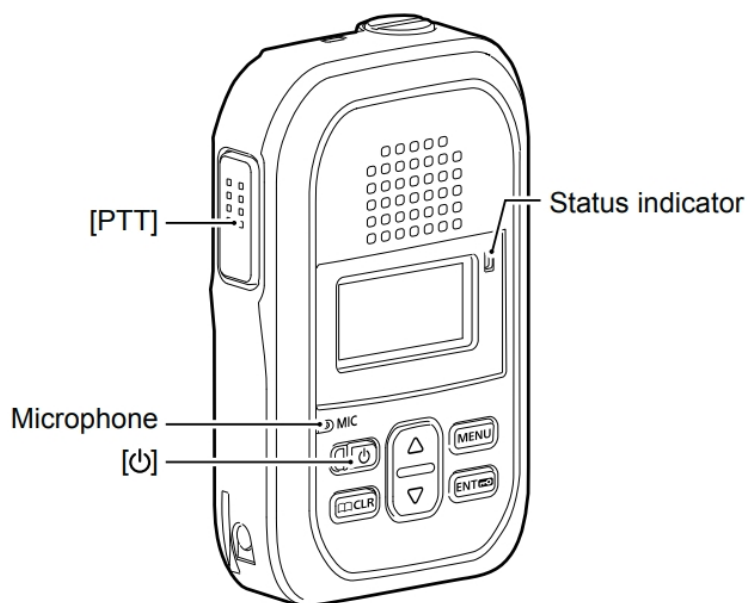
- While receiving a call, push **[PTT]** to talk in the Full Duplex mode* like a telephone call.
 - In the Full Duplex mode, the status indicator lights yellow.
 - * Depending on the Controller setting. Ask your dealer for details.

If howling occurs, turn down the audio level.

IMPORTANT:

To maximize the readability of your signal:

1. After pushing **[PTT]**, pause briefly before you start speaking.
2. Hold the microphone 5 ~ 10 cm (2 ~ 4 inches) from your mouth, then speak at your normal voice level.



AUTHENTICATION

Refer to the “Authentication” screen for authentication acquired with the transceiver. ([MENU] > Authentication)

OPTIONS

Chargers

- **BC-257:** BATTERY CHARGER
 - **BC-228:** AC ADAPTER
- (When using multiple BC-257s connected together.)

Belt clip

- **MBB-1:** BELT CLIP

Cables

- **OPC-2132:** PLUG ADAPTER CABLE
- **OPC-2133:** PLUG ADAPTER CABLE
- **OPC-2480:** USB CABLE (USB Type-A/USB Type-C)
- **OPC-1655:** PROGRAMMING ADAPTER CABLE
- **OPC-478UC*1:** PROGRAMMING CABLE

Speaker-Microphones

- **HM-186PI:** COMPACT SPEAKER MICROPHONE
- **HM-228:** SPEAKER MICROPHONE

Full sized waterproof speaker microphone including alligator type clip to attach to your shirt or collar, and so on.

Headsets and Earphone microphone

- **HS-94* 2** : HEADSET (Ear hook type)
- **HS-95* 2** : HEADSET (Neck and arm type)
- **HS-97* 2** : HEADSET (Throat Microphone)
- **VS-3**: Bluetooth® HEADSET
- **HM-179PI**: DURABLE EARPHONE MICROPHONE

Earphone

- **SP-16PIBW**: EARPHONE (Ear hook type)
 1. The OPC-1655 (Programming adapter cable) is required.
 2. The OPC-2133 (Plug adapter cable) is required.

FCC INFORMATION

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.

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.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Responsible Party

Company Name: Icom America Inc.

Address: 12421 Willows Road NE Kirkland, WA 98034

U.S. Contact Information

800-USA-ICOM (800-872-4266)

Monday – Friday 7 AM to 5 PM PST

FOR CANADA

This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

The device for operation in the band 5150–5350 MHz is only for indoor use to reduce the potential for harmful interference to cochannel mobile satellite systems.

SAFETY TRAINING INFORMATION

The available scientific evidence does not show that any health problems are associated with using low power wireless devices. There is no proof, however, that these low power wireless devices are absolutely safe. Low power Wireless devices emit low levels of radio frequency energy (RF) in the microwave range while being used. Whereas high levels of RF can produce health effects (by heating tissue), exposure of low-level RF that does not produce heating effects causes no known adverse health effects. Many studies of low level RF exposures have not found any biological effects. Some studies have suggested that some biological effects might occur, but such findings have not been confirmed by additional research. This device has been tested and found to comply with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules.

ABOUT CE AND DOC



Hereby, Icom Inc. declares that the versions of IP110H which have the "CE" symbol on the product, comply with the essential requirements of the Radio Equipment Directive, 2014/53/EU, and the restriction of the use of certain hazardous substances in electrical and electronic equipment Directive, 2011/65/EU. The full text of the EU declaration of conformity is available at

the following internet address:

<https://www.icomjapan.com/support/>

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.

RECOMMENDATION

CLEAN THE TRANSCEIVER THOROUGHLY IN A BOWL OF FRESHWATER after exposure to saltwater, and dry it before operating. Otherwise, the transceiver's keys, switches, and controllers may become unusable, due to salt crystallization, and/or the charging terminals of the battery pack may corrode.

NOTE: If the transceiver's waterproof protection appears defective, carefully clean it with a soft, damp (fresh water) cloth, then dry it before operating. The transceiver may lose its waterproof protection if the case, jack cap, or connector cover is cracked or broken, or the transceiver has been dropped. Contact your Icom distributor or your dealer for advice.

Support


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Documents / Resources

	iCOM IP110H WiFi Two Way Radio [pdf] Instructions 399500, AFJ399500, IP110H WiFi Two Way Radio, WiFi Two Way Radio
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References

- [📍 Icom Inc. Global](#)
- [📍 Support | Icom Inc.](#)