

VHF TRANSCEIVER IC-V88 UHF TRANSCEIVER IC-U88

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.

PRECAUTIONS

⚠ **DANGER! NEVER** short the terminals of the battery pack.

⚠ **DANGER!** Use and charge only specified Icom battery packs with Icom transceivers or Icom chargers. Only Icom battery packs are tested and approved for use with Icom transceivers or to be charged by Icom chargers. Using third-party or counterfeit battery packs or chargers may cause smoke, fire, or cause the battery packs to burst.

⚠ **WARNING! NEVER** hold the transceiver 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 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.

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

CAUTION: MAKE SURE the flexible antenna, battery pack and jack cover are securely attached to the transceiver, and that the antenna and battery pack are dry before attachment. Exposing the inside of the transceiver to dust or water will result in serious damage to the transceiver.

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

DO NOT push [PTT] when you do not actually intend to transmit.

DO NOT use harsh solvents such as benzene or alcohol when cleaning, as they will damage the transceiver surfaces.

Thank you for choosing the IC-V88 VHF TRANSCEIVER or the IC-U88 UHF TRANSCEIVER.
READ ALL INSTRUCTIONS carefully and completely before using the transceiver.

DO NOT use or place the transceiver in direct sunlight or in places with temperatures below -30°C or above $+60^{\circ}\text{C}$. The basic operations of the transceiver are guaranteed within the specified operating temperature range. However, the Liquid Crystal Display may not operate correctly, or show an indication in the case of long hours of operation, or after being placed in extremely cold areas.

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

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

BE CAREFUL! The transceiver meets IP67* requirements for dust-tight and waterproof protection. However, once the transceiver has been dropped, dust-tight and waterproof protection cannot be guaranteed because of possible damage to the transceiver's case or the waterproof seal.

*Only when the jack cover or the optional HM-168LWP is attached.

Even when the transceiver power is OFF, a slight current still flows in the circuits. Remove the battery pack from the transceiver when not using it for a long time. Otherwise, the installed battery pack will become exhausted, and will need to be recharged or replaced.

MAKE SURE to turn the transceiver power OFF before connecting the supplied or optional equipment.

• Battery caution

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

⚠ **DANGER! NEVER** short terminals (or charging terminals) of the battery pack. Also, current may flow into nearby metal objects such as a necklace, so be careful when placing the battery packs (or the transceiver) in handbags, etc. Simply carrying with or placing near metal objects such as a necklace, etc. may cause shorting. This may damage not only the battery pack, but also the transceiver.

⚠ **DANGER! DO NOT** hammer or otherwise impact the battery pack. Do not use the battery pack if it has been severely impacted or dropped, or if it has been subjected to heavy pressure. The damage may not be visible on the outside of the case. Even if the surface of the battery pack does not show cracks or any other damage, the cells inside may rupture or catch fire.

PRECAUTIONS (Continued)

⚠ **DANGER! NEVER** use or leave the battery pack in areas with temperatures above $+60^{\circ}\text{C}$. High temperature buildup in the battery pack, such as could occur near fires or stoves, inside a sun heated car, or in direct sunlight may cause the battery pack to rupture or catch fire. Excessive temperatures may also degrade performance or shorten life.

⚠ **DANGER! DO NOT** expose the battery pack to rain, snow, seawater, or any other liquids. Do not charge or use a wet battery pack. If the battery pack gets wet, be sure to wipe it dry before using.

⚠ **DANGER! KEEP** the battery pack away from fire. Fire or heat may cause them to rupture or explode. Dispose of a used battery pack in accordance with local regulations.

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

⚠ **DANGER!** Use the battery pack only with the transceiver for which it is specified. Never use a battery pack with any other equipment, or for any purpose that is not specified in this instruction manual.

⚠ **DANGER!** If fluid from inside the battery pack gets in your eyes, blindness can result. Rinse your eyes with clean water, without rubbing them, and see a doctor immediately.

⚠ **WARNING!** Immediately stop using the battery pack 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.

⚠ **WARNING!** Immediately wash, using clean water, any part of the body that comes into contact with fluid from inside the battery pack.

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

CAUTION: Always use the battery pack within the specified temperature range, for the transceiver (-30°C to $+60^{\circ}\text{C}$) and the battery pack itself (-20°C to $+60^{\circ}\text{C}$). Using the battery pack out of its specified temperature range will reduce the performance and the life. Please note that the specified temperature range of the battery pack may exceed that of the transceiver. In such cases, the transceiver may not work properly because it is out of its operating temperature range.

CAUTION: Shorter battery life could occur if the battery pack is left fully charged, completely discharged, or in an excessive temperature environment (above $+50^{\circ}\text{C}$) for an extended period of time. If the battery pack must be left unused for a long time, it must be detached from the transceiver after discharging. You may use the battery pack until the remaining capacity is about half, then keep it safely in a cool and dry place at the following temperature range:

- -20°C to $+50^{\circ}\text{C}$ (within a month)
- -20°C to $+40^{\circ}\text{C}$ (within three months)
- -20°C to $+20^{\circ}\text{C}$ (within a year)

BE SURE to replace the battery pack with a new one approximately five years after manufacturing, even if it still holds a charge. The inside battery material will become weak after a period of time, even with little use. The estimated number of times you can charge the battery is between 300 and 500.

Even when the battery appears to be fully charged, the operating time of the transceiver may become short when:

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

• Charging caution

⚠ **DANGER! NEVER** charge the battery pack in areas with extremely high temperatures, such as near fires or stoves, inside a sun-heated vehicle, or in direct sunlight. In such environments, the safety/protection circuit in the battery pack will activate, causing the battery to stop charging.

⚠ **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 battery pack in the battery charger beyond the specified time for charging. If the battery pack is not completely charged by the specified time, stop charging and remove the battery pack from the battery charger. Continuing to charge the battery pack beyond the specified time limit may cause a fire, overheating, or the battery pack may rupture.

⚠ **WARNING! NEVER** insert the transceiver (the battery pack attached to 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.

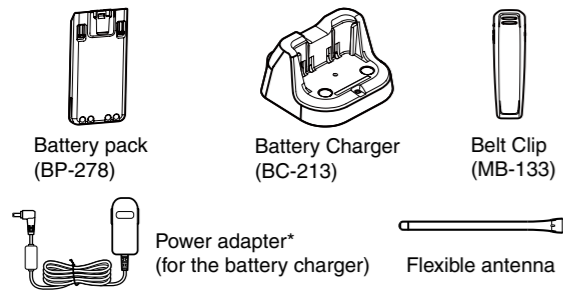
NOTE: Charge the battery pack within the specified temperature range of $+10^{\circ}\text{C}$ to $+40^{\circ}\text{C}$. Otherwise, the charging time will be longer, but the battery pack will not reach a full charge. While charging, at a point after the temperature goes out of the specified range, the charging will automatically stop.

RECOMMENDATION

CLEAN THE TRANSCEIVER THOROUGHLY WITH FRESH WATER in a bowl 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 rust.

NOTE: If the transceiver's waterproof protection appears defective, carefully clean it with a soft, wet (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.

SUPPLIED ACCESSORIES



◇ About the flexible antenna

FA-SC55V (150–174 MHz) is supplied for the IC-V88.
FA-SC02U (330–380 MHz) is supplied for the IC-U88.

NOTE:

To use the transceiver out of the supplied antenna's frequency range, select a suitable antenna from **OPTIONS** described on **INSTRUCTIONS** ②.

* Not supplied or the shape is different, depending on the transceiver version.

BATTERY CHARGING

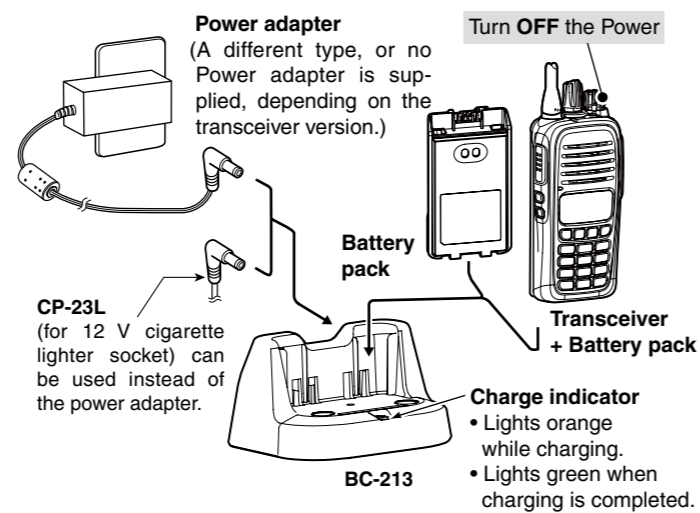
◇ Rapid charging with the supplied BC-213

The BC-213 DESKTOP CHARGER rapidly charges the Li-ion battery pack.
The BC-213 is used with the power adapter or the CP-23L CIGARETTE LIGHTER CABLE (purchase separately).

- **Charging time of the BP-278**
Approximately 2 hours

CAUTION: STOP charging, if the charge indicator lights orange and green alternately. In this case, a charging failure is occurring.

NOTE: Charge the battery within the specified temperature range of +10°C to +40°C. Otherwise, the charging time will be longer, but the battery will not reach a full charge. While charging, at a point where the temperature goes out of the specified range, the charging will automatically stop.



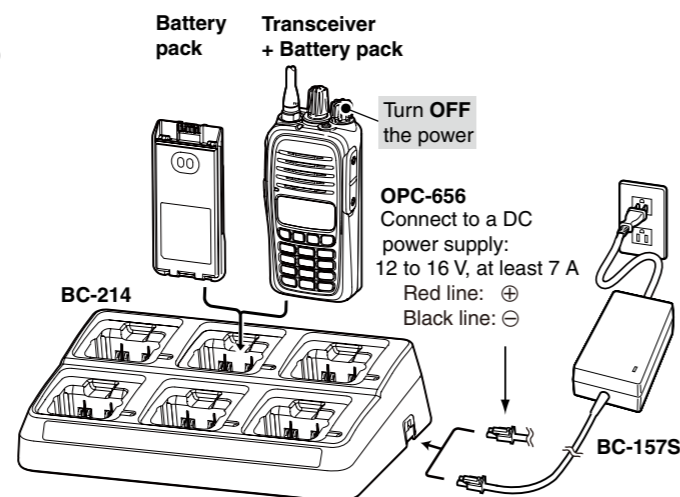
◇ Rapid charging with the BC-214

The BC-214 MULTI CHARGER* can simultaneously charge up to 6 Li-ion battery packs.
The BC-214 is used with the BC-157S AC ADAPTER* or the OPC-656 DC POWER CABLE*.

* Purchase separately

- **Charging time of the BP-278**
Approximately 2 hours

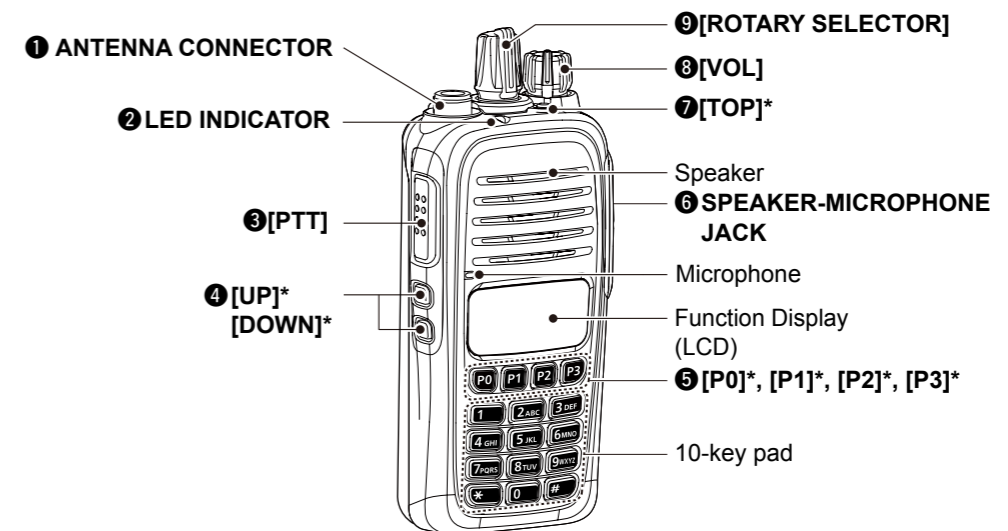
① For more information about Icom accessories, read **OPTIONS** described on **INSTRUCTIONS** ②.



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.

PANEL DESCRIPTION



① ANTENNA CONNECTOR

Connect the supplied or optional antennas.

② LED INDICATOR

- Lights red while transmitting.
- Lights green while receiving a signal, or when the squelch is open.
- You should charge the battery when the indicator slowly blinks green.
- You must charge the battery when the indicator quickly blinks green.

③ [PTT]

Hold down to transmit, and release to receive.

④ [UP]*/[DOWN]*

No function is currently assigned.

- ⑤ [P0]*: Hold down to enter or exit the User Set mode.
- [P1]*: Push to enter the Zone Selecting mode.
- [P2]*: Hold down to lock or unlock keys.
- [P3]*: Push to set the transmit output power to High, Low 1, or Low 2.

⑥ SPEAKER-MICROPHONE JACK

Connect an optional speaker-microphone.

CAUTION: The transceiver meets IP67 requirements for the dust-tight and waterproof protection, only when the jack cover or the optional HM-168LWP is attached.

⑦ [TOP]*

No function is currently assigned.

⑧ [VOL]

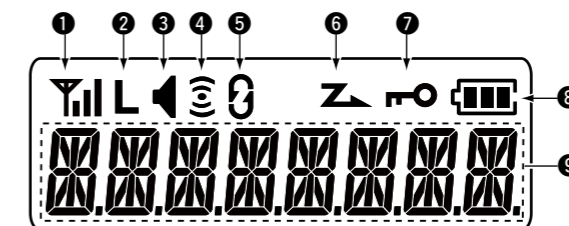
Rotate to turn the power ON or OFF, and to adjust the audio level.

⑨ [ROTARY SELECTOR]

Rotate to select the memory channels.

* If you use CS-V88 CLONING SOFTWARE (purchase separately), you can assign other functions to these keys. For more information about functions, see the operating guide for the IC-V88 and IC-U88 on the Icom website.

FUNCTION DISPLAY



① SIGNAL STRENGTH INDICATOR

Displays the relative receive signal strength.

② LOW POWER ICON

Appears when low output power is selected.

- ① When the battery charge decreases to a set level, low power is automatically selected.

③ AUDIBLE ICON

Appears when the channel is in the 'Audible' (unmuted) mode.

④ COMPANDER ICON

Appears when the Compander function is ON.

⑤ SCRAMBLER ICON

Appears when the Voice Scrambler function is ON.

⑥ SCAN ICON

Appears or blinks while scanning.

⑦ KEY LOCK ICON

Appears when the Key Lock function is ON.

⑧ BATTERY INDICATOR

Displays the remaining battery charge.
Blinks when the battery charge decreases to a set level.

⑨ ALPHANUMERIC READOUT

Displays messages such as the channel name.