



## INSTRUCTION MANUAL

VHF TRANSCEIVER

# IC-F3061T/S

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This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

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**Icom Inc.**

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## IMPORTANT

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**READ ALL INSTRUCTIONS** carefully and completely before using the transceiver.

**SAVE THIS INSTRUCTION MANUAL** — This instruction manual contains important operating instructions for the **IC-F3061T/S VHF TRANSCEIVER**.

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## EXPLICIT DEFINITIONS

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WORD	DEFINITION
<b>⚠ WARNING</b>	Personal injury, fire hazard or electric shock may occur.
<b>CAUTION</b>	Equipment damage may occur.
<b>NOTE</b>	If disregarded, inconvenience only. No risk of personal injury, fire or electric shock.

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## PRECAUTIONS

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**⚠ CAUTION! 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 2 to 4 in. (5 to 10 cm) away from the lips and the transceiver is vertical.

**⚠ CAUTION! NEVER** operate the transceiver with a headset or other audio accessories at high volume levels.

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

**DO NOT** push PTT when not actually desiring to transmit.

**AVOID** using or placing the transceiver in direct sunlight or in areas with temperatures below +22°F (−30°C) or above +140°F (+60°C).

The basic operations, transmission and reception of the transceiver are guaranteed within the specified operating temperature range. However, the LCD display may not be operate correctly, or show an indication in the case of long hours of operation, or after being placed in extremely cold areas.

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**DO NOT** modify the transceiver for any reason.

**KEEP** the transceiver from the heavy rain, and **Never** immerse it in the water. The transceiver construction is **water resistant**, not waterproof.

The use of non-Icom battery packs/chargers may impair transceiver performance and invalidate the warranty.

***For U.S.A. only***

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

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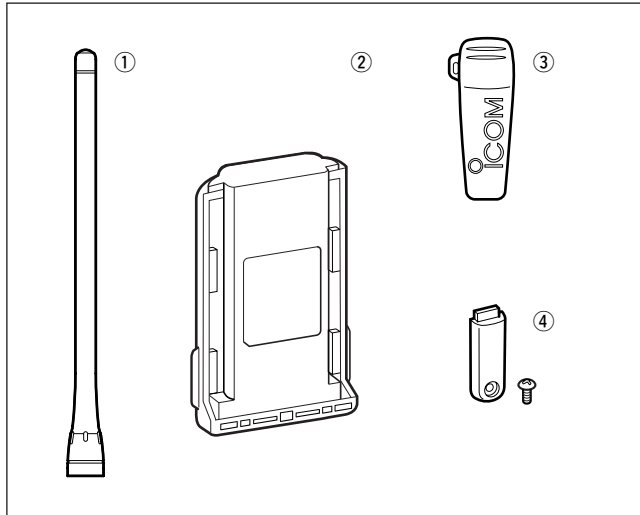
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## ■ Supplied accessories

The following accessories are supplied:	Qty.
① Flexible antenna .....	1
② Battery pack .....	1
③ Belt clip .....	1
④ Connector cover (with screw) .....	1 set



## ■ Accessory attachments

### ◇ Flexible antenna

Connect the supplied flexible antenna to the antenna connector.

### CAUTION!

- NEVER HOLD by the antenna when carrying the transceiver.
- Transmitting without an antenna may damage the transceiver.



# 1 ACCESSORIES

## ◇ Battery pack

### *To attach the battery pack:*

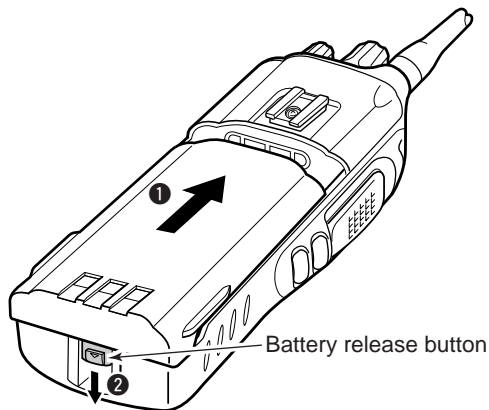
Slide the battery pack in the direction of the arrow (❶), then lock it with the battery release button.

- Slide the battery pack until the battery release button makes a 'click' sound.

### *To release the battery pack:*

Slide the battery release button in the direction of the arrow (❷) as shown below. The battery pack is then released.

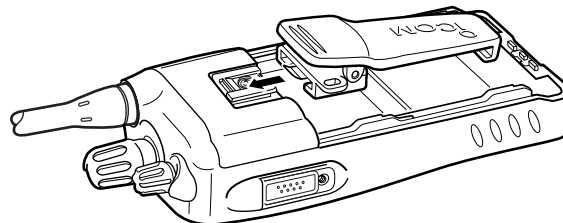
/// **NEVER** release or attach the battery pack when the transceiver is wet or soiled. This may result water or dust getting into the transceiver/battery pack and may result in the transceiver being damaged.



## ◇ Belt clip

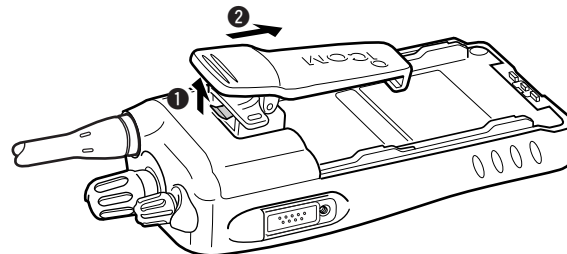
### *To attach the belt clip:*

- ❶ Release the battery pack if it is attached.
- ❷ Slide the belt clip in the direction of the arrow until the belt clip is locked and makes a 'click' sound.



### *To detach the belt clip:*

- ❶ Release the battery pack if it is attached.
- ❷ Pinch the clip (❶), and slide the belt clip in the direction of the arrow (❷).

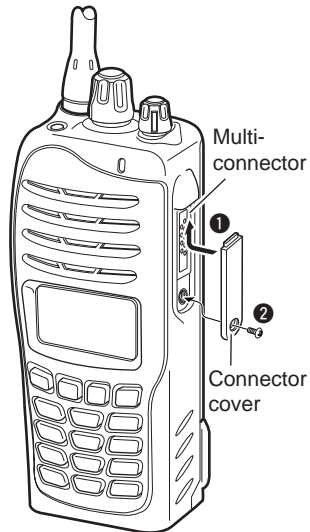


### ◇ Jack cover

Attach the jack cover when the optional speaker-microphone is not used.

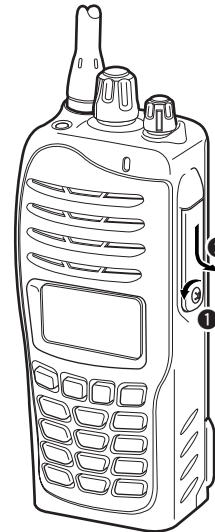
#### *To attach the connector cover:*

- 1 Insert the connector cover into the multi-conector.
- 2 Tighten the screw.

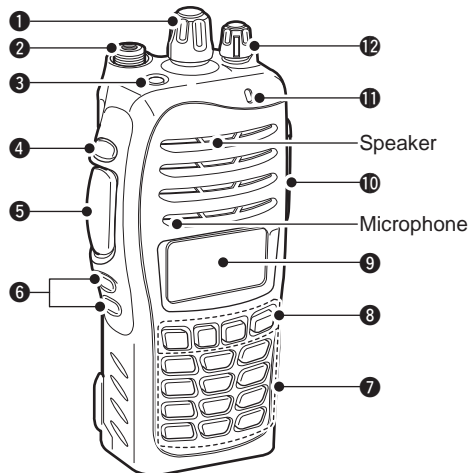


#### *To detach the connector cover:*

- 1 Unscrew the screw using a phillips screwdriver.
- 2 Detach the connector cover for the speaker-microphone connector.



## ■ Front panel



### 1 ROTARY SELECTOR

Rotate to select the pre-programmed memory channels or the operating zone.  
(Depending on the pre-setting)

### 2 ANTENNA CONNECTOR

Connects the supplied antenna.

### 3 EMERGENCY SWITCH

Push and hold for a specified period to transmit an emergency call.

\*Desired function can be programmed by your dealer.

### 4 MONITOR SWITCH

➔ Mute and release the CTCSS (DTCS) or 2-tone squelch mute. Open any squelch/deactivate any mute while pushing this key. (LMR operation only)

\*Desired function can be programmed by your dealer.

### 5 PTT SWITCH [PTT]

➔ Push and hold to transmit; release to receive.

➔ Push to transmit the call during MSK operation, depending on the setting.

### 6 UP/DOWN KEYS

➔ Push to select an operating channel.

➔ Push to select a TX code channel after pushing [TX CODE CH SELECT].

➔ Push to select a DTMF channel after pushing [DTMF].

➔ Push to select a scan group after pushing and holding [SCAN].

\*Desired functions can be programmed independently by your dealer.



**7 10-KEYPAD** (Depending on version)

The keypad allows you to enter digits to:

- Select memory channels
- Select tone channels
- Select DTMF codes (during transmit)
- Set TX codes
- Start up with the password

**8 DEALER-PROGRAMMABLE KEYS [P0] to [P3]**

Desired functions can be programmed independently by your dealer.

**9 FUNCTION DISPLAY**

Displays a variety of information such as an operating channel number/name, 2/5-tone code, DTMF numbers, selected function, etc.

**10 MULTI-CONNECTOR**

Connect an optional speaker-microphone.

**11 BUSY/TRANSMIT INDICATOR**

- ➔ Lights green while receiving a signal, or when the squelch is open.
- ➔ Lights red while transmitting.

**12 VOLUME CONTROL [VOL]**

Rotate to turn the power ON/OFF and adjusts the audio level.

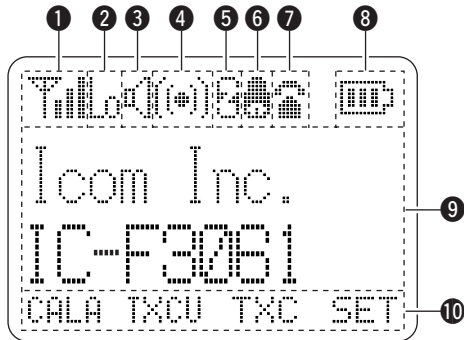


Connector cover

**NOTE:** Attach the connector cover when the optional speaker-microphone is not used. (See p. 3 for details)

## 2 PANEL DESCRIPTION

### ■ Function display



- 1 SIGNAL STRENGTH INDICATOR**  
Indicates relative signal strength level.
- 2 LOW POWER INDICATOR**  
Appears when low output power is selected.
- 3 AUDIBLE INDICATOR**
  - ➔ Appears when the channel is in the 'audible' (unmute) condition.
  - ➔ Appears when the specified 2/5-tone is received.
- 4 COMPANDER INDICATOR**  
Appears when the compander function is activated.

- 5 SCRAMBLER INDICATOR**  
Appears when the voice scrambler function is activated.
- 6 BELL INDICATOR**
  - ➔ Appears/blinks when the specific 2/5-tone/DTMFselect call is received, according to the pre-programming.
- 7 CALL CODE MEMORY INDICATOR**  
Appears when the call code memory is selected.
- 8 BATTERY INDICATOR**  
Appears or blinks when the battery power decreases to a specified level.
- 9 ALPHANUMERIC DISPLAY**
  - ➔ Displays an operating channel number, channel name, Set mode contents, DTMF code, etc.
  - ➔ The indication mode can be selected from 1 line or 2 lines. Ask your dealer for details.
    - In this instruction manual, the LCD illustration is described using the 2 lines indication mode.
- 10 KEY INDICATOR**  
Indicate the programmed function of the front panel keys ([P0], [P1], [P2] and [P3]).

## ■ Programmable function keys

The following functions can be assigned to [EMERGENCY], [MONITOR], [UP], [DOWN], [P0], [P1], [P2] and [P3] programmable function keys.

Consult your Icom dealer or system operator for details concerning your transceivers programming.


If the programmable function names are bracketed in the following explanations, the specific key is used to activate the function depends on the programming.

### **CH UP AND DOWN KEYS**

- Push to select an operating channel.
- Push to select a transmit code channel after pushing [TX Code CH Select].
- Push to select a DTMF channel after pushing [DTMF Autodial].
- Push to select a scan group after pushing and holding [Scan A Start/Stop]/[Scan B Start/Stop].

### **ZONE KEY**

Push this key, then push [CH Up] or [CH Down] to select the desired zone.

 **What is “zone”?**— The desired channels are assigned into a zone according to the intended use for grouping. For example, ‘Staff A’ and ‘Staff B’ are assigned into a “Business” zone, and ‘John’ and ‘Cindy’ are assigned into a “Private” zone.

### **SCAN A KEY**

- This key’s operation depends on the Power ON Scan setting.

#### **When the power ON scan function is turned OFF;**

Push to start and cancel scanning operation. In case of transmission during scan, cancels scanning.

#### **When the power ON scan function is turned ON;**

Push to pause scanning. Scanning resumes after passing a specified time period. In case of transmission during scan, pauses scanning. Scanning resumes after passing a specified time period specified.

- Push and hold this key for 1 sec. to indicate the scan group, then push [CH Up] or [CH Down] to select the desired group.

### **SCAN B KEY**

- Push to start and cancel scanning operation. In case of transmission during scan, pauses scanning. Scanning resumes after passing a specified time period.
- Push and hold this key for 1 sec. to indicate the scan group, then push [CH Up] or [CH Down] to select the desired group.

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## 2 PANEL DESCRIPTION

### **SCAN ADD/DEL (TAG) KEY**

Push to add or delete the selected channel to/from the scan group.

### **PRIO A/B KEYS**

- ➔ Push to select Priority A or Priority B channel.
- ➔ Push and hold [Prio A (Rewrite)] to rewrite the Prio A channel.

### **MR-CH 1/2/3/4 KEYS**

Push to select an operating channel directly.

### **MONI KEY**

Mute and release the CTCSS (DTCS) or 2-tone squelch mute. Open any squelch/deactivate any mute while pushing this key.

### **LIGHT KEY**

Push to turn the transceiver's backlight ON temporarily only when the backlight function is turned OFF in user set mode.

### **LOCK KEY**

- ➔ Push and hold for 1 sec. to electronically lock all programmable keys except the following: [Call] (incl. Call A and Call B), [Moni(Audi)] and [Emergency].
- ➔ Push and hold for 1 sec. again to turn the lock function OFF.

### **HIGH/LOW KEY**

Push to select the transmit output power temporarily or permanently, depending on the pre-setting.

- Ask your dealer for the output power level for each selection.

### **C.TONE CH ENT KEY**

Push to select the continuous tone channel using [CH Up]/[CH Down] to change the tone frequency/code setting. The selected channel remains set as the continuous tone channel until another channel is designated as such.

### **TALK AROUND KEY**

Push to turn the talk around function ON and OFF.

- The talk around function equalizes the transmit frequency to the receive frequency for transceiver-to-transceiver communication.

### **WIDE/NARROW KEY**

Push to toggle the IF bandwidth between wide and narrow.

### **DTMF AUTODIAL KEY**

- ➔ Push to enter the DTMF channel selection mode. Then select the desired DTMF channel using [CH Up]/[CH Down].
- ➔ After selecting the desired DTMF channel, push this key to transmit the DTMF code.

### **RE-DIAL KEY**

Push to transmit the last-transmitted DTMF code.

**CALL KEYS**

Push to transmit a 2/5-tone/BIIS ID code.

- Call transmission is necessary before you call another station depending on your signalling system.
- [Call A] and/or [Call B] may be available when your system employs selective 'Individual/Group' calls. Ask your dealer which call is assigned to each key.

**EMERGENCY KEY**

Push and hold for a specified period to transmit an emergency call.

- If you want to cancel the emergency call, push (or push and hold) the key again before transmitting the call.
- The emergency call is transmitted one time only or repeatedly until receiving a control code depending on the pre-setting.

**SURVEILLANCE KEY**

Push to turn the surveillance function ON or OFF.

When this function is turned ON, the beep is not emitted and the LCD backlight does not light when a signal is received or a key is pushed, etc.

**TX CODE CHANNEL SELECT KEY**

- ➡ Push to enter the ID code channel selection mode directly. Then set the desired channel using [CH Up]/[CH Down]. (p. 13)

**TX CODE CHANNEL UP/DOWN KEYS**

Push to select a TX code channel directly.

**SCRAMBLER FUNCTION**

Push to toggle the voice scrambler function ON and OFF.

**COMPANDER KEY**

Push to toggle the compander function ON and OFF.

The compander function reduces noise components from the transmitting audio to provide clear communication.

**USER SET MODE KEY**

- ➡ Push and hold to enter user set mode.
  - During user set mode, push this key to select an item, and change the value or condition using push [CH Up]/[CH Down].
- ➡ Push and hold this key again to exit user set mode. User set mode is also available via the 'Power ON function.' Refer to p. 16 also.

**OPT OUT KEYS**

Push to control the output signal level of the optional ports in the optional unit connector.

**OPT MOMENTARY KEYS**

Push and hold to control the output signal level of the optional ports in the optional unit connector.

## ■ Turning power ON

/// Prior to using the transceiver for the first time, the battery pack must be fully charged for optimum life and operation. (p. 18)

- ① Rotate **[VOL]** to turn the power ON.
- ② If the transceiver is programmed for a start up password, input the digit codes as directed by your dealer.
  - 10-keypad can be used for password input depending on version:
  - The keys in the table below can be used for password input:
  - The transceiver detects numbers in the same block as identical. Therefore “01234” and “56789” are the same.

KEY	P <sub>0</sub>	P <sub>1</sub>	P <sub>2</sub>	P <sub>3</sub>	DOWN
NUMBER	0	1	2	3	4
	5	6	7	8	9

- ③ When the “PASSWORD” indication does not clear after inputting 4 digits, the input code number may be incorrect. Turn the power off and start over in this case.

## ■ Channel selection

Several types of channel selections are available. Methods may differ according to your system set up.

### **NON-ZONE TYPE:**

Push [CH Up] or [CH Down], or rotate [ROTARY SELECTOR]\* to select the desired operating channel, in sequence; or, push one of [MR-CH 1] to [MR-CH 4] keys to select a channel directly.

- Up to 16 pre-programmed channels can be selected via [ROTARY SELECTOR].\*

### **ZONE TYPE:**

Push [Zone], then push [CH Up] or [CH Down] or rotate [ROTARY SELECTOR]\* to select the desired zone.

### **AUTOMATIC SCAN TYPE:**

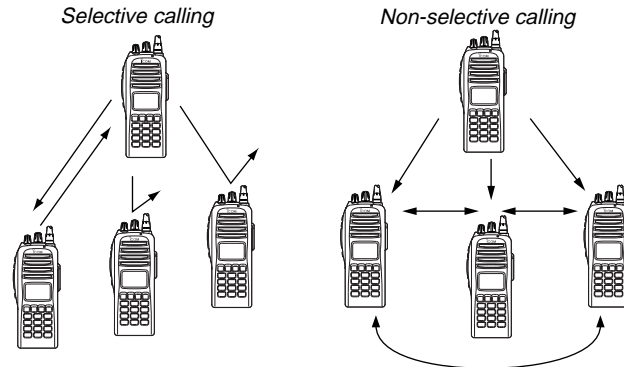
Channel setting is not necessary for this type. When turning power ON, the transceiver automatically starts scanning. Scanning stops when receiving a call.

\*Depending on the pre-setting.

## ■ Call procedure

When your system employs tone signaling (excluding CTCSS and DTCS), the call procedure may be necessary prior to voice transmission. The tone signalling employed may be a selective calling system which allows you to call specific station(s) only and prevent unwanted stations from contacting you.

- ① Select the desired TX code channel or 2/5-tone code according to your System Operator's instructions.
  - This may not be necessary depending on programming.
- ② Push the call key (assigned to one of the dealer programmable keys: [Up], [Down], [P0], [P1], [P2], [P3], [Emergency] and [Monitor]) or [PTT].
- ③ After transmitting a 2/5-tone code, the remainder of your communication can be carried out in the normal fashion.



## ■ Receiving a call

### ◇ Group call

- ① Push **[CH Up]** or **[CH Down]**, or rotate **[ROTARY SELECTOR]** to select the LTR system channel or talk group.
- ② When a call is received;
  - 'BUSY' indicator lights green, and the calling station name/ID appears.
- ③ Push and hold **[PTT]**, then speak into the microphone at a normal voice level.
- ④ Release **[PTT]** to return to receive.

### ◇ Selective call (DTMF call)

- ① Push **[CH Up]** or **[CH Down]**, or rotate **[ROTARY SELECTOR]** to select the LTR system channel or talk group.
- ② Push **[Call]** to mute the channel.
  - "📞" appears.
- ③ When receiving a call, the calling station name appears and a beep is emitted. Then the mute is released.
  - "📞" disappears.



### ◇ Phone call

- ① Push **[CH Up]** or **[CH Down]**, or rotate **[ROTARY SELECTOR]** to select the LTR system channel or talk group.
- ② When a phone call is received (transceiver rings), push and hold **[PTT]**, then speak into the microphone at a normal voice level.
  - “☎” blinks and calling station name/ID appears for 1 sec.
- ③ Release **[PTT]** to return to receive.
- ④ Push **[#]** while pushing **[PTT]** to finish the communication.

## ■ Transmitting a call

### ◇ Group call

- ① Push **[CH Up]** or **[CH Down]**, or rotate **[ROTARY SELECTOR]** to select the LTR system channel or talk group.
- ② While pushing and holding **[PTT]**, speak into the microphone at a normal voice level after a beep is emitted.
  - If an error beep is emitted, release **[PTT]**. After a while, repeat step ②.
  - The beep can be turned OFF in User set mode.

### ◇ Selective call (DTMF call)

- ① Push **[CH Up]** or **[CH Down]**, or rotate **[ROTARY SELECTOR]** to select the LTR system channel or talk group.
- ② Push **[DTMF Autodial]**— a DTMF encode channel appears.
- ③ Push **[CH Up]** or **[CH Down]** to select the desired DTMF encode channel.
- ④ Push **[PTT]** to transmit the selected DTMF code in the selected DTMF channel.
  - Push **[DTMF Autodial]** to cancel the DTMF transmission.

## ■ Receiving and transmitting


**NOTE:** Transmitting without an antenna may damage the transceiver. See p. 1 for antenna attachment.

### **Receiving:**

- ① Rotate [VOL] to turn the power ON.
- ② Push [CH Up] or [CH Down], or rotate [ROTARY SELECTOR]\* to select the conventional system channel, in sequence.  
\*Depending on the pre-setting.
- ③ When receiving a call, adjust the audio output level to a comfortable listening level.

### **Transmitting:**

Wait for the channel to become clear to avoid interference.

- ① Push [Call] when initiating a call from your side.
  - Coded audio may be heard from the transceiver, then “” appears.
  - This operation may not be necessary depending on your signaling system. Ask your dealer for details.
- ② While pushing and holding [PTT], speak into the microphone at a normal voice level.
- ③ Release [PTT] to return to receive.


**IMPORTANT:** To maximize the readability of your signal;

1. Pause briefly after pushing [PTT].
2. Hold the microphone 5 to 10 cm (2 to 4 inches) from your mouth, then speak into the microphone at a normal voice level.

### ◇ **Transmitting notes**

#### • **Transmit inhibit function**

The transceiver has several inhibit functions which restrict transmission under the following conditions:

- The channel is in mute condition ('Inaudible' condition; “” does not appear.)
- The channel is busy.
- Un-matched (or matched) CTCSS is received. (Depending on the pre-setting.)
- The selected channel is a 'receive only' channel.

#### • **Time-out timer**

After continuous transmission for the pre-programmed time period, the time-out timer is activated, causing the transceiver to stop transmitting.

#### • **Penalty timer**

Once the time-out timer is activated, transmission is further inhibited for a period determined by the penalty timer.

### ◇ TX code channel selection

If the transceiver has [TX Code CH Select] assigned to it, the indication can be toggled between the operating channel number (or name) and TX code channel number (or name). When the TX code channel number (or name) is displayed, [CH Up] or [CH Down] selects the TX code channel.

#### **USING [TX CODE CH SELECT] KEY:**

- ① Push [TX Code CH Select]— a TX code channel number (or name) appears.
- ② Push [CH Up] or [CH Down] to select the desired TX code channel.
- ③ Push [Call] (or [PTT] during MSK operation) to transmit the selected TX code.
- ④ Push [TX Code CH Select] again to return to the operating channel number indication.

#### **USING [TX CODE CH UP]/[TX CODE CH DOWN] KEY:**

If the transceiver has a [TX Code CH Up] or [TX Code CH Down] key assignment, the programmed TX code channel can be selected directly when pushed.

### ◇ DTMF transmission

If the transceiver has [DTMF Autodial] assigned to it, the automatic DTMF transmission function is available. Up to 8 DTMF channels are available.

#### **TO SELECT A TX CODE:**

- ① Push [DTMF Autodial]— a DTMF channel appears.
- ② Push [CH Up] or [CH Down] to select the desired DTMF channel.
- ③ Push [DTMF Autodial] to transmit the DTMF code in the selected DTMF channel.

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## 5 CONVENTIONAL OPERATION

### ■ User set mode

User set mode is accessed at power ON and allows you to set seldom-changed settings. In this case you can “customize” the transceiver operation to suit your preferences and operating style.

#### *Entering the user set mode:*

- ① While pushing and holding [P1] and [P2], rotate [VOL] to turn the power ON. Then, push and hold [P0] to enter user set mode.
- ② Push [P0] several times to select the appropriate item. Then push [Up] or [Down] to set the desired level/condition.
  - Available set mode functions are **Backlight**, **LCD contrast**, **Beep**, **Beep Level**, **Ringer Level**, **SQL Level**, **AF Min Level**, **Mic Gain**, **VOX Gain**, **VOX Delay**, **Battery Voltage** and **Signal Moni**.
- ③ Rotate [VOL] to turn the power OFF to exit user set mode.

/// **NOTE:** User set mode is also available via a programmable key. Please refer to p. 9 [User Set Mode] section.

### ■ Emergency transmission

When [Emergency Single] or [Emergency Repeat] is pushed, an emergency signal is automatically transmitted for the specified time period.

When [Emergency] is pushed, the DTMF emergency signal is transmitted on the priority channel.

When [Emergency Single] or [Emergency Repeat] is pushed for the specified time period, the DTMF emergency signal is transmitted once or repeatedly on the emergency channel. However, when no emergency channel is specified, the signal is transmitted on the previously selected channel.

### ■ Scrambler function

The voice scrambler function provides private communication between stations. The frequency inversion type is equipped to all versions, moreover, the optional Rolling or Non-rolling type can be available.

- ① Push [**Scrambler**] to turn the scrambler function ON.
  - “G” appears.
- ② Push [**Scrambler**] again to turn the scrambler function OFF.
  - “G” disappears.

## ■ Stun function

When the specified ID, set as a killer ID, is received, the stun function is activated.

When the killer ID is received, the transceiver switches to the password required condition. Entering of the password via the keypad is necessary to operate the transceiver again in this case.

## ■ Priority A channel selection

When one of the following operations is performed, the transceiver selects the Priority A channel automatically.

Priority A is selected when;

- Clear down signal is received/transmitted
  - Set the 'Move to PrioA CH' item as 'Clear down.'
- Turning the power ON  
The Priority A channel is selected each time the transceiver power is turned ON.
- Status call  
The Priority A channel is selected when transmitting a status call.

## ■ Battery charging

Prior to using the transceiver for the first time, the battery pack must be fully charged for optimum life and operation.

**CAUTION:** To avoid damage to the transceiver, turn the power OFF while charging.

- Recommended temperature range for charging: +10°C to +40°C (+50°F to +104°F)
- Use the specified chargers (BC-119N, BC-121N and BC-160). **NEVER** use another manufacturer's charger.
- Use the specified AC adapter. **NEVER** use another manufacturer's adapter.

### **Recommendation:**

Charge the supplied battery pack for a maximum of up to 10 hours. Li-Ion batteries are different from Ni-Cd batteries in that it is not necessary to completely charge and discharge them to prolong the battery life. Therefore, charging the battery in intervals, and not for extended periods is recommended.

## ■ Battery caution

**⚠ DANGER** Charge the specified Icom batteries only. Only tested and approved for use with genuine Icom batteries. Fire and/or explosion may occur when a third party battery pack or counterfeit product is charged.

**CAUTION! NEVER** insert battery pack/transceiver (with the battery pack attached) in a wet or soiled condition into the charger. This may result in corrosion of the charger terminals or damage to the charger. The charger is not waterproof and water can easily get into it.

**NEVER** incinerate used battery packs. Internal battery gas may cause an explosion.

**NEVER** immerse the battery pack in water. If the battery pack becomes wet, be sure to wipe it dry **BEFORE** attaching it to the transceiver.

**NEVER** short the terminals of the battery pack. Also, current may flow into nearby metal objects, such as a necklace, etc. Therefore, be careful when carrying with, or placing near metal objects, carrying in handbags, etc.

**AVOID** leaving the battery pack in a fully charged, or completely discharged condition for long time. It causes shorter battery life. In case of leaving the battery pack unused for a long time, it must be kept safely after discharge, or use the battery until the battery indicator appears, then remove it from the transceiver.

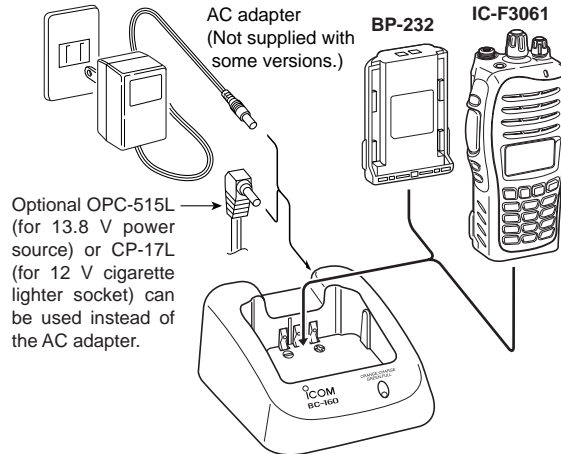
If your battery pack seems to have no capacity even after being charged, fully charge the battery pack again. If the batteries still do not retain a charge (or very little), new battery pack must be purchased.

## ■ Optional battery chargers

### ◇ Rapid charging with the BC-160

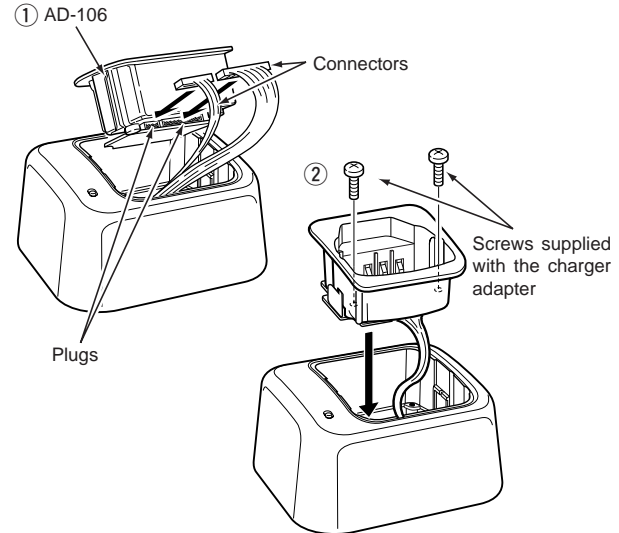
The optional BC-160 provides rapid charging of optional Li-Ion battery packs.

- An AC adapter (may be supplied with BC-160 depending on version) or the DC power cable (OPC-515L/CP-17L) is additionally required.



### ◇ AD-106 installation

- ① Install the AD-106 desktop charger adapter into the holder space of the BC-119N/BC-121N.
- ② Connect the plugs of the BC-119N/BC-121N to the AD-106 desktop charger adapter with the connector, then install the adapter into the charger with the supplied screws.

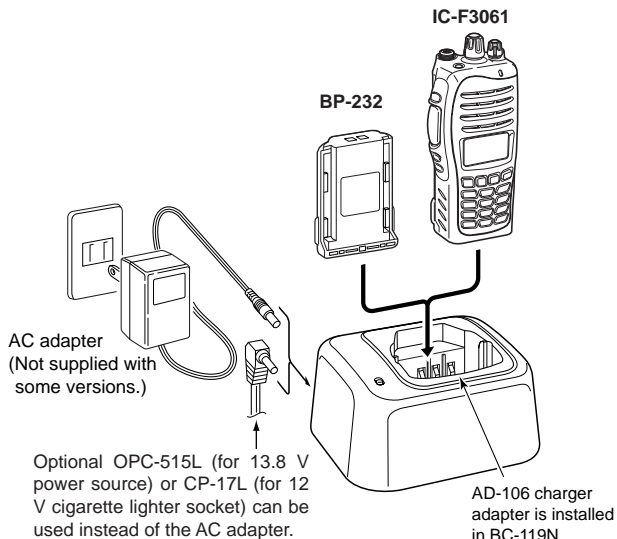


## 6 BATTERY CHARGING

### ◇ Rapid charging with the BC-119N+AD-106

The optional BC-119N provides rapid charging of battery packs. The following items are additionally required.

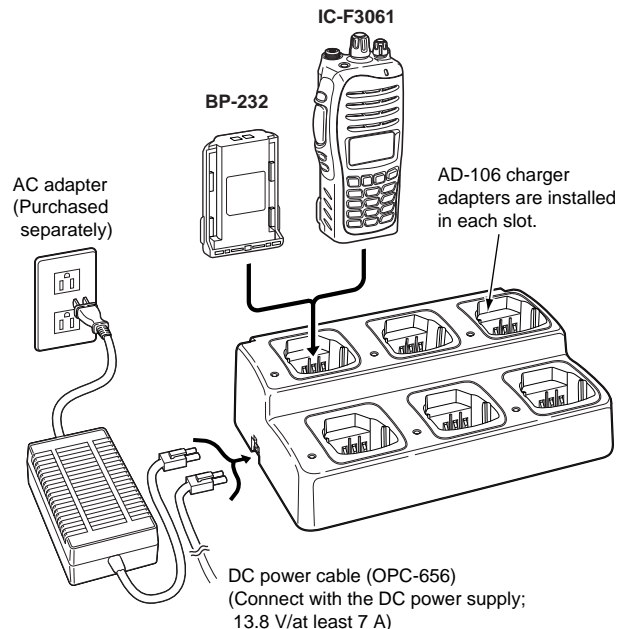
- AD-106 charger adapter
- An AC adapter (may be supplied with BC-119N depending on version) or the DC power cable (OPC-515L/CP-17L).



### ◇ Rapid charging with the BC-121N+AD-106

The optional BC-121N allows up to 6 battery packs to be charged simultaneously. The following items are additionally required.

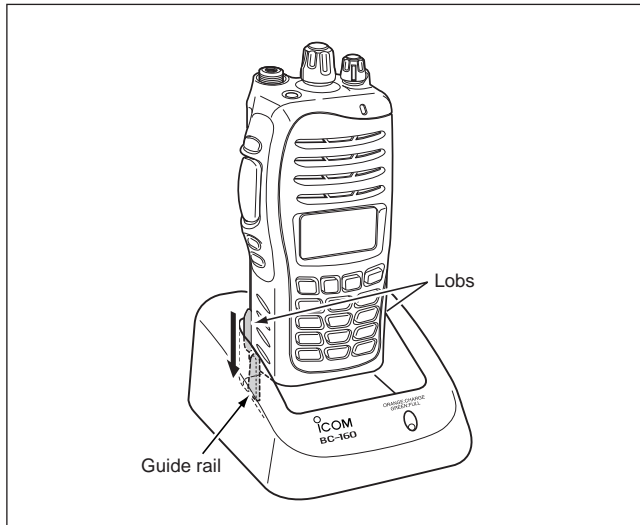
- Six AD-106 charger adapters
- An AC adapter (BC-124) or the DC power cable (OPC-656)





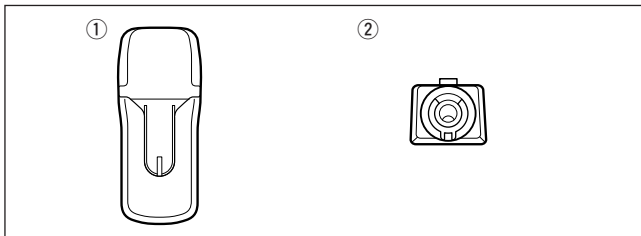
**IMPORTANT!: Battery charging**

Ensure the guide lobs on the battery pack are correctly aligned with the guide rails inside the charger adapter.  
(This illustration is described with the BC-160.)



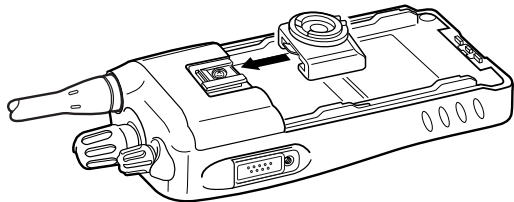
## ■ MB-93 contents

	Qty.
① Belt clip .....	1
② Base clip .....	1

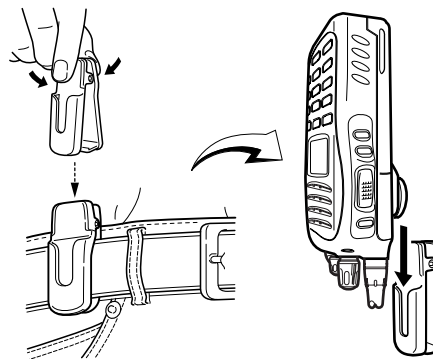


## ■ To attach

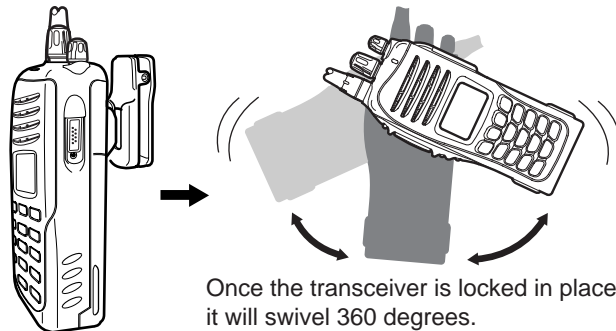
- ① Release the battery pack if it is attached. (p. 2)
- ② Slide the base clip in the direction of the arrow until the base clip is locked and makes a 'click' sound.



- ③ Clip the belt clip to a part of your belt. And insert the transceiver into the belt clip until the base clip inserted fully into the groove.

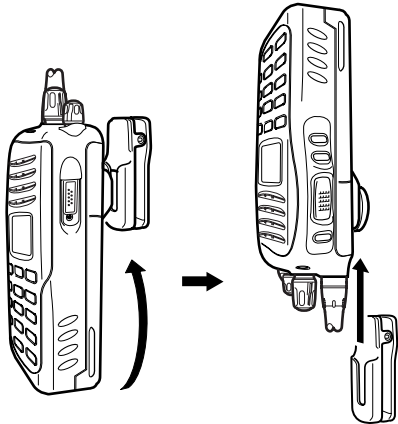


- ④ Once the transceiver is locked in place, it swivels as illustrated below.

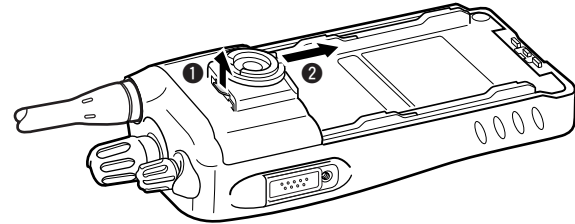


## ■ To detach

- ① Turn the transceiver upside down in the direction of the arrow and pull out from the belt clip.



- ② Release the battery pack if it is attached. (p. 2)
- ③ Pinch the clip (①), and slide the base clip in the direction of the arrow (②).



**CAUTION!**  
HOLD THE TRANSCEIVER TIGHTLY, WHEN HANGING OR DETACHING THE TRANSCEIVER FROM THE BELT CLIP.  
Otherwise the transceiver may not be attached to the holder or swivel properly if the transceiver is accidentally dropped and the base clip is scratched or damaged.

### ◇ CHARGERS

- **BC-119N** DESKTOP CHARGER + **AD-106** CHARGER ADAPTER  
+ **BC-145** AC ADAPTER

For rapid charging of battery packs. An AC adapter is supplied with the charger depending on versions. Charging time: approx. 2 hours when BP-231 is attached.

- **BC-121N** MULTI-CHARGER + **AD-106** CHARGER ADAPTER (6 pcs.)  
+ **BC-124** AC ADAPTER

For rapid charging of up to 6 battery packs (six AD-106's are required) simultaneously. An AC adapter should be purchased separately. Charging time: approx. 2 hours when BP-231 is attached.

- **BC-160** DESKTOP CHARGER + **BC-145** AC ADAPTER

For rapid charging of battery packs. An AC adapter is supplied with the charger depending on versions. Charging time: approx. 2 hours when BP-231 is attached.

### ◇ BELT CLIPS

- **MB-93** SWIVEL BELT CLIP
- **MB-94** BELT CLIP

Exclusive alligator-type belt clip. The same as supplied with the transceiver.

- **MB-96N/96F** LEATHER BELT HANGER

### ◇ OPTIONAL UNITS

- **UT-119** DIGITAL MODULATOR/DEMODULATOR UNIT

Provides 6.25 kHz narrow bandwidth digital mode operation.

- **UT-109R /UT-110R** SCRAMBLER UNITS

Non-rolling type (UT-109R)/Rolling type (UT-110R) voice scrambler unit provides higher communication security.

## ◇ DC CABLES

- **CP-17L** CIGARETTE LIGHTER CABLE  
Allows charging of the battery pack through a 12 V cigarette lighter socket. (For BC-119N)
- **OPC-515L/OPC-656** DC POWER CABLES  
Allows charging of the battery pack using a 13.8 V power source instead of the AC adapter.  
OPC-515L: For BC-119N  
OPC-656 : For BC-121N

## ◇ OTHER OPTIONS

- **SP-13** EARPHONE  
Provides clear receive audio in noisy environment.
- **HM-131SC** SPEAKER-MICROPHONE  
Combination speaker-microphone that provides convenient operation while hanging the transceiver from your belt.
- **HS-94/HS-95/HS-97** HEADSET + **VS-1SC** VOX/PTT CASE  
HS-94: Ear-hook type  
HS-95: Neck-arm type  
HS-97: Throat microphone  
VS-1SC: VOX/PTT switch box for hands-free operation, etc.

Some options may not available in some countries. Please ask your dealer for details.



Your Icom radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as “Occupational Use Only”, meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards.

This radio is NOT intended for use by the “General Population” in an uncontrolled environment.

This radio has been tested and complies with the FCC RF exposure limits for “Occupational Use Only”. In addition, your Icom radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- American National Standards Institute (C95.1-1992), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields— RF and Microwave.
- The following accessories are authorized for use with this product. Use of accessories other than those specified may result in RF exposure levels exceeding the FCC requirements for wireless RF exposure.; Belt Clip (MB-94), Rechargeable Li-Ion Battery Pack (BP-231) and Speaker-microphone (HM-131L).



#### CAUTION

To ensure that your exposure to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

- **DO NOT** operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or antenna specifically authorized by the manufacturer for use with this radio.
- **DO NOT** transmit for more than 50% of total radio use time (“50% duty cycle”). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “TX” (TX indicator) lights. You can cause the radio to transmit by pressing the “PTT” switch.
- **ALWAYS keep** the antenna at least 2.5 cm (1 inch) away from the body when transmitting and only use the Icom belt-clips listed on page 40 when attaching the radio to your belt, etc., to ensure FCC RF exposure compliance requirements are not exceeded. To provide the recipients of your transmission the best sound quality, hold the antenna at least 5 cm (2 inches) from your mouth, and slightly off to one side.

The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates with the FCC RF exposure limits of this radio.

**Electromagnetic Interference/Compatibility**

During transmissions, your Icom radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so. **DO NOT** operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

**Occupational/Controlled Use**

The radio transmitter is used in situations in which persons are exposed as consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

**Count on us!**

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