

Thank you for choosing the IC-F3360DT/IC-F3360DS VHF DIGITAL TRANSCEIVERS or IC-F4360DT/IC-F4360DS UHF DIGITAL TRANSCEIVERS. **READ ALL PRECAUTIONS** carefully and completely before using the transceiver.

## EXPLICIT DEFINITIONS

WORD	DEFINITION
<b>⚠ DANGER!</b>	Personal death, serious injury or an explosion may occur.
<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.

## PRECAUTIONS

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

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

**⚠ WARNING! NEVER** hold the radio that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting. The radio will perform best if the microphone is 5 to 10 cm (2 to 4 inches) away from the lips and the radio is vertical.

**⚠ WARNING! NEVER** operate the radio 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 radio 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 radio, and that the antenna and battery pack are dry before attachment. Exposing the inside of the radio to dust or water will result in serious damage to the radio.

**DO NOT** operate the radio 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 or place the radio in direct sunlight or in areas with temperatures below  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ ) or above  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ). The basic operations, transmission and reception of the radio 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.

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

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

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

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

Even when the radio power is OFF, a slight current still flows in the circuits. Remove the battery pack from the radio 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 radio power OFF before connecting the supplied or optional equipment.

The GPS receiver may not work if the transceiver transmits near the 510 MHz. This is made in the internal circuit and does not indicate a transceiver malfunction.

## PRECAUTIONS (Continued)

### • 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** 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 battery packs (or the radio) 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 radio.

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

**⚠ DANGER! NEVER** use or leave battery pack in areas with temperatures above  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ). High temperature buildup in the battery, such as could occur near fires or stoves, inside a sun heated car, or in direct sunlight may cause the battery to rupture or catch fire. Excessive temperatures may also degrade battery performance or shorten battery life.

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

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

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

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

**⚠ DANGER!** If fluid from inside the battery 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 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.

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

**CAUTION:** Always use the battery within the specified temperature range, for the radio  $-30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$ ), and the battery itself  $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$ ). Using the battery out of its specified temperature range will reduce the battery's performance and battery life. Please note that the specified temperature range of the battery may exceed that of the radio. In such cases, the radio may not work properly because it is out of its operating temperature range.

**CAUTION:** Shorter battery life could occur if the battery is left fully charged, completely discharged, or in an excessive temperature environment (above  $+50^{\circ}\text{C}$ ;  $+122^{\circ}\text{F}$ ) for an extended period of time. If the battery must be left unused for a long time, it must be detached from the radio after discharging. You may use the battery until the remaining capacity is about half, then keep it safely in a cool dry place at the following temperature range:

$-20^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $+122^{\circ}\text{F}$ ) (within a month)  
 $-20^{\circ}\text{C}$  to  $+35^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $+95^{\circ}\text{F}$ ) (within three months)

**BE SURE** to replace the battery with a new one after five years, even if still holds a charge. The inside battery material will deteriorate after a period of time, even with little use.

### • 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 will activate, causing the battery to stop charging.

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

**⚠ WARNING! NEVER** insert the radio (battery attached to the radio) 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 within the specified temperature range: BC-160 and BC-171 ( $0^{\circ}\text{C}$  to  $+45^{\circ}\text{C}$ ;  $+32^{\circ}\text{F}$  to  $+113^{\circ}\text{F}$ ), BC-119 and BC-121 ( $+10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$ ;  $+50^{\circ}\text{F}$  to  $+104^{\circ}\text{F}$ ). Icom recommends charging the battery at  $+20^{\circ}\text{C}$  ( $+68^{\circ}\text{F}$ ). The battery may heat up or rupture if charged out of the specified temperature range. Additionally, battery performance or battery life may be reduced.

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## FCC INFORMATION

### • FOR CLASS A UNINTENTIONAL RADIATORS:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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

### CAUTION:

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

## VOICE CODING TECHNOLOGY

The AMBE+2™ voice coding Technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc. This voice coding Technology is licensed solely for use within this Communications Equipment. The user of this Technology is explicitly prohibited from attempting to extract, remove, decompile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into a human-readable form. U.S. Patent Nos. #5,870,405, #5,826,222, #5,754,974, #5,701,390, #5,715,365, #5,649,050, #5,630,011, #5,581,656, #5,517,511, #5,491,772, #5,247,579, #5,226,084 and #5,195,166.

## COUNTRY CODE LIST

### • ISO 3166-1

	Country	Codes		Country	Codes
1	Austria	AT	18	Liechtenstein	LI
2	Belgium	BE	19	Lithuania	LT
3	Bulgaria	BG	20	Luxembourg	LU
4	Croatia	HR	21	Malta	MT
5	Czech Republic	CZ	22	Netherlands	NL
6	Cyprus	CY	23	Norway	NO
7	Denmark	DK	24	Poland	PL
8	Estonia	EE	25	Portugal	PT
9	Finland	FI	26	Romania	RO
10	France	FR	27	Slovakia	SK
11	Germany	DE	28	Slovenia	SI
12	Greece	GR	29	Spain	ES
13	Hungary	HU	30	Sweden	SE
14	Iceland	IS	31	Switzerland	CH
15	Ireland	IE	32	Turkey	TR
16	Italy	IT	33	United Kingdom	GB
17	Latvia	LV			

### < Intended Country of Use >

AT  BE  CY  CZ  DK  EE  
 FI  FR  DE  GR  HU  IE  
 IT  LV  LT  LU  MT  NL  
 PL  PT  SK  SI  ES  SE  
 GB  IS  LI  NO  CH  BG  
 RO  TR  HR

## RECOMMENDATION

**CLEAN THE TRANSCIVER THOROUGHLY WITH FRESH WATER** after exposure to saltwater, and dry it before operating. Otherwise, the transceiver's keys, switches and controllers may become unusable due to salt crystallization.

**NOTE: DO NOT** submerge the transceiver in water if there is any reason (one of the following) to suspect the waterproof protection may not be effective.

- When the transceiver has been dropped
- When the transceiver's case or the waterproof seal is cracked or damaged



## SAFETY TRAINING INFORMATION



WARNING

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 and IC 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 antennas, batteries, belt clips, speaker-microphone, and other accessories that are listed in "OPTIONS" of the INSTRUCTIONS sheet, are authorized for use with this product. Use of accessories other than those specified may result in RF exposure levels exceeding the FCC and IC requirements for wireless RF exposure.



CAUTION

To ensure that your exposure to RF electromagnetic energy is within the FCC and IC 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 and IC 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 and IC RF exposure compliance requirements to be exceeded. The radio is transmitting when the LED indicator lights red. 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 in "OPTIONS" of the INSTRUCTIONS sheet when attaching the radio to your belt, etc., to ensure FCC and IC 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 and IC 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.



AVERTISSEMENT

Votre radio Icom produit une énergie électromagnétique de radiofréquences (RF), en mode de transmission. Cette radio est conçue pour un «usage professionnel seulement» et classée comme tel, ce qui signifie qu'elle doit être utilisée uniquement dans le cadre d'un travail par des personnes conscientes des dangers et des mesures visant à minimiser ces dangers. Elle N'EST PAS conçue pour une «utilisation grand public», dans un environnement non contrôlé.

Cet appareil a été évalué et jugé conforme, aux limites d'exposition aux RF de la FCC et d'IC, pour une «utilisation grand public». En outre, votre radio Icom satisfait les normes et directives qui suivent en matière de niveaux d'énergie et d'énergie électromagnétique de RF et d'évaluation de tels niveaux en ce qui concerne l'exposition humaine:

- Supplément C, édition 97-01, du Bulletin OET n° 65 de la FCC, «Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields».
- Norme de l'American National Standards Institute (ANSI): IEEE C95.1-1992 sur les niveaux de sécurité compatibles avec l'exposition humaine aux champs électromagnétiques de radiofréquences (3 kHz à 300 GHz).
- Norme de l'ANSI: IEEE C95.3-1992 sur la méthode d'évaluation recommandée du champ magnétique potentiellement dangereux des radiofréquences et des micro-ondes.
- Les accessoires illustrés dans "Options" de la feuille d'instructions sont approuvés pour une utilisation avec ce produit. L'utilisation d'accessoires autres que ceux précisés peut entraîner des niveaux d'exposition aux RF supérieures aux limites établies par la FCC et d'IC en matière d'exposition aux RF sans fil.



MISE EN GARDE

Afin de vous assurer que votre exposition à une énergie électromagnétique de RF se situe dans les limites permises par la FCC et d'IC pour une utilisation grand public, veuillez en tout temps respecter les directives suivantes:

- **NE PAS** faire fonctionner la radio sans qu'une antenne appropriée y soit fixée, car ceci risque d'endommager la radio et causer une exposition supérieure aux limites établies par la FCC et d'IC. L'antenne appropriée est celle qui est fournie avec cette radio par le fabricant ou une antenne spécialement autorisée par le fabricant pour être utilisée avec cette radio.
- **NE PAS** émettre pendant plus de 50 % du temps total d'utilisation de l'appareil («50 % du facteur d'utilisation»). La notion «50% du facteur d'utilisation» s'applique également au mode VOX/PTT. Émettre pendant plus de 50 % du temps total d'utilisation peut causer une exposition aux RF supérieure aux limites établies par la FCC et d'IC. Lorsque le voyant DEL rouge s'allume, cette radio est en train d'émettre. La radio émettra si vous appuyez sur le bouton du microphone.
- **TOUJOURS tenir** l'antenne éloignée d'au moins 2,5 cm de votre corps au moment d'émettre et utiliser uniquement l'attache pour ceinture Icom illustrée dans "Options" de la feuille d'instructions, lorsque vous attachez la radio à votre ceinture, ou à autre chose, de façon à vous assurer de ne pas provoquer une exposition aux RF supérieure aux limites fixées par la FCC et d'IC. Pour offrir à vos interlocuteurs la meilleure qualité de transmission possible, tenez l'antenne à au moins 5 cm de votre bouche et légèrement de côté.

Les renseignements ci-dessus fournissent à l'utilisateur toute l'information nécessaire sur l'exposition aux RF et sur ce qu'il faut faire pour assurer que cette radio fonctionne en respectant les limites d'exposition aux RF établies par la FCC et d'IC.

### Interférence électromagnétique et compatibilité

En mode de transmission, votre radio Icom produit de l'énergie de RF qui peut provoquer des interférences avec d'autres appareils ou systèmes. Pour éviter de telles interférences, mettez la radio hors tension dans les secteurs où une signalisation l'exige. **NE PAS** faire fonctionner l'émetteur dans des secteurs sensibles au rayonnement électromagnétique tels que les hôpitaux, les aéronefs et les sites de dynamitage.

### Usage professionnel/contrôlé

Ce radio émetteur est utilisé dans des cas où des personnes sont exposées en raison de leur travail, pourvu qu'elles soient conscientes du risque d'exposition et qu'elles puissent exercer un contrôle sur cette exposition.



# ICOM INSTRUCTIONS

## VHF DIGITAL TRANSCEIVERS IC-F3360D series

## UHF DIGITAL TRANSCEIVERS IC-F4360D series

### FOREWORD

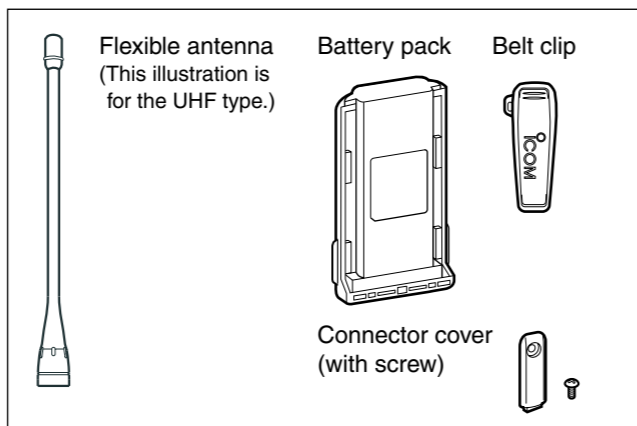
This instruction manual includes some functions which are usable only when they are preset by your dealer. Ask your dealer for details.

See the operating instructions for details of other functions, IDAS™ NXDN™ and MDC system operations. Ask your dealer for details.

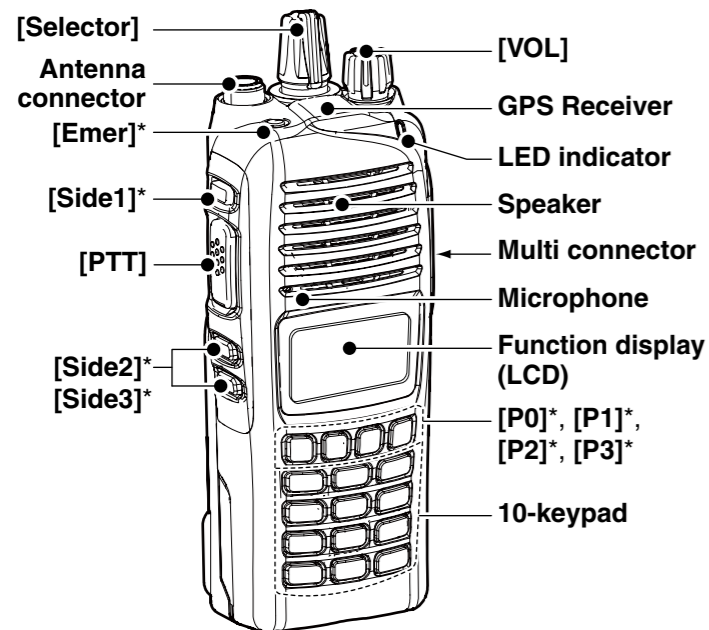
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Thank you for choosing the IC-F3360DT/IC-F3360DS VHF DIGITAL TRANSCEIVERS or IC-F4360DT/IC-F4360DS UHF DIGITAL TRANSCEIVERS.  
**READ ALL INSTRUCTIONS** carefully and completely before using the transceiver.

### SUPPLIED ACCESSORIES



### PANEL DESCRIPTION



The illustration is for the 10-key type transceivers.

\* Dealer assignable

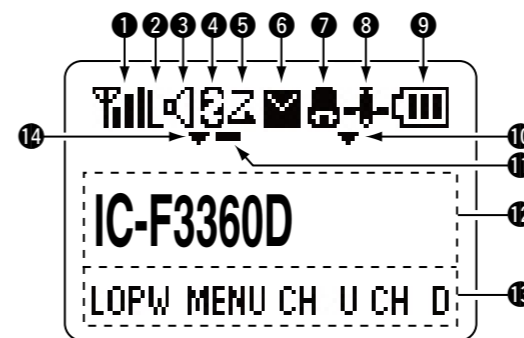
#### ◇ About the LED indicator

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

#### ◇ About the Multi connector

- CAUTION: Attach the connector cover when optional equipment is not used.

### FUNCTION DISPLAY



#### ① SIGNAL STRENGTH ICON

Displays the relative receive signal strength level.

#### ② LOW POWER ICON

Displayed when low output power is selected.

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

#### ③ AUDIBLE ICON

- ➔ Displayed when the channel is in the 'audible' (unmute) mode.
- ➔ Displayed when a matched signal is received.

#### ④ SCRAMBLER ICON

Displayed when the Voice Scrambler function is ON.

#### ⑤ SCAN ICON

Displayed while scanning.

#### ⑥ MESSAGE ICON

Displayed when a message is received.

#### ⑦ BELL ICON

Displayed when a matched signal is received, depending on the presetting.

#### ⑧ GPS ICON

Displayed when a position data is received.

#### ⑨ BATTERY ICON

Displayed or blinks when the battery power decreases to a specified level.

Indication				
Battery level	Full	Mid	Charging required	Exhausted Battery

blinks when the battery is over charged.

blinks when the battery is exhausted.

- This icon may not be displayed, depending on the presetting.

#### ⑩ SCAN TARGET CHANNEL ICON

Displayed when the scan target channel is selected.

#### ⑪ VOX ICON

Displayed when the VOX function is available.

#### ⑫ ALPHANUMERIC DISPLAY

Displays the operating channel number, channel name, Menu contents, DTMF code, and so on.

- The display mode automatically switches between one line and two lines.

#### ⑬ KEY ICONS

Displays the assigned function of the front panel keys ([P0], [P1], [P2] and [P3]).

#### ⑭ SCAN TARGET ZONE ICON

Displayed when the scan target zone is selected.

### BASIC OPERATION

#### ◇ Turning power ON

- Before using the transceiver for the first time, the battery pack must be fully charged for optimum life and operation.
- See the back page of this sheet.

➔ Rotate [VOL] to turn ON the power.

#### ◇ Receiving and Transmitting

- CAUTION: Attach an antenna before transmitting. Transmitting without an antenna may damage the transceiver.

#### Receiving:

- ① Rotate [Selector], push [CH U]/[CH D], or push one of the direct channel select keys, [DR 1] to [DR 5], to select a channel.
- ② When receiving a call, rotate [VOL] to adjust the audio output level to a comfortable listening level.

#### Transmitting:

Wait until the channel is clear to avoid interference.

- ① While holding down [PTT], speak at a normal voice level.
- ② Release [PTT] to receive.

#### IMPORTANT:

To maximize the readability of your signal:

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

Icom Inc.

1-1-32 Kamiminami, Hirano-ku, Osaka 547-0003, Japan

Count on us!

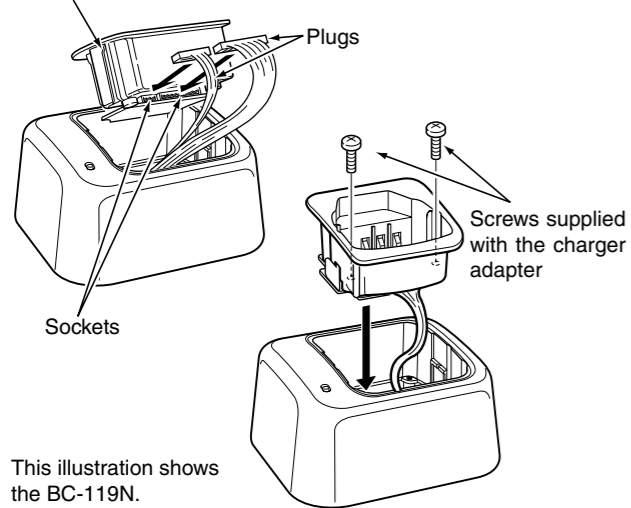
A-7144?-2EX Printed in Japan  
© 2014 Icom Inc.

## BATTERY CHARGING

### ◇ AD-106 installation

The AD-106 CHARGER ADAPTER must be installed into the BC-119N or BC-121N before battery charging.

- 1 Connect the AD-106 CHARGER ADAPTER and the BC-119N/BC-121N.
- 2 Install the AD-106 into the holder space of the BC-119N/BC-121N with the supplied screws.



This illustration shows the BC-119N.

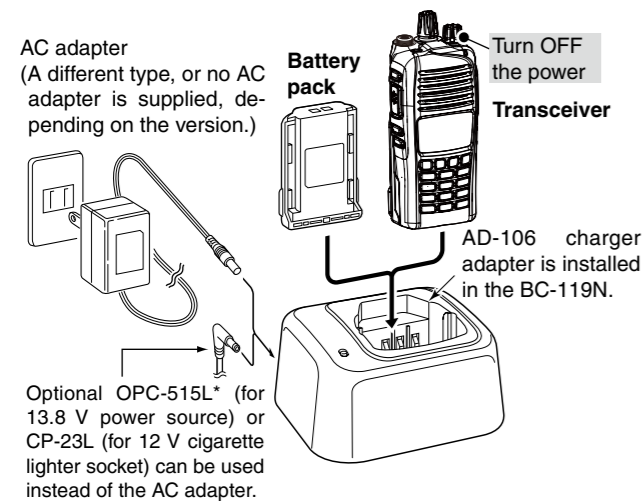
### ◇ Rapid charging with the BC-119N+AD-106

The optional BC-119N provides rapidly charges the Li-ion battery pack.

Charging time: Approximately 3.5 hours with the BP-232WP

The following items are additionally required.

- AD-106 charger adapter (purchase separately)
- An AC adapter (may be supplied with BC-119N, depending on version) or the OPC-515L/CP-23L DC power cable.



Optional OPC-515L\* (for 13.8 V power source) or CP-23L (for 12 V cigarette lighter socket) can be used instead of the AC adapter.

**CAUTION:** NEVER connect the OPC-515L to a power source using reverse polarity. This will ruin the battery charger.  
White line: ⊕ Black line: ⊖

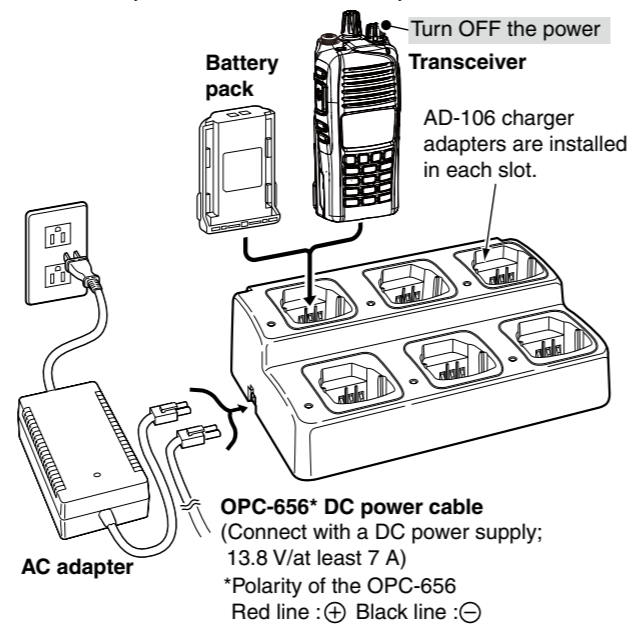
### ◇ Rapid charging with the BC-121N+AD-106

The optional BC-121N allows up to 6 battery packs to be simultaneously charged.

Charging time: Approximately 3.5 hours with the BP-232WP

The following items are additionally required. (purchase separately)

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



### ◇ Charging with the BC-160/BC-171

The optional BC-160 provides rapid charging, or the BC-171 provides regular charging of the Li-ion battery pack.

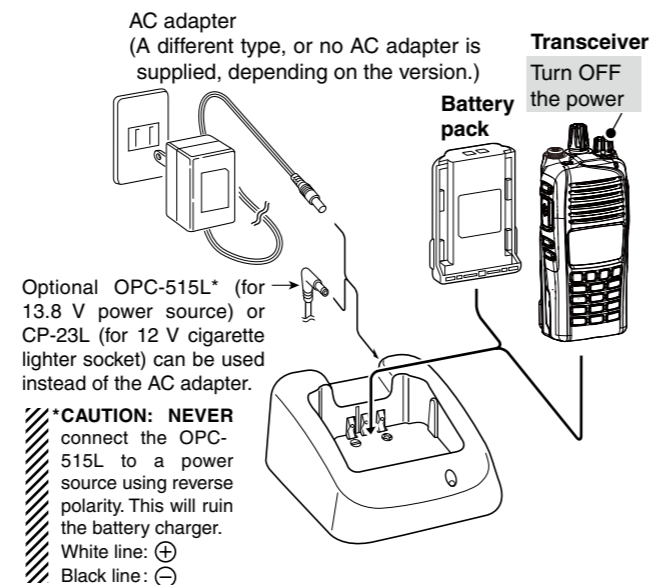
#### • Charging time

BC-160: Approximately 3.5 hours with the BP-232WP

BC-171: Approximately 11 hours with the BP-232WP

The following items are additionally required:

- An AC adapter (may be supplied with the charger, depending on version) or the OPC-515L/CP-23L DC power cable.



**CAUTION:** NEVER connect the OPC-515L to a power source using reverse polarity. This will ruin the battery charger.  
White line: ⊕ Black line: ⊖

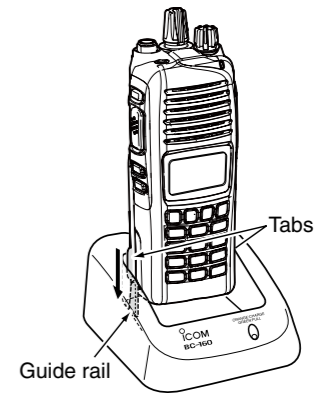
## BATTERY CHARGING (Continued)

### IMPORTANT: Battery charging caution

Ensure the guide tabs on the battery pack are correctly aligned with the guide rails inside the charger adapter. This illustration is for the BC-160.

### CAUTION:

**When using the OPC-656 DC power cable**  
**NEVER** reverse the polarity when connecting the OPC-656 to a power source. This will ruin the battery charger.  
OPC-656 : Red line: ⊕, Black line: ⊖



## OPTIONS

### ◇ BATTERY PACKS

- BP-232WP LI-ION BATTERY PACK

Voltage: 7.4 V, Capacity: 2250 mAh (min.) 2300 mAh (typ.)

- Battery life

VHF		UHF	
Digital mode	Analog mode	Digital mode	Analog mode
14.5 hrs.	13 hrs.	14.5 hrs.	13 hrs.

When the power save function is set to "Short," and the operating periods are calculated under the following conditions;  
TX : RX : standby = 5 : 5 : 90

- BP-240 BATTERY CASE  
Battery case for AAA (LR03) × 6 alkaline
- BP-261 BATTERY CASE  
Battery case for AA (LR6) × 6 alkaline

### ◇ DC CABLES

- CP-23L CIGARETTE LIGHTER CABLE  
Allows charging of the battery pack through a 12 V cigarette lighter socket. For use with the BC-119N/BC-160/BC-171
- 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

### ◇ CHARGERS

- BC-119N DESKTOP CHARGER + AD-106 CHARGER ADAPTER + BC-145S AC ADAPTER  
For rapid charging of battery packs. An AC adapter may be supplied with the charger, depending on the version.  
Charging time: Approximately 3.5 hours.
- BC-121N MULTI-CHARGER + AD-106 CHARGER ADAPTER (6 pcs.) + BC-157S AC ADAPTER  
For rapid charging of up to 6 battery packs simultaneously. Six AD-106s are required. An AC adapter should be purchased separately.  
Charging time: Approximately 3.5 hours.
- BC-160 DESKTOP CHARGER + BC-145S AC ADAPTER  
For rapid charging of battery packs. An AC adapter may be supplied with the charger, depending on the version.  
Charging time: Approximately 3.5 hours.
- BC-171 DESKTOP CHARGER + BC-147S AC ADAPTER  
For regular charging of battery packs. An AC adapter may be supplied with the charger, depending on the version.  
Charging time: Approximately 11 hours.

### ◇ BELT CLIPS

- MB-93 SWIVEL BELT CLIP
- MB-94/MB-94R BELT CLIP  
Exclusive alligator-type belt clip.
- MB-96N/MB-96F LEATHER BELT HANGER

### ◇ ANTENNAS

- FA-SC56VS/FA-SC57VS/FA-SC73US STUBBY ANTENNAS  
Shorter VHF or UHF antennas.  
FA-SC56VS: 150–162 MHz FA-SC57VS: 160–174 MHz  
FA-SC73US: 450–490 MHz
- FA-SC25V/FA-SC55V/FA-SC25U/  
FA-SC57U/FA-SC72U FLEXIBLE ANTENNAS  
VHF or UHF antennas.  
FA-SC25V: 136–150 MHz FA-SC55V: 150–174 MHz  
FA-SC25U: 400–430 MHz FA-SC57U: 430–470 MHz  
FA-SC72U: 470–520 MHz
- FA-SC61VC/FA-SC61UC CUT ANTENNAS  
FA-SC61VC: 136–174 MHz FA-SC61UC: 380–520 MHz
- FA-SC62V/FA-SC63V HIGH GAIN ANTENNAS  
FA-SC62V: 150–160 MHz FA-SC63V: 155–165 MHz

### ◇ OTHERS

- AD-118 ACC ADAPTER  
Allows you to connect an accessory which uses a HIROSE plug. See the instruction sheet of the AD-118 for details of the recommended accessories.  
**CAUTION:** The AD-118 does not have any waterproof protection. When it is connected, NEVER expose the adaptor and transceiver to rain, snow or any liquids.
- HM-184/HM-184H SPEAKER MICROPHONE  
Rugged type speaker microphone.  
The HM-184 and HM-184H meet IP67 requirements for waterproof protection.
- VS-4MC PTT SWITCH CABLE + HS-94/HS-95/HS-97 HEADSET  
VS-4MC: Used to connect a headset to a transceiver.  
HS-94: Ear-hook type  
HS-95: Neck-arm type  
HS-97: Throat microphone  
The VS-4MC meets IP54 requirement for splash resistance. When it is connected, the transceiver corresponds to IP54.
- MB-130 VEHICLE CHARGER BRACKET  
Mounts the BC-160 DESKTOP CHARGER on to variety of place in vehicle.

Approved Icom optional equipment is designed for optimal performance when used with an Icom transceiver. Icom is not responsible for the destruction or damage to an Icom transceiver in the event the Icom transceiver is used with equipment that is not manufactured or approved by Icom.

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