



BASIC MANUAL

VHF AIR BAND TRANSCEIVERS

IC-A16 IC-A16E

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

Icom Inc.



Thank you for choosing this Icom product.

This product is designed and built with Icom's state of the art technology and craftsmanship. With proper care, this product should provide you with years of trouble-free operation.

■ Important

READ ALL INSTRUCTIONS carefully and completely before using the transceiver. SAVE THIS INSTRUCTION MANUAL — This instruction manual contains important operating instructions for the IC-A16 and IC-A16E.

For Advanced features and instructions, see the FULL MANUAL on the Icom website for details.

<http://www.icom.co.jp/world/support/download/manual>

■ 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.

■ Features

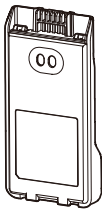
- 25 kHz/8.33 kHz channel spacing compatible
- Bluetooth® function that can connect your Wireless headset*1
- Compact, waterproof durable design (IP67/IP54*2 and MIL-STD-810-G)
- 17 hours battery life (With the BP-280)

*1 For only transceivers with the built-in Bluetooth unit.

*2 Only when the battery, antenna, and jack cap are attached.

■ Supplied accessories

Battery pack



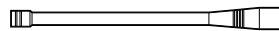
Belt clip



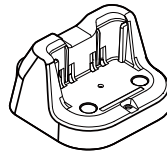
Handstrap



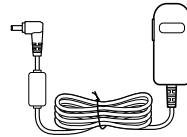
Antenna



Battery charger



Power adapter



NOTE:

- Some accessories are not supplied, or the shape is different, depending on the transceiver version.
- Confirm both battery sliding locks are locked in place, when attaching the battery pack or the battery case to the transceiver. Both sliding locks make a 'click' sound when locked.

■ Precautions

⚠ **DANGER! NEVER** use or charge Icom battery packs with non-Icom transceivers or non-Icom chargers. Only Icom battery packs are tested and approved for use with Icom transceivers 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 transceiver so that the antenna is very close to, or touching exposed parts of the body, especially the face or eyes, while transmitting.

⚠ **WARNING! NEVER** operate the transceiver with 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, reduce the volume level or discontinue use.

CAUTION: DO NOT short the terminals of the battery pack. Shorting may occur if the terminals touch metal objects such as a key, so be careful when placing the battery packs (or the transceiver) in bags, and so on. Carry them so that shorting cannot occur with metal objects. Shorting may damage not only the battery pack, but also the transceiver.

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 place or leave the transceiver in excessively dusty environments. This could damage the transceiver.

DO NOT place or leave the transceiver in direct sunlight or in areas outside of the specified temperature range:
IC-A16: -10°C (-14°F) $\sim +60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$)
IC-A16E: -20°C $\sim +55^{\circ}\text{C}$

BE CAREFUL! The transceiver meets: IP67/IP54* requirements (IP67: Dust tight and waterproof protection, IP54: Dust protection and splash resistance). However, once the transceiver has been dropped, dust and waterproof protections 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 cover or the optional speaker microphone is attached.

This transceiver is NOT approved for use by the general population in an uncontrolled environment. This transceiver is restricted to occupational use, work related operations only where the transceiver operator must have the knowledge to control.

This equipment is not suitable for use in locations where children are likely to be present.

CAUTION: In Canada, use of 8.33 kHz Channel Spacing of this radio is strictly prohibited and shall not be used.

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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.

■ Précautions (pour le Canada)

⚠ **DANGER!** N'utilisez JAMAIS et ne rechargez JAMAIS des blocs-batteries Icom avec des émetteurs-récepteurs non-Icom ou des chargeurs non-Icom. Seuls les blocs-batteries Icom sont testés et homologués pour être utilisés avec des émetteurs-récepteurs Icom ou pour être rechargés avec des chargeurs Icom. L'utilisation de blocs-batteries ou de chargeurs tiers ou de contrefaçon peut être à l'origine de fumées, d'incendie ou peut faire éclater la batterie.

⚠ **AVERTISSEMENT! NE JAMAIS** l'émetteur-récepteur de sorte que l'antenne soit très proche des parties exposées du corps, en particulier du visage ou des yeux, et ne les touche pas pendant la transmission.

⚠ **AVERTISSEMENT!** N'utilisez JAMAIS l'émetteur-récepteur avec un casque ou d'autres accessoires audio à des niveaux de volume élevés. Le fonctionnement continu à volume élevé peut provoquer une sonnerie dans vos oreilles. Si vous ressentez la sonnerie, réduisez le volume ou cessez d'utiliser.

ATTENTION: NE PAS court-circuiter les bornes de la batterie. Un court-circuit peut se produire si les bornes touchent des objets métalliques tels qu'une clé. Soyez donc prudent lorsque vous placez les batteries (ou l'émetteur-récepteur) dans des sacs, etc. Transportez-les de manière à ce qu'il n'y ait pas de court-circuit avec des objets métalliques. Un court-circuit peut endommager non seulement la batterie, mais également l'émetteur-récepteur.

ATTENTION: NE PAS utiliser de dissolvants agressifs tels que du Benzène ou de l'alcool lors du nettoyage, car ils endommageraient les surfaces de l'émetteur-récepteur. Si l'émetteur-récepteur est poussiéreux ou sale, nettoyez-le avec un tissu doux et sec.

ATTENTION: NE PAS placer l'émetteur-récepteur dans des environnements excessivement poussiéreux. Cela pourrait endommager l'émetteur-récepteur.

NE PAS placer ou laisser l'émetteur-récepteur en plein soleil ou dans un environnement soumis à des températures inférieures à -30°C (-22°F) ou supérieures à $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$).

MISE EN GARDE: L'émetteur-récepteur répond aux exigences IP67/IP54* (IP67: Protection étanche à la poussière et à l'eau, IP54: Protection contre la poussière et résistance aux éclaboussures). Cependant, une fois l'émetteur-récepteur tombé, la protection contre la poussière et la protection contre l'eau ne peuvent être garanties du fait que l'émetteur-récepteur peut être fissuré ou que le joint étanche à l'eau est endommagé, etc.

* Uniquement lorsque le cache-prise ou le microphone à haut-parleur en option est installé.

MISE EN GARDE: Utilisation de 8,33 kHz
Espacement des canaux de cette radio est strictement interdite et ne doit pas être utilisé au Canada.

■ Recommendation

CLEAN THE TRANSCEIVER THOROUGHLY IN A BOWL OF 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, and/or the charging terminals of the battery pack may corrode.

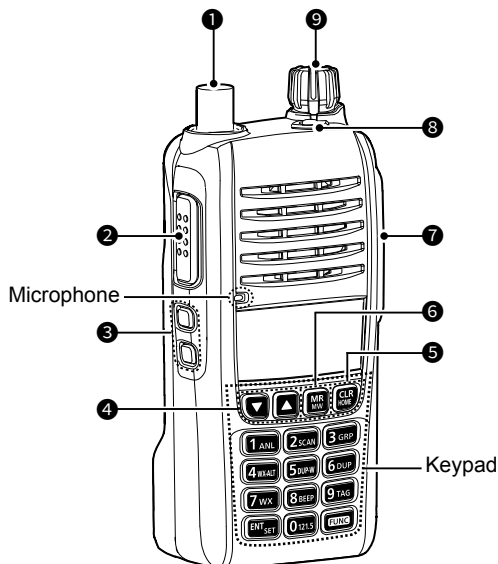
NOTE: If the transceiver's waterproof protection appears defective, carefully clean it with a soft, damp (fresh water) cloth, then dry it before operating. The transceiver may lose its waterproof protection if the case, jack cap, or connector cover is cracked or broken, or the transceiver has been dropped.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

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■ Front, top and side panels



- 1 ANTENNA CONNECTOR**
Connect the supplied antenna.
- 2 PTT SWITCH [PTT]**
Hold down to transmit, release to receive.
- 3 SQUELCH ADJUSTMENT KEYS [SQL▲]/[SQL▼]**
Push to adjust the squelch level.
- 4 UP/DOWN KEYS [▲]/[▼]**
 - Push to change or select the frequency, Memory channel, Set mode settings, and so on.
 - While scanning, push to change the scanning direction.
- 5 CLEAR/HOME KEY [CLR]/[HOME]**
 - Push to return to the VFO mode.
- 6 MEMORY/MEMORY WRITE KEY [MR]/[MW]**
 - Push to enter the Memory Channel Selection mode.
 - Push [FUNC], and then push this key to enter the Memory Write mode.
- 7 HEADSET JACK**
Connects a third party headset through the optional headset adapter.
- 8 LOCK KEY [LCK]**
 - Push to lock the keypad.
 - Hold down for 2 seconds to unlock the keypad.
- 9 VOLUME/POWER SWITCH [VOL]**
 - Rotate to turn the transceiver ON or OFF.
 - Rotate to adjust the audio output level.

■ Keypad

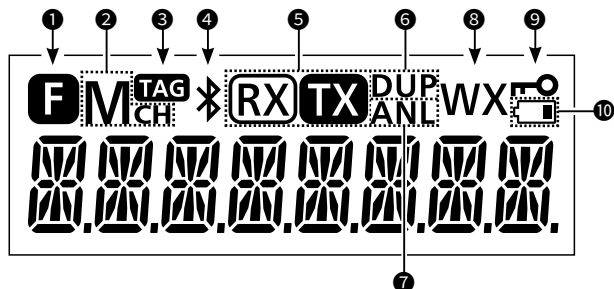
- Push to set the frequency, select a Memory channel, and so on.
- Push [FUNC], and then push or hold down another key within 3 seconds to use the secondary functions listed below.

KEYS	FUNCTIONS
Push [1]/[ANL]	Turn the Automatic Noise Limiter (ANL) function ON or OFF.
Push [2]/[SCAN]	Start a scan. ① Push [CLR] to stop a scan.
Push [3]/[GRP]	In the Memory mode, enter the Memory Selection mode.
Push [4]/[WX-ALT]*	Turn the Weather Alert function ON or OFF.
Push [5]/[DUP-W]*	Enter the Duplex Frequency Entry mode. ① Confirm the NAV band frequency is selected.
Push [6]/[DUP]*	Turn the Duplex function ON or OFF. ① Confirm the NAV band frequency is selected.
Push [7]/[WX]*	Enter the Weather Channel Selection mode.
Push [8]/[BEEP]	Turn the Key beep ON or OFF.
Push [9]/[TAG]	Tag or untag the selected Memory channel or Weather Channel*.
Hold down [ENT]/[SET] for 1 second	Enter the Set mode.
Push [0]/[121.5]	Select the emergency frequency.

*For only the USA version.

1 PANEL DESCRIPTION

■ Function display



- 1 FUNCTION ICON**
Displayed for 3 seconds when you push [FUNC], to use secondary functions assigned to a key.
- 2 MEMORY CHANNEL ICON**
Displayed when a Memory channel is selected.
- 3 TAG ICON**
Displayed when a tagged Memory channel is selected.
- 4 BLUETOOTH ICON**
Displayed when a Bluetooth headset is connected.
- 5 RX/TX ICON**
Displayed while receiving or transmitting.
- 6 DUPLEX ICON**
 - Displayed when the Duplex function is ON.
 - Blinks while entering the duplex frequency to a Memory channel.
- 7 AUTOMATIC NOISE LIMITER ICON**
Displayed when the Automatic Noise Limiter function is ON.
- 8 WEATHER ALERT ICON (For only the USA version.)**
Displayed when the Weather Alert function is ON.
- 9 LOCK ICON [L]**
Displayed when the Lock function is ON.
- 10 LOW BATTERY ICON**
 - Displayed when charging is required.
 - Blinks when the battery exhausted.

■ 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** 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! NEVER** place or leave battery packs in areas 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 battery pack's performance or shorten the battery cell's life.

⚠ **DANGER! NEVER** strike or otherwise impact the battery pack. Do not use the battery pack if it has been severely impacted or dropped, or if the pack has been subjected to heavy pressure. Battery pack 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** place battery packs near a fire. Fire or heat may cause them to rupture or explode. Dispose of used battery packs in accordance with local regulations.

⚠ **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** 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 cells to rupture.

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

CAUTION: DO NOT continue to use 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.

CAUTION: DO NOT expose the battery pack to rain, snow, saltwater, or any other liquids. Do not charge or use a wet pack. If the pack gets wet, be sure to wipe it with a clean dry cloth before using.

CAUTION: DO NOT use the battery pack out of the specified temperature range for the transceiver (-30°C ~ +60°C (-22°F ~ +140°F)) and the battery itself (-20°C ~ +60°C (-4°F ~ +140°F)). Using the battery out of its specified temperature range will reduce its performance and battery cell's life. Please note that the specified temperature range of the battery 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: DO NOT leave the pack fully charged, completely discharged, or in an excessive temperature environment (above 50°C, 122°F) 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 ~ +50°C (-4°F ~ +122°F)
(within a month)

-20°C ~ +40°C (-4°F ~ +104°F)
(within three months)

-20°C ~ +20°C (-4°F ~ +68°F)
(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 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 pack is between 300 and 500. Even when the pack appears to be fully charged, the operating time of the transceiver may become short when:

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

2 BATTERY CHARGING

■ 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.

⚠ **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 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.

CAUTION: DO NOT insert the transceiver (battery 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.

CAUTION: DO NOT charge the battery pack outside of the specified temperature range: 10°C ~ 40°C (50°F ~ 104°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.

■ Battery charger

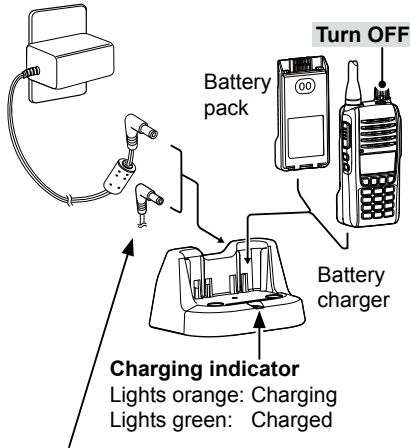
NOTE: Before attaching or detaching a battery pack, BE SURE to turn OFF the transceiver by rotating [VOL] fully counter clockwise until it makes a “click” sound. Otherwise, a transceiver malfunction could occur.

◇ Supplied battery charger

Charging time:

Approximately 3.5 hours for the BP-280

Power adapter*



The CP-23L (for a 12 V cigarette lighter socket) can be used instead of the power adapter.

* May not be supplied, or the shape may be different, depending on the transceiver version.

NOTE: If the charging indicator alternately blinks green and orange, remove the battery pack or the transceiver from the charger, then reinsert it.

◇ Optional BC-214 MULTI CHARGER

Charging time:

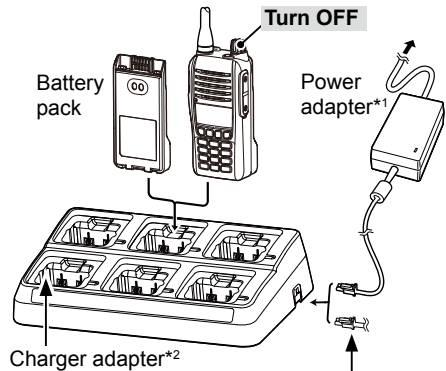
Approximately 2 to 3 hours for the BP-280

Additionally needed item (purchase separately):

The BC-157S AC ADAPTER or the OPC-656 DC POWER CABLE

CAUTION: DO NOT reverse the polarity when connecting the OPC-656 to a power source. This will ruin the battery charger.

Red: ⊕, Black: ⊖



Connect to a DC power supply:
12 to 16 V, at least 7 A
Red: ⊕, Black: ⊖

*1 A different type, or no power adapter is supplied, depending on the charger version.

*2 Charger adapter's shape may differ, depending on the charger version.

■ Using the Set mode

You can use the Set mode to set infrequently changed values or function settings.

1. Push [FUNC], and then hold down [ENT]/[SET] for 1 second.
 - The Set mode item is displayed.
2. Push [MR]/[MW] to select an item.
 - ① Push [ENT]/[SET] to go to the next tree level, go back a level by pushing [CLR]/[HOME].
3. Push [▲] or [▼] to select an option.
4. Push [CLR]/[HOME] to exit the Set mode.

◇ Set mode items

ITEM
Backlight "LIT"
MIC gain "MIC"
MIC Audio Input "MIA"
VOX setting "VOX"
VOX Level "VOL"
VOX delay "VOXD"
TOT "TOT"
Battery voltage "BATT"
Bluetooth settings "BT SET"
Bluetooth "BT"
Auto connect "AT"
Connect/Disconnect "CONNECT" / "DISCON"
Pairing "PAIRING"
Headset settings "HSET"
SCO "SCO"
SP Output "SP"
Icom headset "ICOM HS"
Power save "PSAV"
PTT "PTT"
PTT Beep "PTTB"
Initialize Bluetooth unit "INIT BT"
CPU version "CPU"
Bluetooth unit version "BT"

See the FULL MANUAL for each menu item's details. You can download the FULL MANUAL from the Icom website.

- ① The Set mode items contained in the transceiver may be different, depending on the transceiver's version or presets. Ask your dealer for details.

<http://www.icom.co.jp/world/support/download/manual>

Receiving and transmitting

◇ Setting the frequency

- ① If the transceiver is in the Memory mode, push [CLR]/[HOME] to exit the Memory mode.
- Use the keypad to set the frequency.

○ Selecting a Memory channel

1. Push [MR]/[MW] to enter the Memory mode.
 - “MCH” is displayed.
 - The memory channel's frequency or name is displayed, if it is entered.
2. Push [▲] or [▼] to select a channel.

TIP: To change the selected group:

- ① Confirm the transceiver is in the Memory mode.
1. Push [FUNC], and then push [GRP].
2. Push [▲] or [▼] to select a group, and then push [ENT]/[SET].

◇ Receiving

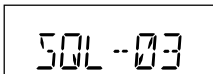
When receiving a signal, “RX” is displayed and audio should be heard.

- ① Rotate [VOL] to adjust the audio output level.



◇ Adjusting the squelch level

- Push [SQL▲]/[SQL▼] to adjust the squelch level until the noise just disappears, when no signal is received.
 - The squelch level is displayed while adjusting.



◇ Using the Automatic Noise Limiter (ANL) function

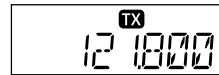
The function reduces noise components in the received signal, such as those caused by engine ignition systems.

- Push [FUNC], and then push [ANL] to turn the function ON or OFF.
 - “ANL” is displayed while the function is ON.

◇ Transmitting

CAUTION: DO NOT transmit without an antenna.

- Hold down [PTT], and then speak at your normal voice level.
 - “TX” is displayed.

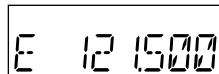


NOTE: When the battery is exhausted, beep sounds and the transceiver stops transmitting, even if you hold down [PTT].

Selecting the 121.5 MHz emergency frequency

In case of emergency, you can immediately select the 121.5 MHz emergency frequency.

- Push [FUNC], and then push [121.5] to select the emergency frequency.
 - ① Push [CLR] to return to the previously selected frequency.

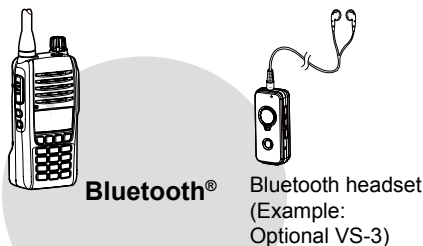


■ Using a Bluetooth® headset

(For only transceivers with the built-in Bluetooth unit)

Transceivers with the built-in Bluetooth unit can operate with Bluetooth headsets.

The communication range of Bluetooth is approximately 10 meters (33 ft).



NOTE:

- The Bluetooth communication range may vary, depending on the environment where you operate the device.

◇ Electromagnetic Interference

When you use a Bluetooth device, pay attention to the following:

Bluetooth devices operate in the 2.4 GHz band. The 2.4 GHz band is also used by other devices, such as Wireless LAN products, microwave ovens, RFID systems, amateur radio stations, and so on.

When using this device near such devices, interference may occur, causing a decrease in communication speed, and an unstable connection.

In such cases, use this device away from the other devices, or stop using those devices.

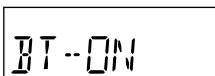
◇ Pairing with a device

You can pair maximum of 4 Bluetooth headsets to the transceiver.

- ① These instructions describe pairing with the VS-3 Bluetooth® headset, as an example.

1. Turning ON the transceiver's Bluetooth function

1. Push [FUNC], and then hold down [ENT]/[SET] for 1 second to enter the Set mode.
2. Select "BT SET," and then push [ENT]/[SET].
3. Select "ON," and then push [ENT]/[SET].



4. Push [CLR]/[HOME] to exit the Set mode.

2. Entering the VS-3 Pairing mode

Refer to the VS-3's instruction manual for details.

3. Pairing and connecting the Bluetooth headset

1. Push [FUNC], and then hold down [ENT]/[SET] for 1 second to enter the Set mode.
2. Select "PAIRING," and then push [ENT]/[SET].

BT SET > PAIRING

- The transceiver searches for a headset.
 - ① Push [CLR] to cancel searching.
 - "SUCCESS" and "*" is displayed if the headset or device is correctly connected.
3. Push [CLR]/[HOME] twice to exit the Set mode.

◇ Disconnecting a paired device

You can disconnect a paired Bluetooth device if it is not being used.

1. Push [FUNC], and then hold down [ENT]/[SET] for 1 second to enter the Set mode.
2. Select "DISCON," and then push [ENT]/[SET].

BT SET > **DISCON**

- "SUCCESS" is displayed and the headset is disconnected.
3. Push [CLR]/[HOME] twice to exit the Set mode.

◇ Unpairing a device

Before unpairing a connected headset or device, disconnect it by following the steps shown to the left.

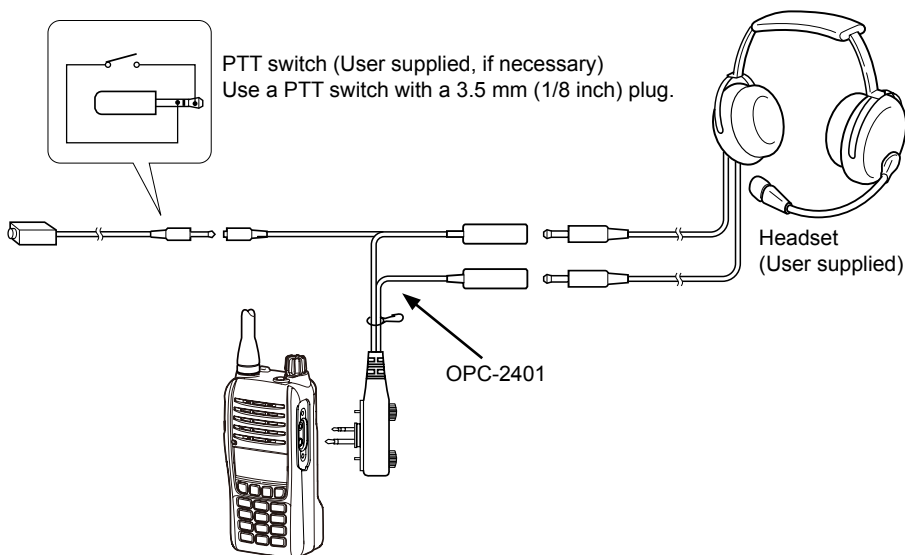
1. Push [FUNC], and then hold down [ENT]/[SET] for 1 second to enter the Set mode.
2. Select "CONNECT," and then push [ENT]/[SET].

BT SET > **CONNECT**

- A paired device's name is displayed.
 - ① Push [MR]/[MW] to display the Bluetooth device address.
 - ① Push [▲] or [▼] to select other paired headsets, if necessary.
3. Push [FUNC], and then push [CLR]/[HOME].
 - "DELETE?" is displayed.
 4. Push [ENT]/[SET].
 5. Push [CLR]/[HOME] twice to exit the Set mode.

■ Using a wired headset

Connect your headset through the optional OPC-2401 headset adapter.



■ Specifications Measurements made without an antenna.

① All stated specifications are subject to change without notice or obligation.

◇ General

Frequency range:	IC-A16	TX	118.000 ~ 136.99166 MHz
		RX	108.000 ~ 136.99166 MHz
		WX	161.650 ~ 163.275 MHz
	IC-A16E	TX/RX	118.000 ~ 136.99166 MHz
Channel spacing:			25 kHz/8.33 kHz
Mode:	IC-A16		6K00A3E/5K60A3E
			16K0G3E (WX)
	IC-A16E		6K80A3E/5K00A3E
Number of Memory channels:			200 Channels
Antenna impedance:			50 Ω nominal
Antenna connector:			BNC type
Power supply requirement:			7.2 V DC standard
Current drain:			Less than 1.8 A
Operating temperature range:	IC-A16		-10°C ~ +60°C, 14°F ~ 140°F
	IC-A16E		-20°C ~ +55°C
Dimensions*1 :			52.2 (W) × 111.8 (H) × 34.1 (D) mm,
			2.1 (W) × 4.4 (H) × 1.3 (D) inches
Weight (approximately):			257 g, 9.1 oz with BP-280

◇ Transmitter

Output power:			6.0 W (PEP), 1.8 W (CW)
Modulation limiting (IC-A16):			70 ~ 100%
Modulation depth (IC-A16E):			85%
Audio harmonic distortion:	IC-A16		Less than 10% (at 60% modulation)
	IC-A16E		Less than 10% (at 85% + 3dB modulation)
Ham and Noise ratio:			More than 35 dB
Spurious emissions:	IC-A16		More than 46 dB*2*3
	IC-A16E		Less than -36 dBm**4
Frequency stability:	IC-A16		±0.4 kHz
	IC-A16E		±1 ppm

◇ Receiver

Receive system:			Double conversion superheterodyne
Intermediate frequencies:			1st 46.35 MHz, 2nd 450 kHz
Sensitivity:	IC-A16	COM	Less than 0 dBμ (at 6 dB S/N)
		NAV	Less than 3 dBμ (at 6 dB S/N)
		WX	Less than -8 dBμ (at 12 dB SINAD)
	IC-A16E		Less than 0 dBμ (at 12 dB SINAD with CCITT)
Squelch sensitivity (Threshold):	COM/NAV		Less than 0 dBμ
	WX		Less than -5 dBμ
Spurious response rejection ratio:	IC-A16	COM/NAV	More than 60 dB
		WX	More than 30 dB
	IC-A16E		More than 70 dB

Audio output power: Int. SP 1500 mW (Typical) into an 8 Ω load
 (At 10% distortion) Ext. SP More than 350 mW into an 8 Ω load

- *1 Projections not included.
- *2 Except operating frequency ±62.5 kHz in 25 kHz channel spacing.
- *3 Except operating frequency ±20.825 kHz in 8.33 kHz channel spacing.
- *4 Except for operating frequency ±1 MHz.

■ Options

◇ Battery packs

• BP-278/BP-279/BP-280 BATTERY PACKS

Battery pack	Voltage	Capacity
BP-278	7.2 V	1130 mAh (minimum) 1190 mAh (typical)
BP-279	7.2 V	1485 mAh (minimum) 1570 mAh (typical)
BP-280	7.2 V	2280 mAh (minimum) 2400 mAh (typical)

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◇ Chargers/Adapters/DC cables

- **BC-213** DESKTOP CHARGER + **BC-123S** AC ADAPTER
 To rapidly charge a single battery pack.
- **BC-214** MULTI CHARGER + **BC-157S** AC ADAPTER+ **AD-130** CHARGER ADAPTER
 To rapidly charge up to 6 battery packs.
- **CP-23L** CIGARETTE LIGHTER CABLE
 Use when charging the battery pack from a 12 V cigarette lighter socket.
 (Use with the BC-213)
- **OPC-515L** DC POWER CABLE
 Used when charging battery packs using a 13.8 V DC power source instead of the power adapter. (Use with the BC-213)
- **OPC-656** DC POWER CABLE
 Use with a 13.8 V power source instead of the power adapter. (Use with the BC-214)

◇ Others

- **FA-B02AR** ANTENNA
- **OPC-2401** HEADSET ADAPTER
 To connect a wired headset to the transceiver.
- **HM-240** SPEAKER MICROPHONE
- **MB-130** CHARGER BRACKET
 Mounts the BC-213 desktop charger on a variety of places in a vehicle.
- **MB-133** BELT CLIP
- **MB-96F/MB-96FL/MB-96N** BELT HANGERS
- **VS-3** Bluetooth® HEADSET
 The Bluetooth headset with a [PTT] switch.

About the third party Bluetooth headsets:

Icom has checked the PTT operation with some 3M Peltor headsets, such as the WS Headset XP, WS ProTac XP and WS Alert XP. (Compatibility not guaranteed.)

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

All options and those specifications are subject to change without notice or obligation.

See the FULL MANUAL for the latest informations, if necessary. You can download the FULL MANUAL from the Icom website.

<http://www.icom.co.jp/world/support/download/manual>

7 INFORMATION

■ Channel ID list

- Channel spacing: 8.33 kHz

Operating Frequency (MHz)	Channel ID (Displayed Frequency)
118.0000	118.005
118.0083	118.010
118.0167	118.015
118.0250	118.030
118.0333	118.035
118.0417	118.040
118.0500	118.055
118.0583	118.060
118.0667	118.065
118.0750	118.080
118.0833	118.085
118.0917	118.090
118.1000	118.105

- Channel spacing: 25 kHz (Actual frequency is displayed.)

Operating Frequency (MHz)	Channel ID (Displayed Frequency)
118.0000	118.000
118.0250	118.025
118.0500	118.050
118.0750	118.075
118.1000	118.100

- ① These tables show just the display example between 118.0000 MHz and 118.1000 MHz. Not all frequencies in the band are shown.

CAUTION: In Canada, use of 8.33 kHz Channel Spacing of this radio is strictly prohibited and shall not be used.

■ About CE and DOC



Hereby, Icom Inc. declares that the versions of IC-A16E 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:

<http://www.icom.co.jp/world/support/>

■ Disposal



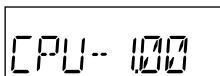
The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic

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.

■ Firmware version identification

You can identify your transceiver’s firmware version in the Set mode.

1. Push [FUNC], and then hold down [ENT]/[SET] to enter the Set mode.
2. Select “CPU.”
 - The firmware version is displayed.



■ FCC information

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.

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

■ Information FCC

Cet équipement a été testé et reconnu conforme aux limites fixées pour un appareil numérique de classe A, conformément au point 15 de la réglementation FCC. Ces limites sont définies de façon à fournir une protection raisonnable contre le brouillage préjudiciable lorsque cet appareil est utilisé dans un environnement commercial. Cet équipement génère, utilise et peut émettre un rayonnement de fréquence radio. S’il n’a pas été installé conformément aux instructions, il peut par ailleurs créer des interférences perturbant les communications radio. L’utilisation de cet appareil dans une zone résidentielle peut provoquer un brouillage préjudiciable, auquel cas l’utilisateur sera tenu de corriger la situation à ses frais.

MISE EN GARDE: Tout changement ou modification, non expressément approuvé par Icom Inc., peut annuler l’autorisation de l’utilisateur à utiliser cet appareil conformément à la réglementation FCC.

■ Safety training information



Your Icom radio generates RF electromagnetic energy while transmitting. This radio is designed for and classified as for “Occupational Use Only.”

This means 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 KDB Publication 447498 D03, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- American National Standards Institute (C95.1-2010), IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- American National Standards Institute (C95.3-2002), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields— RF and Microwave.
- The accessories listed on page i 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.
- Health Canada Safety Code 6 - Limits of Human Exposure to Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz.



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 an antenna specifically authorized by the manufacturer for use with this radio.
- **DO NOT** transmit for more than 50% of the 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 “TX” is displayed on the function display. You can cause the radio to transmit by pushing 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 which are listed on page 12 when attaching the radio to your belt, or other place, to ensure FCC and IC RF exposure compliance requirements are not exceeded.

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 within 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 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.

■ Infomation en matière de sécurité



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:

- Publication 447498 D03 de la FCC KDB, «Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields».
- Norme de l'American National Standards Institute (ANSI): IEEE C95.1-2010 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 C95.3-2002 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.
- Le Code de sécurité 6 de Santé Canada - Les limites d'exposition humaine à l'énergie électromagnétique dans la gamme de fréquences de 3 kHz à 300 GHz.



Afin de vous assurer que votre exposition à une énergie électromagnétique de RF se situe dans les limites permises par la FCC 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. 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»). Émettre pendant plus de 50% du temps total d'utilisation peut causer une exposition aux RF supérieure aux limites établies par la FCC. La radio est en train d'émettre lorsque le témoin du "TX" s'affiche sur l'écran ACL. 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 à la p. 12, 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. 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 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.

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.

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Count on us!

