



## INSTRUCTION MANUAL

VHF P25 TRUNKING  
MOBILE TRANSCEIVERS

**IC-F9511S**  
**IC-F9511T**

UHF P25 TRUNKING  
MOBILE TRANSCEIVERS

**IC-F9521S/T**  
**IC-F9523S/T**

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



The photo shows the 10-key version transceiver.

**Icom Inc.**

---

## 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-F9511S/IC-F9511T VHF P25 TRUNKING MOBILE TRANSCEIVERS** and the **IC-F9521S/IC-F9521T/IC-F9523S/IC-F9523T UHF P25 TRUNKING MOBILE TRANSCEIVERS**.

✓ **When the optional UT-125 AES/DES ENCRYPTION UNIT is installed:**

If re-exporting this product and/or AES encryption of this product is activated, you must comply with the export regulations of your country, which can be highly restrictive. **YOUR FAILURE TO COMPLY WITH EXPORT REGULATIONS MAY SUBJECT YOU TO FINES OR PENALTIES.** AES encryption products including this software fall under the control of the Japanese Government as described in Appendix I: Export Legal Controls and Appendix: Exchange Legal Controls. Please consult with your dealer or sales representative for details.


Icom, Icom Inc. and the Icom logo are registered trademarks of Icom Incorporated (Japan) in Japan, the United States, the United Kingdom, Germany, France, Spain, Russia and/or other countries.


All other products or brands are registered trademarks or trademarks of their respective holders.

---

## EXPLICIT DEFINITIONS

---

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.

 See the operating guide for details of Analog, MDC and P25 Trunking/Conventional system operations. Consult your Icom dealer or system operator for details concerning your transceivers programming.

✓ **INFORMATION:**

In this instruction manual, the following descriptions are used;  
IC-F9511S/IC-F9521S/IC-F9523S : “**Simple type**”  
IC-F9511T/IC-F9521T/IC-F9523T : “**10-key type**”

---

## FCC INFORMATION

---

### • FOR CLASS B UNINTENTIONAL RADIATORS:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

---

## ABOUT IPR

---

This device is made under license under one or more of the following U.S. Patents: #4,590,473; #4,636,791; #5,148,482; #5,185,796; #5,271,017; #5,377,229; #4,716,407; #4,972,460; #5,502,767; #5,146,497; #5,164,986; #5,185,795; #5,164,986, #5,185,795, and #5,146,497.

\* IPR means 'Intellectual Property Rights.'

---

## 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.

---

## PRECAUTIONS

---

⚠ **WARNING! NEVER** connect the transceiver to an AC outlet. This may pose a fire hazard or result in an electric shock.

⚠ **WARNING! NEVER** connect the transceiver to a power source of more than 16 V DC such as a 24 V DC. This could cause a fire or damage the transceiver.

⚠ **WARNING! NEVER** reverse the DC power cable polarity when connecting to a power source. This could damage the transceiver.

⚠ **WARNING! NEVER** cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the transceiver might be damaged.

**CAUTION: NEVER** place the transceiver where normal operation of the vehicle may be hindered or where it could cause bodily injury.

**CAUTION: NEVER** expose the transceiver to rain, snow or any liquids. The transceiver may be damaged.

**DO NOT** use or place the transceiver in areas with temperatures below  $-30^{\circ}\text{C}$  ( $-22^{\circ}\text{F}$ ) or above  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ), or in areas subject to direct sunlight, such as the dashboard.

**DO NOT** place the transceiver in excessively dusty environments or in direct sunlight.

**DO NOT** place the transceiver against walls or putting anything on top of the transceiver. This will obstruct heat dissipation.

**DO NOT** use harsh solvents such as benzine or alcohol to clean the transceiver, as they will damage the transceiver's surfaces. If the transceiver becomes dusty or dirty, wipe it clean with a soft, dry cloth.

During mobile operation, **DO NOT** operate the transceiver without running the vehicle's engine. When the transceiver's power is ON and your vehicle's engine is OFF, the vehicle's battery will soon become exhausted.

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

Place the transceiver in a secure place to avoid inadvertent use by children.

When the optional RMK-2 and the supplied/optional microphone\* are attached, the transceiver's front panel meets IP54 requirements for dust-protection and splash resistance. However, once the front panel with the RMK-2 have been dropped, dust-protection and splash resistance cannot be guaranteed because of possible damage to these cases or the waterproof seal.

\* The main body of the microphone is not dust-protection and splash resistance.

Use Icom microphones only (supplied or optional). Other manufacturer's microphones have different pin assignments, and may damage the transceiver.

---

# TABLE OF CONTENTS

---

IMPORTANT .....	i
EXPLICIT DEFINITIONS .....	i
FCC INFORMATION .....	ii
ABOUT IPR .....	ii
VOICE CODING TECHNOLOGY .....	ii
PRECAUTIONS .....	iii
TABLE OF CONTENTS .....	iv

## **1 PANEL DESCRIPTION..... 1–6**

■ Front panel .....	1
■ Function display .....	3
■ Programmable function keys .....	4

## **2 BASIC OPERATION..... 7–12**

■ Turning power ON .....	7
■ Channel selection.....	7
■ Receiving and transmitting .....	8
■ Clock function.....	9
■ Wake up function .....	10
■ Sleep function .....	11
■ User set mode .....	12

## **3 CONNECTION AND MAINTENANCE ..... 13–15**

■ Rear panel connection .....	13
■ Supplied Accessories.....	14
■ Mounting the transceiver .....	15
■ Antenna .....	15
■ Fuse replacement .....	15
■ Cleaning .....	15

## **4 OPTIONS..... 16**

## **5 SAFETY TRAINING INFORMATION..... 17–18**

1

2

3

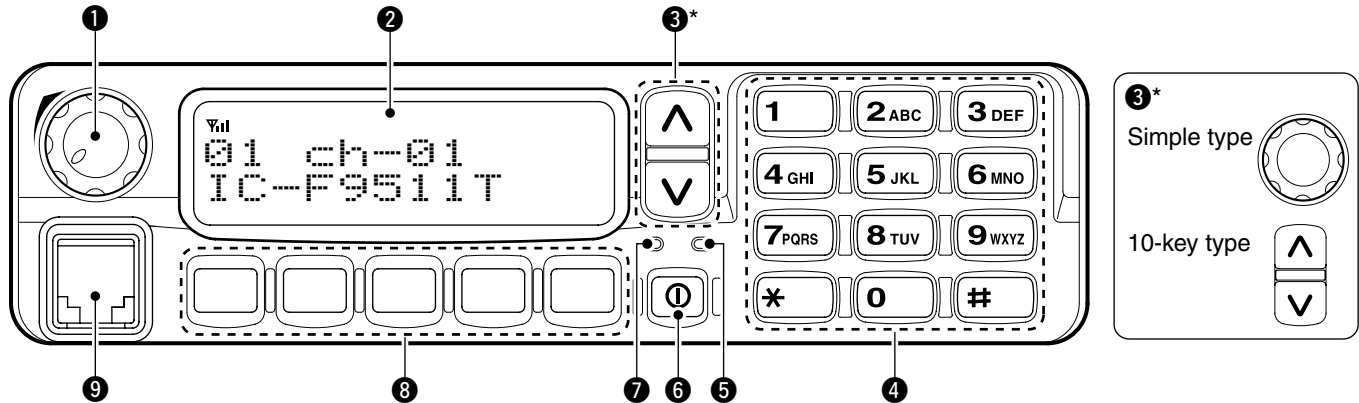
4

5

# 1

## PANEL DESCRIPTION

### ■ Front panel



#### 1 AF VOLUME CONTROL KNOB

Rotate the knob to adjust the audio output level.

- Minimum audio level is pre-programmed.

#### 2 FUNCTION DISPLAY (p. 3)

Displays a variety of information, such as an operating channel number/name, DTMF numbers and audible condition, etc.

#### 3 DIAL or UP/DOWN KEYS

- Simple type: **DIAL**  
Rotate to select an operating channel, etc.
- 10-key type: **UP/DOWN Keys**  
Push to select an operating channel, etc.

\*The desired function can be assigned by your dealer. (p. 4)

**4 10-KEYPAD** (10-key type only)

The keypad allows you to enter digits to:

- Select memory channels, tone channels and DTMF codes (when in the DTMF code channel selection mode)
- Start up with a password
- Input the Individual ID code for digital operation. (Depending on the pre-setting)

**5 BUSY INDICATOR**

Lights green while receiving a signal, or when the squelch is open.

**6 POWER SWITCH [POWER]**

Push to turn the power ON and OFF.

- The following functions are available at power ON as options:
  - Automatic scan start
  - Password prompt
  - Set mode

**7 TRANSMIT INDICATOR**

Lights red while transmitting.

**8 DEALER-PROGRAMMABLE KEYS**

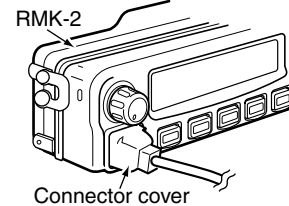
Desired functions can be programmed independently by your dealer. (p. 4)

/// In this instruction manual, these keys are from the left, called [P0]/[P1]/[P2]/[P3]/[P4].

**9 MICROPHONE CONNECTOR**

Connect the supplied or optional microphone.

- When you connect a microphone, be sure to fit the connector cover of the microphone into the connector to maintain the front panel's dust protection and splash resistance\*.
- \*Only when the optional RMK-2 is attached.



/// **NEVER** connect non-specified microphones. The pin assignments may be different and the transceiver may be damaged.

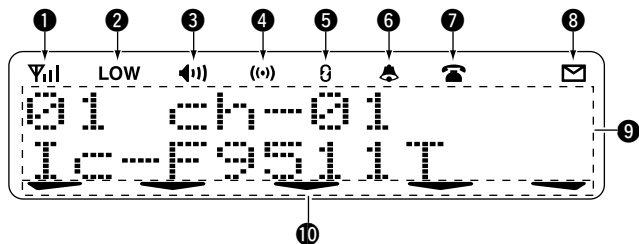
◇ **MICROPHONE**

The supplied microphone has a PTT switch and a hanger hook.

- The following functions are available when the microphone is on or off hook (depending on the setting):
  - Automatic scan starts when it is on hook.
  - Scan is cancelled when it is off hook.
  - Scan is paused when it is off hook.
  - Automatic priority channel selection is available when it is off hook.
  - Sets to 'Inaudible' condition (mute condition) when it is on hook.
  - Sets to 'Audible' condition (unmute condition) when it is off hook.

# 1 PANEL DESCRIPTION

## ■ Function display



### 1 RECEIVED SIGNAL STRENGTH INDICATOR

Indicates relative signal strength level.



### 2 LOW POWER INDICATOR

Appears when low output power is selected.

- When high output power is selected, no indicator appears.

### 3 AUDIBLE INDICATOR

Appears when the channel is in the 'audible' (unmute) condition.

### 4 COMPANDER INDICATOR

Appears when the compander function\* is activated.

- \* Analog mode operation only

### 5 SCRAMBLER INDICATOR

Appears when the voice scrambler or encryption function is activated.

### 6 BELL INDICATOR

Appears/blinks when a matched signal is received, depending on the pre-programming.

### 7 TELEPHONE INDICATOR

Appears when a phone call\* is received.

- \* P25 operation only

### 8 SHORT MESSAGE INDICATOR

Appears when an Status message or Short message is received.

### 9 ALPHANUMERIC DISPLAY

Displays an operating channel number, channel name, Set mode contents, DTMF code, etc.

### 10 ACTIVATED KEY INDICATOR

Appears above the key assigned as [Scan Add/Del (Tag)] key when that key has been activated.

See the operating guide for details of Analog, MDC and P25 Trunking/Conventional system operations. Consult your Icom dealer or system operator for details concerning your transceiver's programming.



## ■ Programmable function keys

The following functions can be assigned to [DIAL]\*, [UP], [DOWN], [P0], [P1], [P2], [P3] and [P4] 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.

\*The functions you can assign to [DIAL] are limited.  
(Only functions marked with ☆ can be assigned.)

### ☆ **CH UP AND DOWN KEYS**

- Push (or Rotate)\* to select an operating channel.
- Push (or Rotate)\* to select a scan group after pushing and holding [Scan].

\*Rotate when this function is assigned to [DIAL].

☆ **ZONE UP AND DOWN KEY** (This function is for [DIAL] only)  
Rotate to select the desired zone.

### **ZONE KEY**

Push this key, then push [CH Up] or [CH Down] or rotate [CH Up/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 KEY**

- Push to start and cancel scanning operation.
  - When the Power ON Scan or Auto Scan function starts a scan, push this key to cancel the scan. The canceled scan resumes after a specified time period.
- Push and hold this key for 1 sec. to indicate a scan group, then push [CH Up] or [CH Down] or rotate [CH Up/Down]\* to select the desired one. (Depending on the pre-setting.)

\*Simple type only

---

# 1 PANEL DESCRIPTION

## **SCAN ADD/DEL (TAG) KEY “SCAN”**

- ➔ Push to add a channel to, or delete it from the current scan list.
  - When a channel is added to the current scan list, the display quickly shows “SCAN ON.” When a channel is deleted from the current scan list, the display quickly shows “SCAN OFF.” After showing “SCAN ON” or “SCAN OFF,” the display quickly shows the current scan list text.
- ➔ You can add a channel to, or delete it from the scan list after selecting the list.
  1. Hold down for 1 second to display the current scan list, and then push [CH Up] or [CH Down] to select a desired list.
  2. Push this key to add a channel to, or delete it from the selected list.
    - When a channel is added to the selected scan list, the display quickly shows “SCAN ON.” When a channel is deleted from the selected scan list, the display quickly shows “SCAN OFF.”
  3. Hold down this key for 1 second to exit the scan list selection mode.
- ➔ Push this key while a scan is paused on a channel, except for primary or secondary channel, and then the channel is deleted from the scan list.
  - Depending on the setting, the deleted channel is added to the scan list again after the scan is cancelled. (Nuisance Delete function)

## **PRIO A/B KEYS**

- ➔ Push to select Priority A or Priority B channel.
- ➔ Push and hold [Prio A (Rewrite)] or [Prio B (Rewrite)] for 1 sec. to assign the operating channel to the Priority A or Priority B channel.

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

Push to select the memory channel 1, 2, 3 or 4.

## **MONI KEY**

- ➔ Push to mute and release the CTCSS (DTCS), 2-tone, NAC or Talkgroup ID squelch mute. Open any squelch/deactivate any mute while pushing and holding this key.
  - Depending on the pre-setting, the ‘Audible’ (unmute) condition may automatically return to the ‘Inaudible’ (mute) condition, after a specified time period.
- ➔ Depending on the pre-setting, pushing and holding this key for 1 sec. cancels the scan.

## **TALK AROUND KEY** (Conventional operation only)

Turn the talk around function ON or OFF.

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

## **PUBLIC ADDRESS KEY**

Push to activate the Public Address (PA) function. When the PA function is activated, the audio output can be controlled from the transceiver separately with [CH Up] or [CH Down] or rotate [CH Up/Down]\*.

- This function is available when the external unit, such as an audio amplifier, speaker, etc. is additionally connected. (p. 14)
- Push this key, then speak into the microphone while pushing and holding [PTT].

\*Simple type only

**RX SPEAKER KEY**

Push to turn the RX speaker function ON or OFF. When the RX speaker function is turned ON, the received audio can be heard via the external speaker that is connected to the D-Sub 25-pin.

- This function is available when the external speaker is additionally connected. (p. 14)
- This function is useful when you are out of the vehicle.
- The audio output level is linked to the transceiver's volume control.

**LOCK KEY**

Push and hold to electronically lock all programmable keys except the following: [Moni], [Light], [Lock], [Emergency], [Surveillance] and [OPT 1/2/3].

**LIGHT KEY**

Push to turn the transceiver's backlight ON for about 5 sec. when the backlight function is turned OFF in user set mode. (p. 12)

**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.

**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.

**HOOK SCAN KEY**

When the on hook scan function is activated, push this key to stop scanning temporarily. Push this key again to re-start scanning.

**USER SET MODE KEY**

- ➔ Push and hold to enter user set mode.
  - During in the user set mode, push this key to select an item that is enabled by your dealer, and change the value or condition by pushing [CH Up] or [CH Down] or rotating [CH Up/Down]\*.
- ➔ Push and hold this key again to exit user set mode.

**OPT 1/2/3 KEYS**

Push to control the output signal level from the optional unit connector.

**CLOCK KEY**

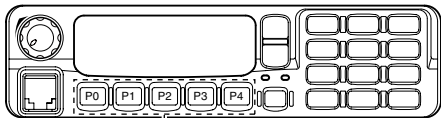
- ➔ Push to indicate the current time on the LCD. (p. 9)
  - While the current time is indicated, push and hold this key for 1 sec. to enter the time data edit mode.
- ➔ Push and hold for 1 sec. to enter the clock set mode. (pp. 10, 11)
  - During in the clock set mode, push this key to select an item, and change the value or condition by pushing [CH Up] or [CH Down] or rotating [CH Up/Down]\*.

\*Simple type only

## ■ Turning power ON

When you use the transceiver for the first time, or after the transceiver has sat unused for a long time, make sure to check the date and time indication after turning the power ON. If the time and date are not correct, reset them. (p.10)

- ① Push [ⓘ] 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.
  - \*10-key type only:
  - The keys as below can be used for password input: The transceiver detects numbers in the same block as identical. Therefore "01234" and "56789" are the same.



\*In this instruction manual, these keys are from the left, called [P0]/[P1]/[P2]/[P3]/[P4].

KEY	P0	P1	P2	P3	P4
NUMBER	0 5	1 6	2 7	3 8	4 9

- ③ When the "PASSWORD" indication does not clear after inputting 6 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:**

To select the desired operating channel:

- Push [CH Up] or [CH Down].
- Rotate [CH Up/Down]\*.
- Push one of [MR-CH 1] to [MR-CH 4].

### **ZONE TYPE:**

To select the desired zone:

- Push [Zone], then push [CH Up] or [CH Down].
- Rotate [Zone Up/Down]\*.

### **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.

\*Simple type only

## ■ Receiving and transmitting

### **Receiving:**

- ① Push [**1**] to turn the power ON.
- ② Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to select a channel, in sequence.
- ③ While receiving a call, adjust the audio output level to a comfortable listening level.

\*Simple type only

### **Transmitting:**

Wait for the channel to become clear to avoid interference.

- ① Take the microphone off hook.
  - The 'audible' condition is selected and BUSY indicator lights green.
  - A priority channel may be selected automatically.
- ② Wait for the channel to become clear.
  - The channel is busy when BUSY indicator lights green.
- ③ While pushing and holding [PTT], speak into the microphone at your normal voice level.
- ④ Release [PTT] 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; "M") does not appear.)
  - The channel is busy.
  - Un-matched (or matched) CTCSS is received.  
(Depending on the pre-setting)
  - Un-matched (or matched) NAC is received.\*  
(Depending on the pre-setting)
  - The selected channel is a 'receive only' channel.
- \*Digital mode operation only.

#### • **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.

## 2 BASIC OPERATION

### ■ Clock function

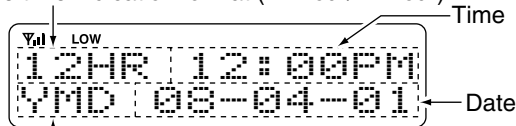
The transceiver indicates the current time and date when [Clock] is pushed. And you can change the indication format and time/date settings.

When you use the transceiver for the first time, or after the transceiver has sat unused for a long time, make sure to check the date and time indication after turning the power ON. If the time and date are not correct, reset them. (p.10)

#### ◇ Time and date indication

- ① Push [Clock] to indicate the current time and date on the LCD.
  - When the indication format is set to 12-hour, “AM” or “PM” is indicated.
  - The LCD indication returns to the stand-by mode after 30 sec. has passed with no operation.

The time indication format (12-hour/24-hour)

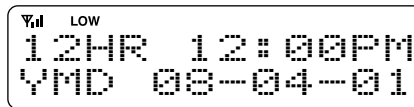


Date indication format (Y: Year, M: Month, D: Day)

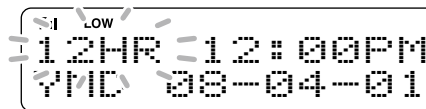
- ② Push [Clock] again to return to the stand-by mode.

#### ◇ Time and date settings

- ① Push [Clock] to indicate the current time and date on the LCD.

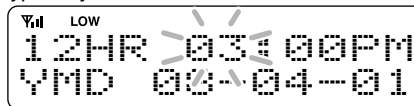


- ② Push and hold [Clock] for 1 sec. to enter the time and date setting mode.
  - The time indication format, “24HR” or “12HR” blinks.

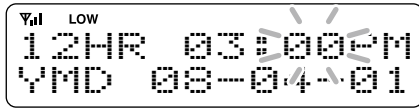


- ③ Push [Clock] to select the desired item to be changed.
- ④ Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to set the selected item.

\*Simple type only



- ⑤ Push [Clock] to set.  
• The next item blinks.



- ⑥ Repeat steps ③ to ⑤ to set items.  
⑦ After setting, push and hold [Clock] for 1 sec. to program.  
• Return to the time and date setting mode.  
⑧ Push [Clock] to return to the stand-by mode.

## Wake up function

The wake up function allows the transceiver to be automatically turned ON according to the wake up time setting.

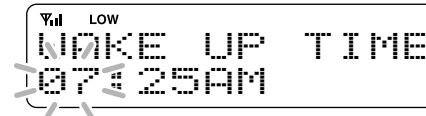
- ① Push and hold [Clock] for 1 sec. to enter the clock set mode.  
• “WAKE UP” is indicated.



- ② Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to turn the wake up function ON.  
③ Push [Clock] to set, and select “WAKE UP TIME.”



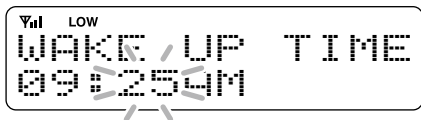
- ④ Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to enter the wake up time edit mode.  
• The 'hour' data blinks.



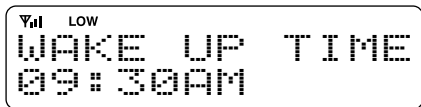
## 2 BASIC OPERATION

- ⑤ Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to input the 'hour' data for wake up time. After inputting, push [Clock] to set.

- The 'minutes' data blinks.



- ⑥ Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to Input the 'minutes' data for wake up time. After inputting, push [Clock] to set.



- ⑦ Push and hold [Clock] for 1 sec. to exit the clock set mode.
- Return to the stand-by mode.

\*Simple type only

## ■ Sleep function

The sleep function allows the transceiver to be automatically turned OFF according to the sleep time setting.

- ① Push and hold [Clock] for 1 sec. to enter the clock set mode.
- "WAKE UP" is indicated.
- ② Push [Clock] several times to select "SLEEP"



- ③ Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to select "ON" or "ON EXCPT EMR" to turn the sleep function ON.
- When "ON EXCPT EMER" is selected, the transceiver will be automatically turned OFF at the sleep time. However, during the emergency mode, the sleep function will not function, even if the sleep time period starts.
- ④ Push [Clock] to set, and select "SLEEP TIME."

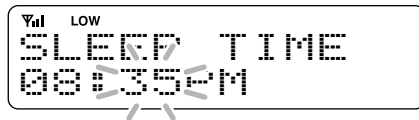




- ⑤ Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to enter the sleep time edit mode.
- The 'hour' data blinks.



- ⑥ Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to Input the 'hour' data for sleep time. After inputting, push [Clock] to set.
- The 'minutes' data blinks.



- ⑦ Push [CH Up] or [CH Down], or rotate [CH Up/Down]\* to Input the 'minutes' data for sleep time. After inputting, push [Clock] to set.



- ⑧ Push and hold [Clock] for 1 sec. to exit the clock set mode.
- Return to the stand-by mode.

\*Simple type only

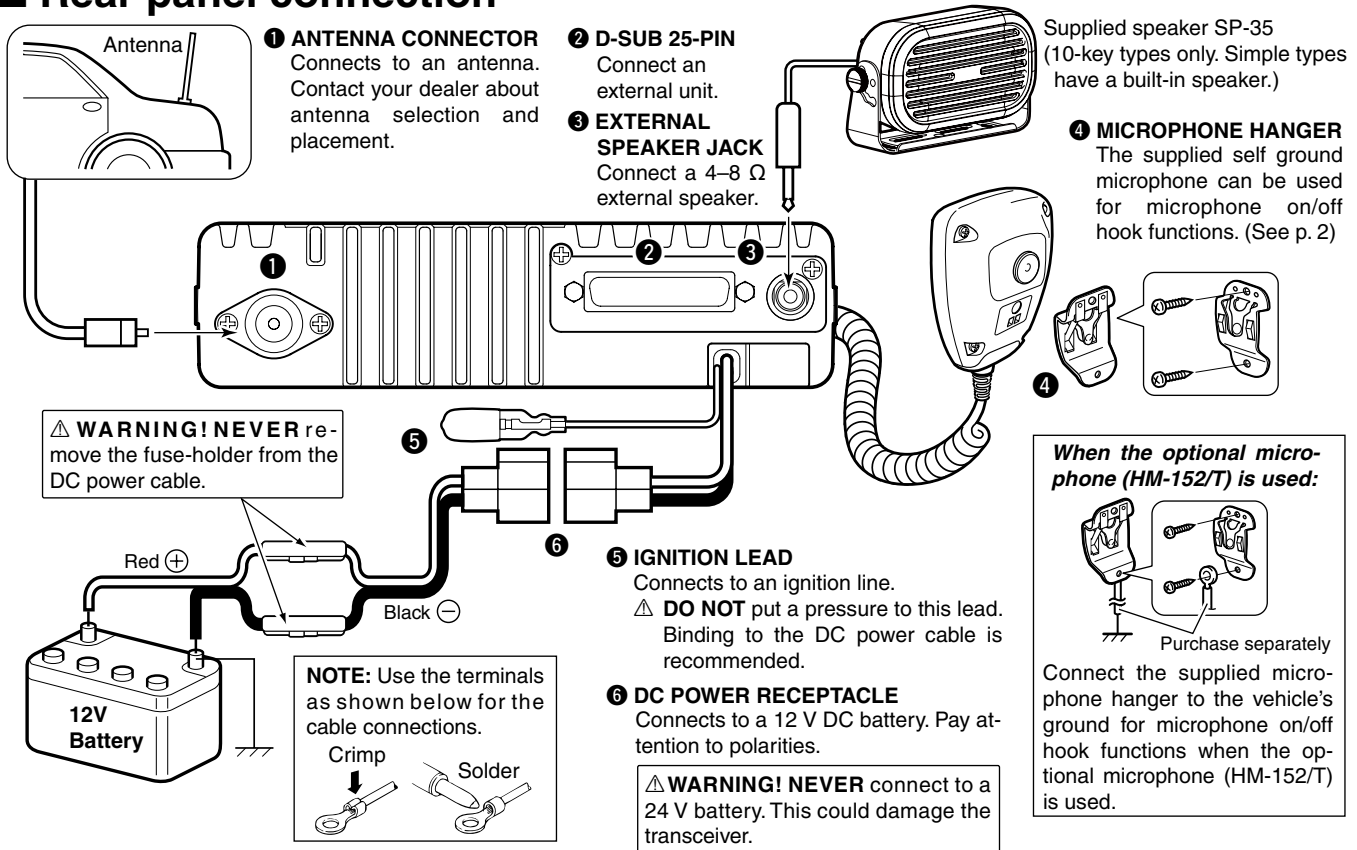
## ■ User set mode

If the transceiver has [User Set Mode] assigned to it, you can "customize" the transceiver operation to suit your preferences and operating style.



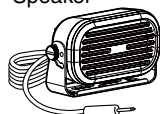

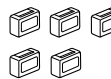

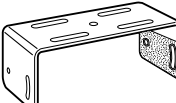






### Entering the user set mode:

- ① Push and hold [User Set Mode] for 1 sec. to enter the User Set mode.
- ② Push [User Set Mode] to select the appropriate item. Then, push [CH Up] or [CH Down] to set the desired value or option.
  - Available set mode functions are **Backlight**, **LCD Contrast**, **Beep**, **Beep Level**, **Ringer Level**, **SQL Level**, **AF Min. Level**, **Mic Gain**, **Horn**, **Battery Voltage**, **Signal Moni**, **Lone Worker** and **System Information**.
- ③ Push and hold [User Set Mode] for 1 sec. again to exit the User Set mode.

## ■ Rear panel connection



## ■ Supplied Accessories

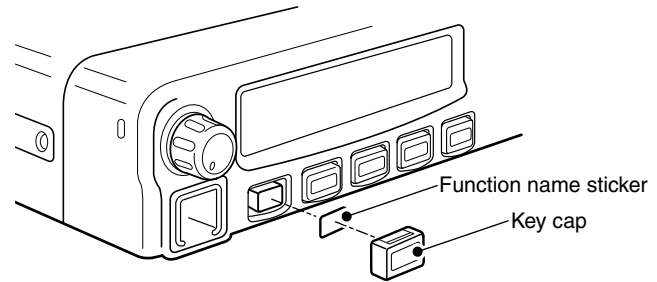
<p>Microphone</p> 	<p>Microphone hanger and screw set</p> 	<p>Speaker*<sup>1</sup></p> 
<p>DC power cable</p> 	<p>Key caps</p> 	<p>Function name stickers*<sup>2</sup></p> 
<p>Mounting bracket</p>  <p>*<sup>1</sup> 10-key type only *<sup>2</sup> Used for labelling the programmable function keys according to their assigned functions.</p>	<p>Flat washers</p>  <p>Spring washers</p>  <p>Nuts</p> 	<p>Bracket bolts</p>  <p>Mounting screws (M5×12)</p>  <p>Self-tapping screws (M5×16)</p> 

### • Function name stickers

There are no names on the programmable function keys since the functions can be freely assigned to these keys.

Attach the supplied function name stickers as below to the appropriate keys for easy recognition of that key's assigned function.

Then, protect the attached stickers from unsticking with the supplied key cap as below.

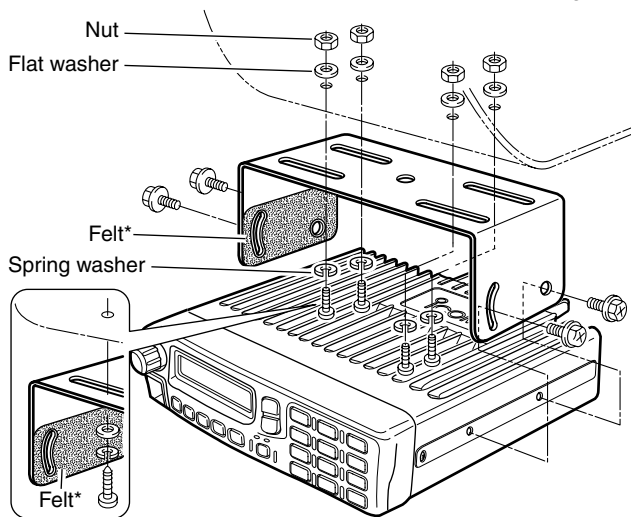


### 3 CONNECTION AND MAINTENANCE

#### ■ Mounting the transceiver

The universal mounting bracket supplied with your transceiver allows overhead or dashboard mounting.

- Mount the transceiver securely with the 4 supplied screws to a thick surface which can support more than 1.5 kg.



When using self-tapping screws

\*Felts reduce the vibration effects.

#### ■ Antenna

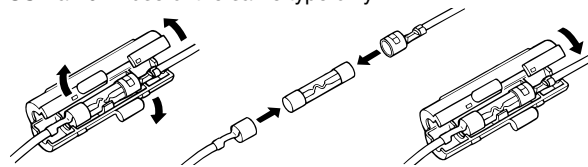
A key element in the performance of any communication system is an antenna. Contact your dealer about antennas and the best places to mount them.

#### ■ Fuse replacement

A fuse is installed in the supplied DC power cable. If a fuse blows, or the transceiver stops functioning, track down the source of the problem, have it repaired, and replace the damaged fuse with a new rated one.

- Fuse rating: 20 A

**USE** a 20 A fuse of the same type only.



#### ■ Cleaning

If the transceiver becomes dusty or dirty, wipe it clean with a soft, dry cloth.



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

- **RMK-2** SEPARATION KIT +  
**OPC-607/OPC-608/OPC-609/OPC-726** SEPARATION CABLE  
 Allows you to install the transceiver front panel separately from the main unit for operating convenience.
- **SP-22/SP-30/SP-35/SP-35L** EXTERNAL SPEAKERS  
 Input impedance : 4 Ω  
 SP-22/SP-35/SP-35L: Rated input; 5 W, Max. input; 7 W  
 SP-30: Rated input; 20 W, Max. input; 30 W
- **HM-152/HM-152T/HM-148G/HM-148T** HAND MICROPHONES  
 HM-152 : Hand microphone  
 HM-152T : DTMF microphone  
 HM-148G: Self ground heavy duty microphone  
 HM-148T : Self ground heavy duty DTMF microphone  
 The 10-keypad of this microphone can be used for the DTMF code transmission only.
- **SM-25** DESKTOP MICROPHONE

- **OPC-1132A/OPC-347** DC POWER CABLES  
 OPC-1132A : 3 m (9.8 ft)  
 OPC-347 : 7 m (23 ft)
- **OPC-1532/OPC-1871** ZONE COPY CABLES  
 OPC-1532 : Mobile to mobile zone copy cable.  
 OPC-1871 : Mobile to handy zone copy cable.
- **MB-77** WALL MOUNT BRACKET
- **UT-125** AES/DES ENCRYPTION UNIT
- **UT-128** DES ENCRYPTION UNIT

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 it 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.



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.

For compliance with FCC and Industry Canada RF Exposure Requirements, the transmitter antenna installation shall comply with the following two conditions:

1. The transmitter antenna gain shall not exceed 0 dBi.
2. IC-F9511S/T:

The antenna is required to be located outside of a vehicle and kept at a distance of 45 cm or more between the transmitting antenna of this device and any persons during operation. For small vehicle as worst case, the antenna shall be located on the roof top at any place on the centre line along the vehicle in order to achieve 45 cm separation distance. In order to ensure this distance is met, the installation of the antenna must be mounted at least 45 cm away from the nearest edge of the vehicle in order to protect against exposure to bystanders.

IC-F9521S/T:

The antenna is required to be located outside of a vehicle and kept at a distance of 38.6 cm or more between the transmitting antenna of this device and any persons during operation. For small vehicle as worst case, the antenna shall be located on the roof top at any place on the centre line along the vehicle in order to achieve 38.6 cm separation distance. In order to ensure this distance is met, the installation of the antenna must be mounted at least 38.6 cm away from the nearest edge of the vehicle in order to protect against exposure to bystanders.

3. IC-F9511S/T:

Transmit only when people outside the vehicle are at least the recommended minimum distance of 100 cm away from the properly installed antenna. This separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements in the applicable RF exposure compliance standards.

IC-F9521S/T:

Transmit only when people outside the vehicle are at least the recommended minimum distance of 86.4 cm away from the properly installed antenna. This separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements in the applicable RF exposure compliance standards.



**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 an 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”). “50% duty cycle” is also applicable to PSTN (Public Switched Telephone Network) mode. Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the “TX indicator” lights red. You can cause the radio to transmit by pressing the “PTT” switch.

### 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.



AVERTISSEMENT

**Notre 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.**

Afin de satisfaire aux exigences de la FCC et d'IC en matière d'exposition aux RF, il est nécessaire que l'antenne soit installée conformément aux trois conditions suivantes:

1. Le gain de l'antenne du radio émetteur ne doit pas dépasser 0 dBi.
2. IC-F9511S/T:

Il faut que l'antenne émettrice de cet appareil soit placée à l'extérieur d'un véhicule et tenue éloignée d'au moins 45 centimètres de toute personne pendant le fonctionnement. Dans le pire des cas, pour un petit véhicule, l'antenne doit être placée sur le toit, n'importe où dans l'axe central du véhicule, afin de respecter une distance de 45 cm du bord le plus rapproché du véhicule et ainsi éviter que les personnes présentes soient exposées.

IC-F9521S/T:

Il faut que l'antenne émettrice de cet appareil soit placée à l'extérieur d'un véhicule et tenue éloignée d'au moins 38.6 centimètres de toute personne pendant le fonctionnement. Dans le pire des cas, pour un petit véhicule, l'antenne doit être placée sur le toit, n'importe où dans l'axe central du véhicule, afin de respecter une distance de 38.6 cm du bord le plus rapproché du véhicule et ainsi éviter que les personnes présentes soient exposées.

3. IC-F9511S/T:

Émettre uniquement lorsque les personnes à l'extérieur du véhicule se trouvent à au moins la distance minimale recommandée de 100 cm de l'antenne correctement installée. Cette distance de sécurité assurera que les personnes soient placées suffisamment loin d'une antenne correctement fixée à l'extérieur pour satisfaire aux exigences en matière d'exposition aux RF, en vertu des normes de conformité applicables.

IC-F9521S/T:

Émettre uniquement lorsque les personnes à l'extérieur du véhicule se trouvent à au moins la distance minimale recommandée de 86.4 cm de l'antenne correctement installée. Cette distance de sécurité assurera que les personnes soient placées suffisamment loin d'une antenne correctement fixée à l'extérieur pour satisfaire aux exigences en matière d'exposition aux RF, en vertu des normes de conformité applicables.



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»). 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.

### 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.

**Count on us!**

A-6625H-1US-④

Printed in Japan

© 2008–2015 Icom Inc.

Printed on recycled paper with soy ink.

**Icom Inc.**

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