



INSTRUCTION MANUAL

WIDEBAND RECEIVER IC-RX7

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

Icom Inc.



FOREWORD

Thank you for purchasing this Icom product. The IC-RX7 WIDEBAND RECEIVER is designed and built with Icom's superior technology and craftsmanship. With proper care, this product should provide you with years of trouble-free operation.

We want to take a couple of moments of your time to thank you for making your IC-RX7 your radio of choice, and hope you agree with Icom's philosophy of "technology first." Many hours of research and development went into the design of your IC-RX7.

FEATURES

- *Covers 0.150–1300 MHz* wide frequency range*

* Some frequency bands are inhibited according to version

- *Splash-resistance construction (IPX4)*

Only when supplied antenna, battery pack and cap are attached.

- *External power supply operation*
- *1600 memory channels with 26 categories are available*
- *Optional PC programming*


IMPORTANT

READ ALL INSTRUCTIONS carefully and completely before using the receiver.

SAVE THIS INSTRUCTION MANUAL— This instruction manual contains important operating instructions for the IC-RX7.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	Recommended for optimum use. No risk of personal injury, fire or electric shock.

 Versions of the IC-RX7 which display the "CE" symbol on the serial number seal, comply with the essential requirements of the European Radio and Telecommunication Terminal Directive 1999/5/EC, and that any applicable Essential Test Suite measurements have been performed.

PRECAUTIONS

⚠ WARNING! NEVER operate the receiver with an earphone, headphones 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 receiver while driving a vehicle. Safe driving requires your full attention—anything less may result in an accident.

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

⚠ WARNING! NEVER connect the receiver directly to a power source of more than 6.9 V DC. This will ruin the receiver.

⚠ WARNING! NEVER connect the receiver to a power source using reverse polarity. This will ruin the receiver.

DO NOT use or place the receiver in direct sunlight or in areas with temperatures below -10°C ($+14^{\circ}\text{F}$) or above $+60^{\circ}\text{C}$ ($+140^{\circ}\text{F}$).

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

DO NOT use of chemical agents such as benzene or alcohol when cleaning, as they can damage the receiver's surfaces.

NEVER expose the receiver to rain, snow or any liquids. The receiver may be damaged.

NEVER operate or touch the receiver with wet hands. This may result in an electric shock or damage the receiver.

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

RESPECT other people's privacy. Information overheard but not intended for you cannot lawfully be used in any way.

For U.S.A. only

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

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.

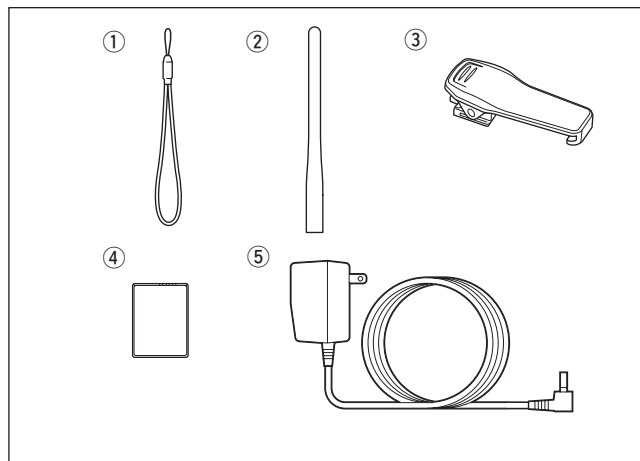
SUPPLIED ACCESSORIES

The following accessories are supplied with the receiver.

- | | |
|--------------------------------------|---|
| ① Hand strap | 1 |
| ② Antenna | 1 |
| ③ Belt clip | 1 |
| ④ Battery pack* (BP-244) | 1 |
| ⑤ Battery charger* (BC-149A/D) | 1 |

(The shape of the BC-149A and BC-149D are different.)

*Not supplied with some versions.



OPERATING THEORY

Electromagnetic radiation which has frequencies of 20,000 Hz (20 kHz*) and above is called radio frequency (RF) energy because it is useful in radio transmissions. The IC-RX7 receives RF energy from 0.150 MHz* to 1300 MHz and converts it into audio frequency (AF) energy which in turn actuates a loudspeaker to create sound waves. AF energy is in the range of 20 to 20,000 Hz.

*kHz is an abbreviation of kilohertz or 1000 hertz, MHz is abbreviation of megahertz or 1,000,000 hertz, where hertz is a unit of frequency.

OPERATING NOTES

The IC-RX7 may receive its own oscillated frequency, resulting in no reception or only noise reception, on some frequencies.

The IC-RX7 may receive interference from extremely strong signals on different frequencies or when using an external high-gain antenna.

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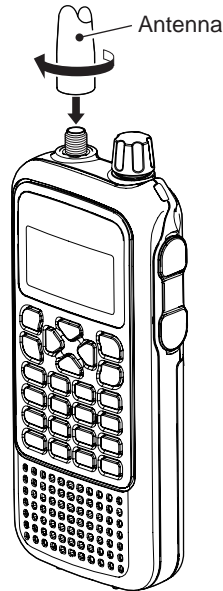
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■ Antenna

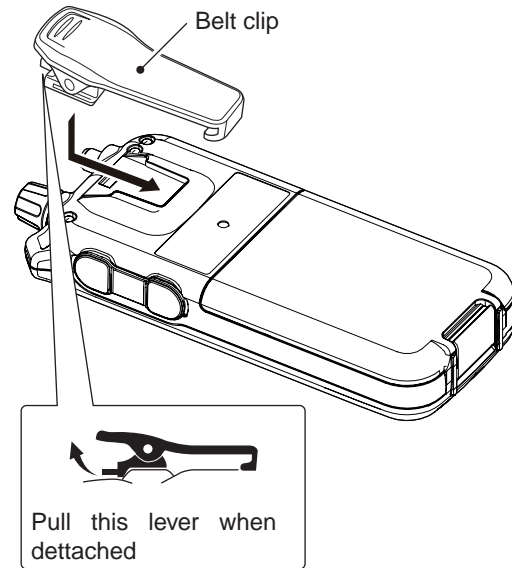
Insert the supplied antenna into the antenna connector and screw down the antenna as shown below.

NEVER carry the receiver by holding the antenna.



■ Belt clip

Slide the supplied belt clip on the receiver's rear panel until it clicks into place.



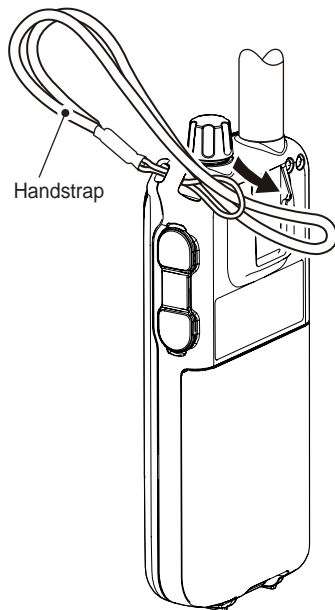
✓ *For your information*

Third-party antennas may increase receiver performance.
An optional AD-92SMA ANTENNA CONNECTOR ADAPTER is available to connect an antenna with a BNC connector.

1 ACCESSORY ATTACHMENT

■ Hand strap

Slide the hand strap through the loop on the right top of the receiver as illustrated at right to facilitate carrying the receiver.

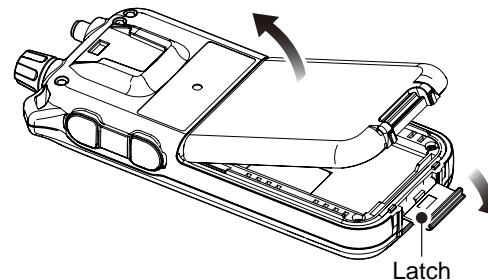


Keep the jack cover attached when jacks are not in use to avoid bad contacts from dust and moisture.

■ Battery installation

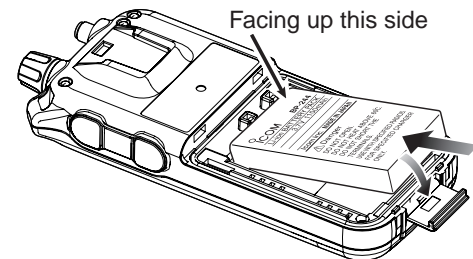
Install the Li-Ion battery pack (BP-244) or optional battery case (BP-262) as illustrated below.

① Remove the battery cover from the receiver.

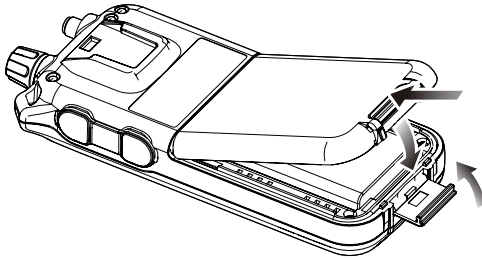


② Install the Li-Ion battery pack (BP-244).

- Be sure to observe the correct direction.
- Charge the Li-Ion battery pack before use. (p. 12)

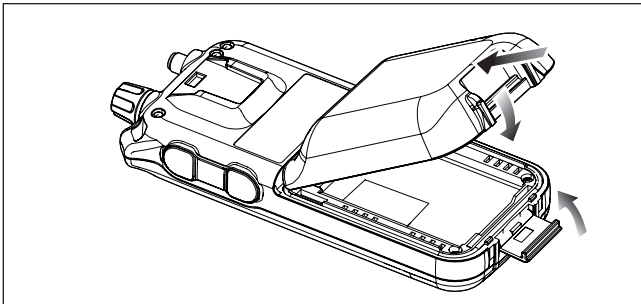


- ③ Attach the battery cover to the receiver.



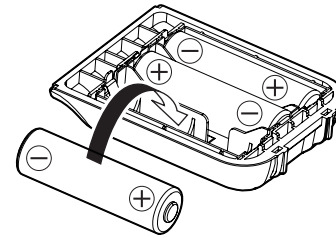
Keep battery contacts clean. It's a good idea to clean battery terminals once a week.

• **BP-262 installation**



■ Optional battery case

- ➔ Install 3 × LR6 (AA) size alkaline batteries into the optional BP-262 BATTERY CASE.
- Be sure to observe the correct polarity.



◇ Battery information

The batteries may seem to have low capacity when used in low temperatures such as -10°C ($+14^{\circ}\text{F}$) or below. Keep the battery case or pack warm in this case.

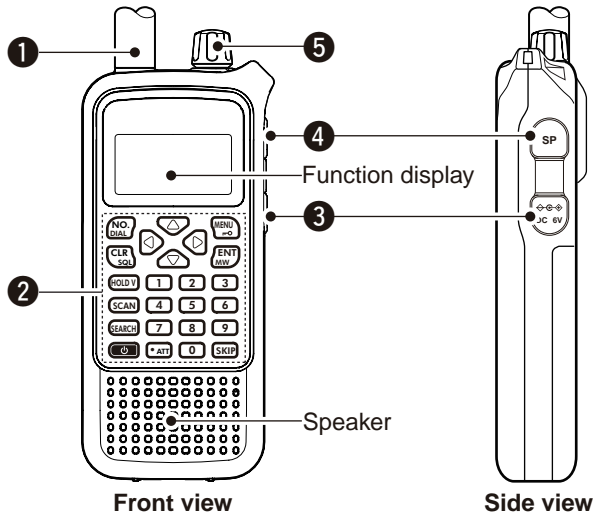
◇ Battery replacement

When the batteries become exhausted, the function display may blink or have a lower contrast. In these cases, replace all batteries with new, same brand, alkaline batteries.

2

PANEL DESCRIPTION

■ Front, top and side panels



① ANTENNA CONNECTOR (p. 1)

Connects the supplied antenna.

- An optional AD-92SMA adapter (p. 90) is available for connecting an antenna with a BNC connector.

② KEYPAD (pgs. 5, 6)

③ EXTERNAL DC IN JACK [DC 6V]

Connects a battery charger or an optional CP-18A/E cigarette lighter cable for both charging the installed rechargeable battery pack and operating.*

④ EXTERNAL SPEAKER/CLONE JACK [SP]

Connect a clone cable, optional speaker or earphone, if desired.

See page 90 for a list of available options.

➔ Connect an optional earphone or headphone.

The internal speaker will not function when any external equipment is connected.

➔ Connects to a PC using an optional OPC-478/UC CLONING CABLE for cloning. Cloning allows you to quickly and easily transfer the programmed contents between the IC-RX7 and the connected PC. (p. 84)

➔ Connect an optional CT-17 for remote control operation. (p. 87)

⑤ CONTROL DIAL [DIAL]

➔ During VFO mode or search holding state, rotate to tune the operating frequency. (p. 22)

➔ During memory mode or scan holding state, rotate to select the memory channel. (p. 53)

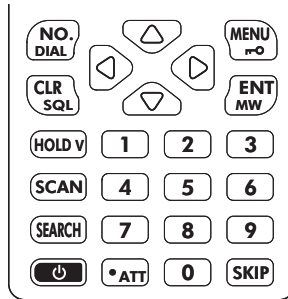
➔ While searching or scanning, changes the direction. (p. 18)

➔ While monitor function is active, rotate to set the squelch level. (p. 15)

➔ While in menu mode, rotate to select the set items or values. (p. 57)

▨ The assigned function for [DIAL] and [△]/[▽] can be exchanged by pushing and holding [NO. DIAL].

KEYPAD



NUMERAL KEYS [0] to [9]

- 0** ➔ Enter the frequency in VFO mode or memory programming state. (pgs. 20, 21, 53)
- ➔ After pushing **[NO. DIAL]**, select the memory name number directly in scan mode. (p. 53)
- 9** ➔ After pushing **[* ATT]**, turn the scan link setting ON and OFF in scan mode. (p. 49)

NUMBER/SQUELCH KEY [NO. DIAL]

- NO. DIAL** ➔ After pushing this key, push numeral keys to select the memory channel name in the memory group directly in scan mode. (p. 53)
- ➔ Push and hold for 1 sec. to exchange the assigned functions for **[DIAL]** and **[△]/[▽]**. (p. 75)

CLEAR/SQUELCH KEY [CLR SQL]

- CLR SQL** ➔ Aborts numeral key input. (p. 20)
- ➔ Push to return to previous operating condition while memory channel programming or while in menu screen operation. (p. 57)
- ➔ Push and hold for 1 sec. to open the squelch temporarily and monitor the operating frequency. (p. 15)
- ➔ After pushing and holding this key for 1 sec., rotate **[DIAL]** to adjust the squelch level. (p. 15)

HOLD/VFO KEY [HOLD V]

- HOLD V** ➔ Push to stop searching or scanning temporarily, and push again to return previous condition. (p. 18)
- ➔ Push and hold for 1 sec. to select VFO mode. (p. 16)

SCAN KEY [SCAN]

- SCAN** ➔ Push to start a scan. (p. 18)
- ➔ Push and hold for 1 sec. to enter SCAN menu.

SEARCH KEY [SEARCH]

- SEARCH** ➔ Push to start a search. (p. 26)
- ➔ Push and hold for 1 sec. to enter SEARCH menu.

2 PANEL DESCRIPTION

POWER KEY [



Push for 1 sec. to turn the receiver power ON and OFF. (p. 14)

ATTENUATOR KEY [• ATT]



- ➔ Push to input MHz digit for frequency entry. (pgs. 20, 21)
- ➔ After pushing this key, push numeral keys to turn the link setting ON and OFF during link scan. (p. 49)
 - Direct key number 0 to 9 can be selected by numeral key only.
- ➔ Push and hold for 1 sec. to turn the attenuator function ON and OFF. (p. 73)

SKIP KEY [SKIP]



- ➔ Push to set the memory channel as the following skip channel during scan holding state in order. (p. 44)
 - Skip channel — “SKIP” appears.
 - Frequency skip channel — “PSKIP” appears.
 - Non-skip channel — no skip indicator appears.
- ➔ Push and hold for 1 sec. to program a paused frequency as a skip frequency during search. (p. 36)
- ➔ Push and hold for 1 sec. to select the group skip setting ON and OFF during link scan. (p. 44)

ENTER/MEMORY WRITE KEY [ENT MW]



- ➔ During VFO mode, search holding state or scan holding state, push to enter memory programming state. (p. 48)
- ➔ Push and hold for 1 sec. to turn the auto write search function ON and OFF. (p. 34)
- ➔ Push and hold for 2 sec. to write the operating frequency into the selected memory channel in memory programming state.

MENU/LOCK KEY [MENU



- ➔ Push to select menu screen indication ON. (p. 57)
- ➔ Push and hold for 1 sec. to toggle the lock function ON and OFF. (p. 73)

LEFT/RIGHT KEY [◀]/[▶]



- ➔ During VFO mode or search mode, push to select the operating frequency band. (p. 16)
- ➔ During VFO mode, push and hold for 1 sec. to select and toggle 1 MHz and 10 MHz tuning steps. (p. 22)
- ➔ During memory mode or scan mode, push to select the group. (p. 18)
- ➔ During memory mode or scan mode, push and hold for 1 sec. to select the category. (p. 18)

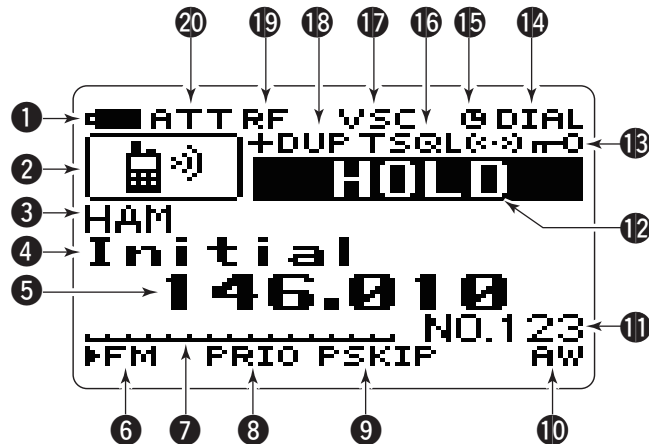
UP/DOWN/VOLUME CONTROL KEY [△]/[▽]



- ➔ Adjust audio volume level. (p. 14)
- ➔ While in menu screen operation, push to select the set items or values. (p. 57)

The function of tuning control and volume control can be traded. See page 75 for details.

■ Function display



① BATTERY INDICATOR (p. 13)

○ When BP-244 is attached

- "▣" (battery indicator) appears when the battery pack has ample capacity.
- "▣" appears when the battery pack is nearing exhaustion, and it must be charged.
- "▣" blinks before the battery pack is exhausted.
- The indicator shows "▣", "▣" and "▣" (disappears) in sequence while charging the attached battery pack.

○ When BP-262 is attached

- "▣" (battery indicator) appears when the installed batteries have ample capacity.
- "▣" appears when the installed batteries are nearing exhaustion.

② ICON INDICATOR (p. 48)

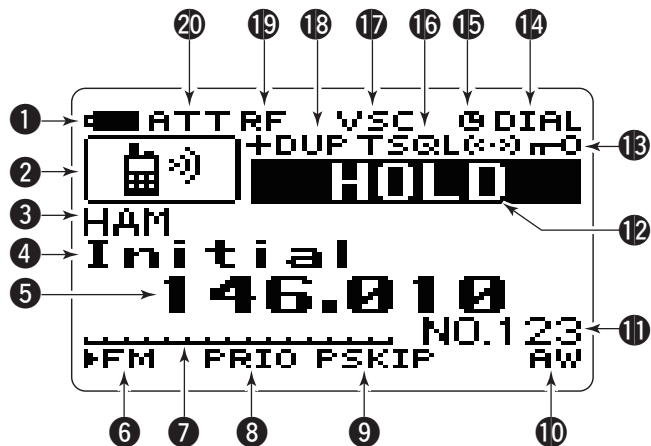
Displays a variety of icon.

- Following 23 icons are available for category programming, TRUCK, BUS, CAR, RACE CAR, TAXI, MOTORCYCLE, TRAIN, SHIP, YACHT, AIRCRAFT, GLIDER, HAM, HAM HH, RADIO, TV, EMERGENCY, FIRE, WEATHER, HUMAN, ANIMAL, BUILDING, HOUSE and PROGRAM SEARCH.

③ CATEGORY INDICATOR

- During memory mode or scan mode, the programmed memory category is displayed.
- During search mode operation, the searching category is displayed.

2 PANEL DESCRIPTION



- 4 MEMORY GROUP INDICATOR** (p. 51)
Displays a programmed memory group during memory mode or scan mode operation.
- 5 FREQUENCY READOUT**
Displays a variety of information, such as operating frequency, memory names.
 - The decimal point blinks during search.
- 6 RECEIVING MODE INDICATOR** (p. 19)
Shows the selected receiving mode.
 - FM, WFM and AM are available, depending on operating band.
- 7 S-METER**
Shows the relative signal strength while receiving signals.
- 8 PRIORITY WATCH INDICATOR** (pgs. 37, 45)
Appears when priority watch is in use.
- 9 SKIP INDICATOR**
 - ➔ "SKIP" appears when the selected memory channel is set as a skip channel. (p. ??)
 - ➔ "PSKIP" blinks during skip search operation. (p. 36)
- 10 AUTO WRITE SEARCH INDICATOR**
Blinks during auto write search operation. (p. 34)
- 11 MEMORY NUMBER INDICATOR**
Shows the selected memory number. (pgs. 52, 53)
 - This number is assigned to memory name and use this number for memory management in each memory group.
Memory organization: Category ► Group ► Name ► Channel

12 STATUS INDICATOR

Shows the receiver's status such as "HOLD," "SCAN," "SEARCH" or "MEMORY."

13 KEY LOCK INDICATOR (p. 73)

Appears when the key lock function is activated.

14 DIAL STATUS INDICATOR (p. 75)

- "DIAL" appears when [DIAL] is assigned as frequency control.
 - In this case, [Δ]/[▽] keys are activate for volume control.
- "VOL" appears when the [DIAL] is assigned as volume control.
 - In this case, [Δ]/[▽] keys are activate for frequency control.

15 AUTO POWER OFF INDICATOR (p. 82)

Appears when the auto power OFF function is in use.

16 TONE SQUELCH INDICATOR (pgs. 76, 77)

Available only when FM mode is selected.

- "TSQL" appears while the tone squelch function is in use. (p. 124)
- "TSQL-R" appears while the reverse* tone squelch function is in use. (p. 124)
- "DTCS" appears while the DTCS squelch function is in use. (p. 124)
- "DTCS-R" appears while the reverse* DTCS squelch function is in use. (p. 124)
- "(•)" appears with the "TSQL" or "DTCS" indicator while the pocket beep function (with CTCSS or DTCS) is in use. (p. 125)

*: Reverse tone squelch or reverse DTCS squelch closes when the signal is received with matched tone or DTCS.

17 VOICE SQUELCH CONTROL INDICATOR (p. 83)

Appears when VSC (Voice squelch control) function is in use.

18 DUPLEX INDICATOR (pgs. 74, 75)

"+DUP" appears when plus duplex, "-DUP" appears when minus duplex is selected.

19 RF GAIN INDICATOR (p. 72)

"RF" appears when the RF gain is adjusted other than "MAX."

20 ATTENUATOR INDICATOR (p. 73)

Appears when the RF attenuator is in use.

■ Caution

Misuse of Lithium-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!** Use and charge only specified Icom battery packs with Icom radios. Only Icom battery packs are tested and approved for use with Icom radios. Using third-party or counterfeit battery packs may cause smoke, fire, or cause the battery to burst.
- ◇ **Battery caution**
 - ⚠ **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°C (+140°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! NEVER** incinerate a used battery pack since internal battery gas may cause it to rupture, or may cause an explosion.
- ⚠ **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 receiver 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 receiver (-10°C to $+60^{\circ}\text{C}$; $+14^{\circ}\text{F}$ to $+140^{\circ}\text{F}$) and the battery itself (-20°C to $+60^{\circ}\text{C}$; -4°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 receiver. In such cases, the receiver 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 battery indicator shows half-capacity, then keep it safely in a cool dry place with the below temperature range.
 - 20°C (-4°F) to $+50^{\circ}\text{C}$ ($+122^{\circ}\text{F}$) (within a month).
 - 20°C (-4°F) to $+35^{\circ}\text{C}$ ($+95^{\circ}\text{F}$) (within three months).
 - 20°C (-4°F) to $+20^{\circ}\text{C}$ ($+68^{\circ}\text{F}$) (more than a year).

◇ Charging caution

- **⚠ DANGER! NEVER** charge the battery pack in areas with extremely high temperatures, such as near fires or stoves, inside a sun heated car, or in direct sunlight. In such environments, the safety/protection circuit in the battery will activate, causing the battery to stop charging.
- **WARNING! DO NOT** charge or leave the battery in the receiver beyond the specified time for charging. If the battery is not completely charged by the specified time, stop charging and remove the external DC power from the receiver. Continuing to charge the battery beyond the specified time limit may cause a fire, overheating, or the battery may rupture.
- **CAUTION! DO NOT** charge the battery outside of the specified temperature range: $+5^{\circ}\text{C}$ to $+35^{\circ}\text{C}$ ($+41^{\circ}\text{F}$ to $+95^{\circ}\text{F}$). Icom recommends charging the battery at $+25^{\circ}\text{C}$ ($+77^{\circ}\text{F}$). The battery may heat up or rupture if charged out of the specified temperature range. Additionally, battery performance or battery life may be reduced.

3 BATTERY CHARGING

■ Charging

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

◇ Battery indicator and charging indicator

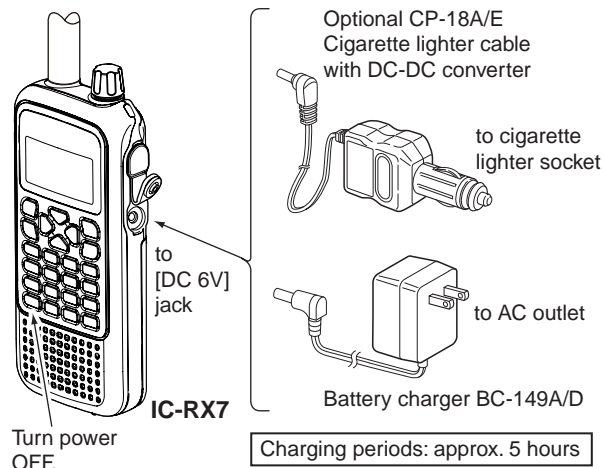
When the receiver's power is ON, the battery indicator shows "▣▣▣," "▣▣" and "▣" (disappears) in sequence while charging, and indicator disappears when completely charged.

When the receiver's power is OFF, the charging indicator shows "▣," "▣" and "▣" in sequence with "Charging..." while charging, and indicator disappears when completely charged.

◇ Charging note

- Be sure to turn the receiver power OFF. Otherwise the battery pack will not be charged completely or takes longer to charge time periods.
- External DC power operation becomes possible when using an optional CP-18A/E. The attached battery pack is also charged simultaneously.
- If your battery pack seems to have no capacity even after being charged, fully charge the battery pack again. If the battery pack still does not retain a charge (or very little), a new battery pack must be purchased.

- ① Insert the battery pack (BP-244) into the receiver. (p. 2)
- ② Plug the battery charger (BC-149A/D*) into an AC outlet; or the optional CP-18A/E into a cigarette lighter socket.
* Not supplied with some versions.
- ③ Turn OFF the receiver, then insert the adapter plug into [DC 6V] of the receiver.



CAUTION: BE SURE to disconnect the CP-18A/E from the cigarette lighter socket when charging is finished, because, a slight current still follows in the CP-18A/E and the vehicle's battery will become exhausted.

■ Battery information

◇ Battery life

The receiver operates with the BP-244 Li-ion battery pack or BP-262 Battery case as follows.

- BP-244: Approx. 8.2 hours *1
- BP-262: Approx. 16.9 hours *1, *2




(Continuous receiving at rated AF output with backlight OFF)

*1 Operating time may differ depending on the operating conditions.



*2 Operating time may differ depending on the installed batteries.

Even when the receiver power is OFF, a small current still flows in the receiver. Remove the battery pack or case from the receiver when not using it for a long time. Otherwise, the battery pack or installed batteries will become exhausted.

◇ Battery indicator

The battery indicator, “” or “” appears when the BP-244 or BP-262 is attached to the receiver. And only when BP-244 is attached, the battery indicator, “,” blinks before the BP-244 is exhausted.

The battery indicator does not appear when turning power ON after charging is completed to the BP-244 without disconnecting the battery charger or external DC power.

Indication	Battery condition
	The battery pack or case has ample capacity.
	The battery pack or case is nearing exhaustion. Charging (BP-244) or replacing batteries (BP-262) is necessary.

■ External DC power operation

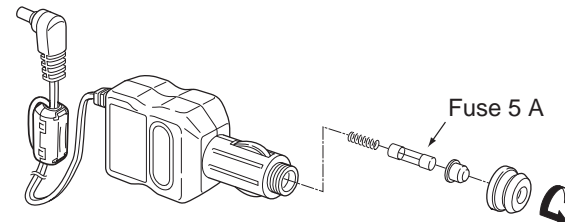
An optional cigarette lighter cable (CP-18A/E; for 12 V cigarette lighter socket) can be used for external power operation.

◇ Operating note

- **BE SURE** to use **CP-18A/E** when connecting a regulated 12 V DC power supply. Use an external DC-DC converter to connect the receiver through optional CP-18A/E to a 24 V DC power source.
- The power save function is deactivated automatically during external DC power operation.

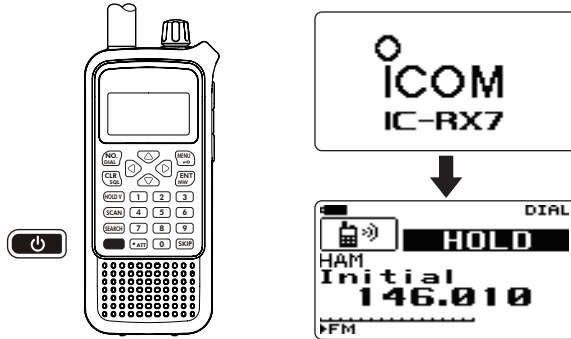
◇ CP-18A/E fuse replacement

If the fuse blows or the receiver stops functioning while operating with the optional CP-18A/E, find the source of the problem if possible, and replace the damaged fuse with a new rated one (FGB 5 A) as shown below.



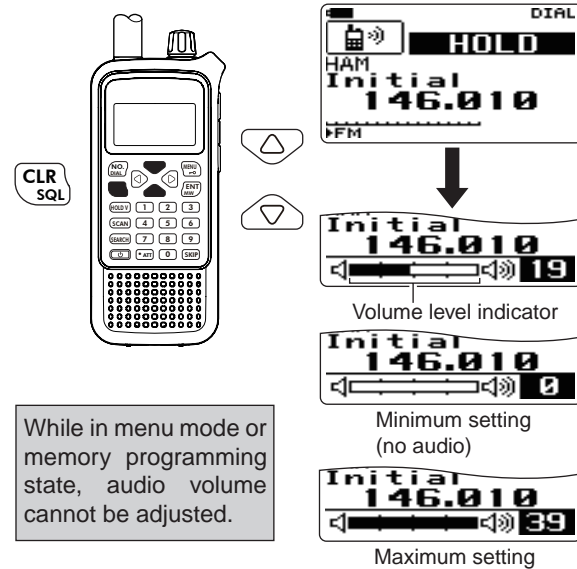
■ Power ON

➔ Push and hold [POWER] for 1 sec. to turn power ON.



■ Setting audio volume

- ➔ Push [Δ] or [∇] several time to adjust the audio level.
 - If squelch is closed, push and hold [CLR SQL] for 1 sec. to activate the monitor function ON while setting the audio level. Push [CLR SQL] again to return to normal operating mode.
 - The display shows the volume level while setting.



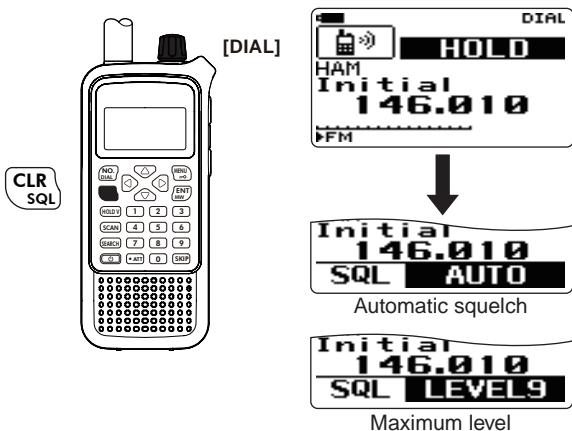
Beep level is adjustable in SOUNDS menu.

MENU ⇨ SOUNDS ⇨ **BEEP LEVEL** (p. 68)

■ Setting squelch level

The squelch circuit mutes the received audio signal depending on the signal strength. The receiver has 9 squelch levels, a continuously open setting and an automatic squelch setting.

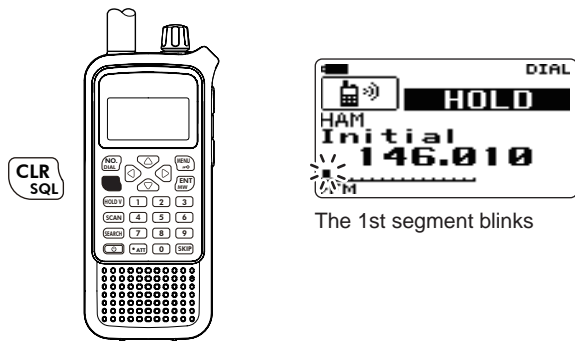
- ➔ After pushing and holding **[CLR SQL]** for 1 sec., rotate **[DIAL]** to select the squelch level.
 - “LEVEL 1” is loose squelch (for weak signals) and “LEVEL 9” is tight squelch (for strong signals).
 - “AUTO” indicates automatic level adjustment by a noise pulse counting system.
 - “OPEN” indicates continuously open setting.
 - Push **[CLR SQL]** to return to normal operating mode.



■ Monitor function

This function is used to listen to weak signals without disturbing the squelch setting or to open the squelch manually even when mute functions such as the tone squelch are in use.

- ➔ Push and hold **[CLR SQL]** for 1 sec. to monitor the operating frequency.
 - Push **[CLR SQL]** to clear the monitor function.



/// The squelch adjustment is available when the monitor function is activate. See left content for details.

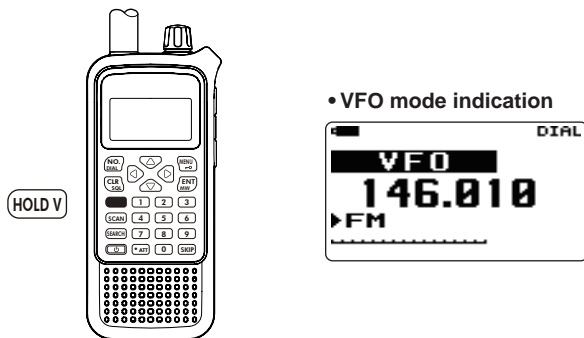
4 BASIC OPERATION

■ Operating mode selection

◇ VFO mode

VFO mode is used for the desired frequency setting within the frequency coverage.

➡ Push and hold **[HOLD V]** for 1 sec. to select VFO mode.



What is VFO?

VFO is an abbreviation of Variable Frequency Oscillator. Frequencies for receiving are generated and controlled by the VFO.

Set the attenuator function ON (p. 73) if the received signal is blocked by other radio station when using a third party high-gain antenna.

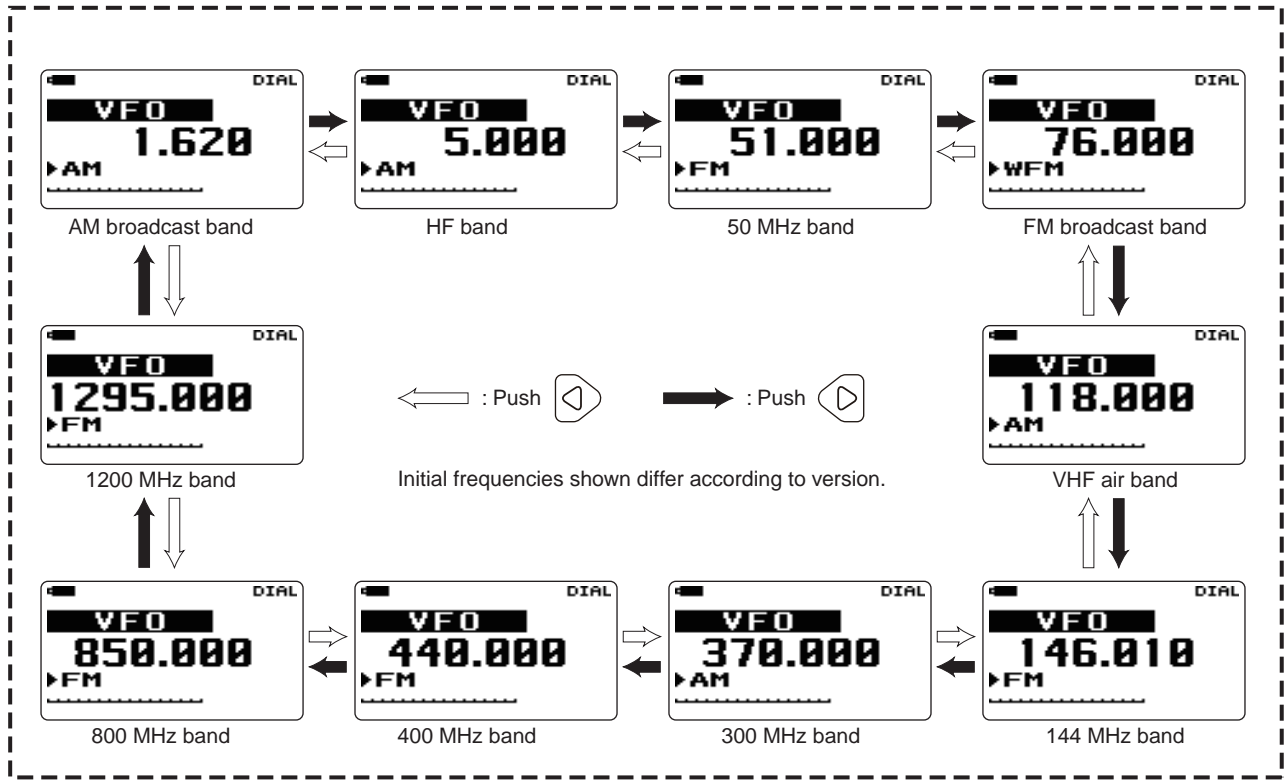
◇ Operating band selection

The receiver can receive the AM broadcast, HF bands, 50 MHz, FM broadcast, VHF air, 144 MHz, 300 MHz, 400 MHz, 800 MHz* or 1200 MHz bands.

- ➡ In VFO mode, push [**<**] or [**>**] several times to select the desired frequency band.
- If VFO mode is not selected, such as a scan mode or memory mode, or weather channel,[†] push and hold **[HOLD V]** to select VFO mode first, then push [**<**] or [**>**] to select the desired band. ([†] Available for USA and CANADA versions only.)
 - Search mode is also selectable operating band.

/// Available frequency bands are different depending on version. See the specification for details. (p. 89)
/// * Some frequency ranges are blocked for the U.S.A. version by regulation.

• Available frequency bands

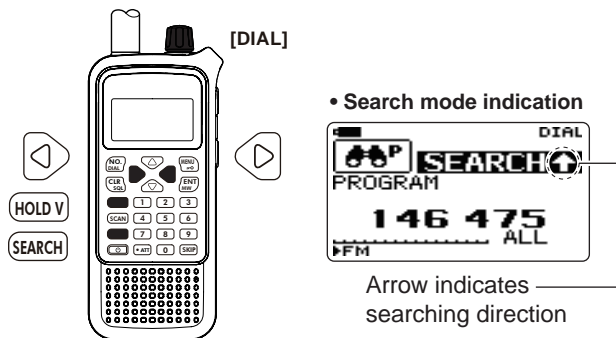


4 BASIC OPERATION

◇ Search mode

Search mode searches for signals for specified tuning steps automatically and makes it easier to locate new stations for listening purpose. Search mode is described more details at Section 6—SEARCH AND SCAN OPERATIONS.

- ① Push **[SEARCH]** to start a search.
 - Search pauses when a signal is received.
 - Rotate **[DIAL]** to change the searching direction.
- ② Push **[◀]** or **[▶]** several times to select the desired frequency band.
- ③ Push **[HOLD V]** to stop the search temporarily, if desired.
 - Rotate **[DIAL]** to change the frequency.
 - Push **[HOLD V]** again to restart the search.

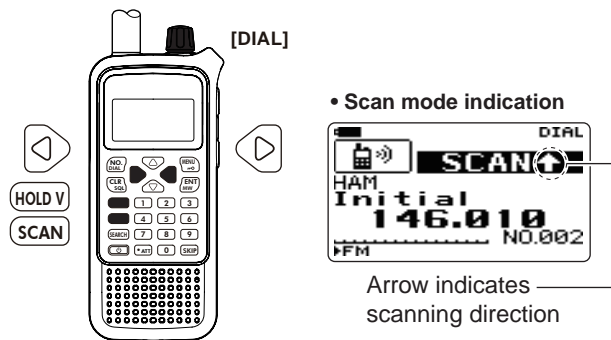


▨ **About the searching steps:** The selected tuning step in each frequency band (in VFO mode) is used during search.

◇ Scan mode

Scan mode searches for signals from the pre-programmed memory channels automatically. Scan mode is described more details at Section 6—SEARCH AND SCAN OPERATIONS.

- ① Push **[SCAN]** to start a scan.
 - Scan pauses when a signal is received.
 - Rotate **[DIAL]** to change the scanning direction.
- ② Push and hold **[◀]** or **[▶]** several times to select the desired category; or push **[◀]** or **[▶]** several times to select the desired group.
- ③ Push **[HOLD V]** to stop the scan temporarily, if desired.
 - Rotate **[DIAL]** to select the desired channel.
 - Push **[HOLD V]** again to restart the scan.




▨ While scan holding condition, memory channels can be selected by the rotating **[DIAL]**.

■ Receiving mode selection

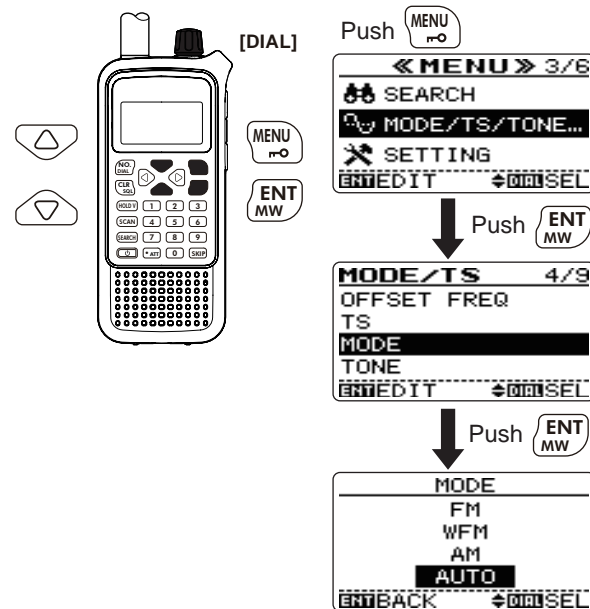
Receiving modes are determined by the modulation of the radio signals. The receiver has 3 operating modes: FM, WFM and AM modes. (And also auto mode is available for USA version.) The mode selection is stored independently for each operating band and memory channels. (Auto mode is available for USA version only.)

Typically, AM mode is used for the AM broadcast stations (0.495–1.620 MHz) and air band (118–136.995 MHz), and WFM is used for FM broadcast stations (76–107.9 MHz).

- 1 Enter "MODE" in MODE/TS/TONE... menu.

MENU ⇨ MODE/TS/TONE ⇨ **MODE** (p. 61)
(Push [MENU ]), (Push [Δ]/[▽]), then push [ENT MW].)

- 2 Push [Δ]/[▽] (or rotate [DIAL]) to set the mode.
- 3 Push [ENT MW] (or [◀]) to return to MODE/TS/TONE... menu, and push [CLR SQL] to return to frequency indication.



■ Setting a frequency

◇ Via the keypad

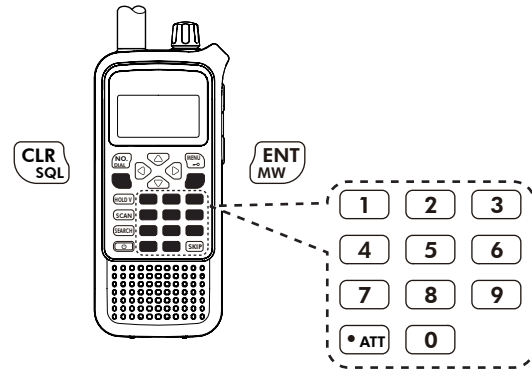
The frequency can be directly set via numeric keys.

- If a frequency outside the frequency range is entered, the previously displayed frequency is automatically recalled after editing last digit.

- ① Push and hold **[HOLD V]** to select VFO mode, if necessary.
- ② Enter the desired frequency via the keypad.

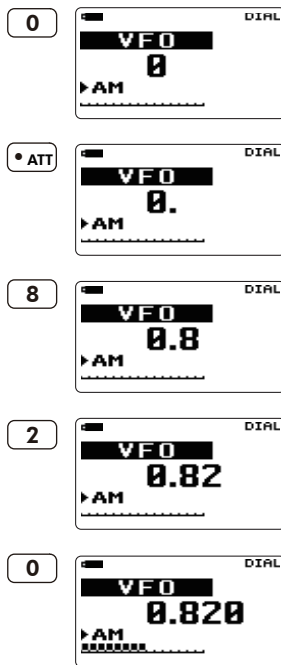
- Pushing **[ENT MW]** omits the entry of 100 kHz and below, when you want to edit to those digits "0."
- When a digit is mistakenly input, push **[CLR SQL]** to abort input.

Depending on the tuning step setting, it may not be possible to input a 1 kHz digit. In this case, enter "0" as 1 kHz digit, then rotate **[DIAL]** to set the desired frequency.

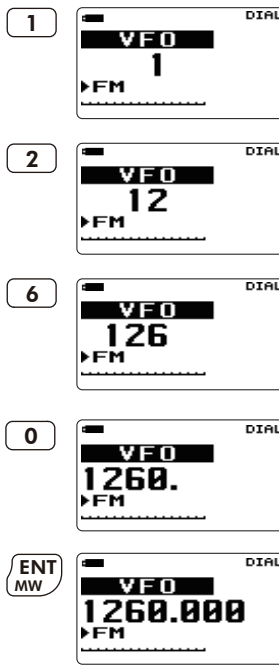


◇ Display example

- Entering 0.820 MHz

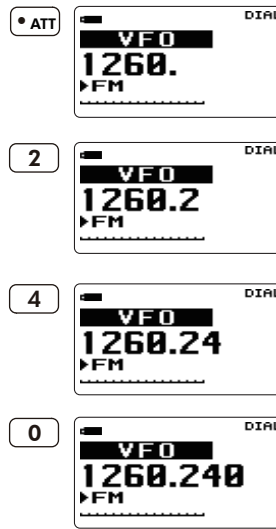


- Entering 1260 MHz



- Changing 100 kHz and below.

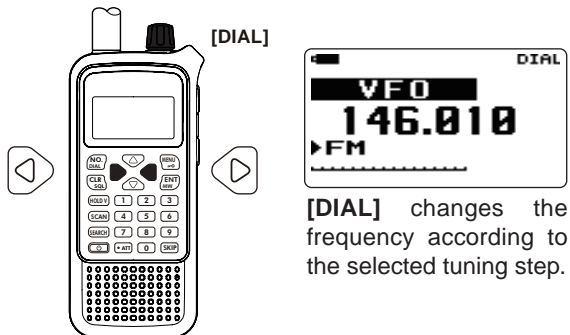
Editing
1260.000 MHz
to 1260.240 MHz



5 FREQUENCY SETTING

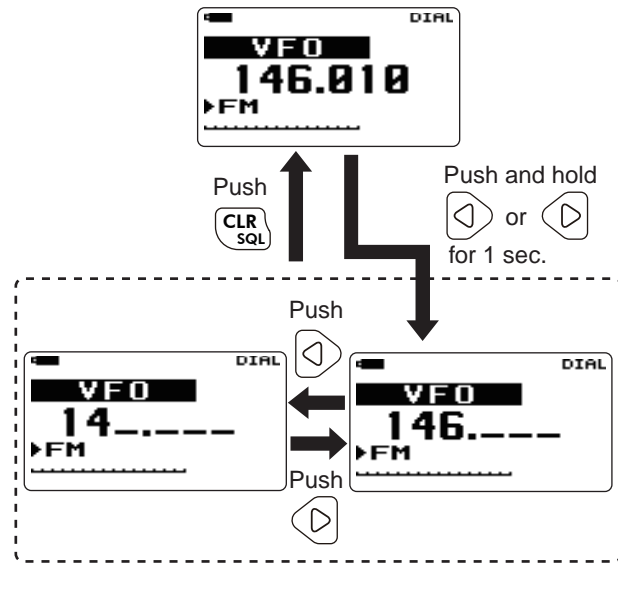
◇ Via the dial

- ① Push and hold **[HOLD V]** for 1 sec. to select VFO mode, if necessary.
- ② Push [**<**] or [**>**] to select the desired frequency band.
- ③ Rotate **[DIAL]** to select the desired frequency.
 - The frequency changes according to the preset tuning steps.
See the next page for setting the tuning step.



✓ CONVENIENT!

Push and hold [**<**] or [**>**] for 1 sec. then rotate **[DIAL]** to change the frequency in 1 MHz steps, or push [**<**] again then rotate **[DIAL]** to change the frequency in 10 MHz steps. (After entering MHz selection mode, pushing [**<**] or [**>**] selects 10 MHz tuning steps or 1 MHz tuning steps, respectively.)



■ Setting a tuning step

The tuning step can be selected for each frequency band.
The following tuning steps are available for the IC-RX7.

(Auto tuning step is available for USA version only.)


- 5.0 kHz • 6.25 kHz • 7.5 kHz • 8.33 kHz[†] • 9.0 kHz[‡]
- 10.0 kHz • 12.5 kHz • 15.0 kHz • 20.0 kHz • 25.0 kHz
- 30.0 kHz • 50.0 kHz • 100.0 kHz • 125.0 kHz • 200.0 kHz

[†] Appears for the VHF air band only.

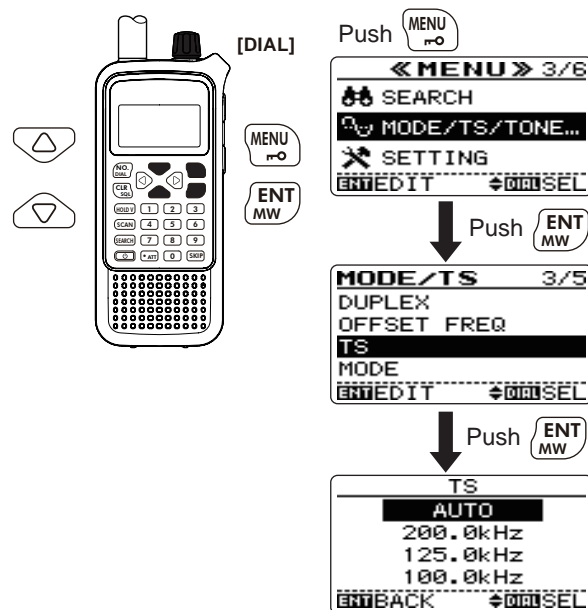
[‡] Appears for the AM broadcast band only.

◇ Tuning step selection

- ① Push and hold [HOLD V] for 1 sec. to select VFO mode, if necessary.
- ② Push [◀] or [▶] to select the desired frequency band.
- ③ Enter "TS" in MODE/TS/TONE... menu.

MENU ⇨ MODE/TS/TONE ⇨ TS (p. 61)
(Push [MENU ]), (Push [Δ]/[▽]), then push [ENT MW].)

- ④ Push [Δ]/[▽] (or rotate [DIAL]) to select the tuning step.
- ⑤ Push [ENT MW] (or [◀]) to return to MODE/TS/TONE... menu, and push [CLR SQL] to return to frequency indication.



6

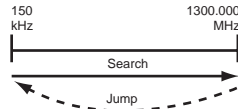
SEARCH AND SCAN OPERATIONS

■ Search and scan types

Searching and scanning search for signals automatically and makes it easier to locate new stations for listening purposes.

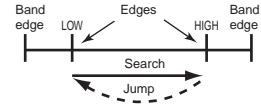
FULL SEARCH (p. 26)

Repeatedly searches all frequencies over the entire band. Some frequency ranges are not searched according to the frequency coverage of the receiver's version.



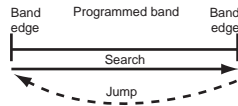
PROGRAM SEARCH (p. 28)

Repeatedly searches between two user-programmed frequencies. Used for checking for frequencies within a specified range such as repeater output frequencies, etc.



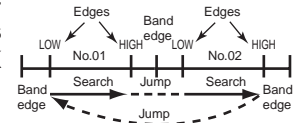
BASIC SEARCH (p. 26)

Repeatedly searches all frequencies over the preprogrammed band by the optional cloning software CS-RX7. Air, Marine, Ham, Racing, Broadcast, and etc. are available.



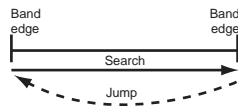
PROGRAM LINK SEARCH (p. 29)

Repeatedly searches user-programmed frequencies selected at PROGRAM LINK item in the SEARCH menu.



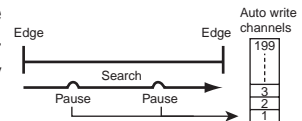
BAND SEARCH (p. 27)

Repeatedly searches all frequencies over the entire selected band.

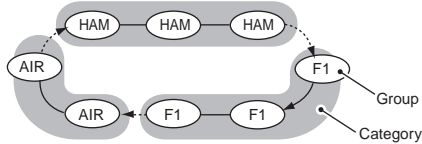


AUTO WRITE SEARCH (p. 34)

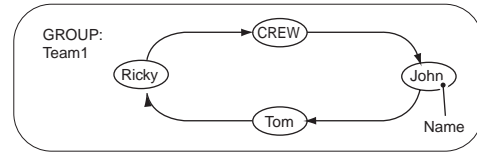
The frequencies that the search pauses on, are automatically stored into memory channels.



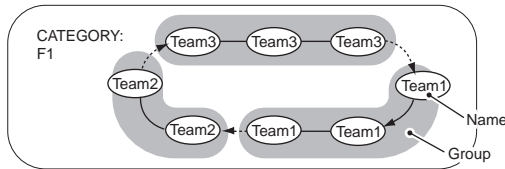
ALL MEMORY SCAN (p. 40)
Repeatedly scans all memory channels.



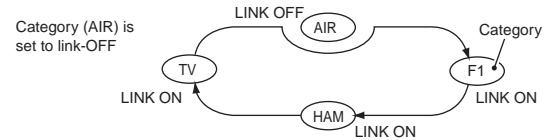
GROUP SCAN (p. 41)
Repeatedly scans all memory channels in the group.



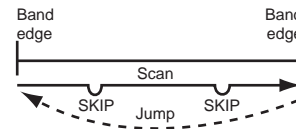
CATEGORY SCAN (p. 40)
Repeatedly scans all memory channels in the category.



LINK SCAN (p. 39)
Repeatedly scans all memory channels in the category/group which selected in the category/group settings.



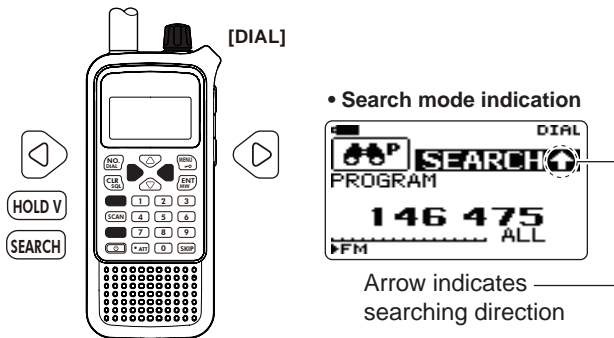
FREQUENCY/MEMORY SKIP FUNCTION (p. 44)
Skips unwanted frequencies or memory channels that inconveniently stop searching (or scanning). This can be turned ON/OFF by each memory channel/name/group/category.



6 SEARCH AND SCAN OPERATIONS

■ Full search

- ① Push **[SEARCH]** to start a search.
 - Search pauses when a signal is received.
 - Rotate **[DIAL]** to change the searching direction.
- ② Push **[◀]** or **[▶]** several times to select the desired frequency band.
- ③ Push **[HOLD V]** to stop the search temporarily, if desired.
 - Push **[HOLD V]** again to restart the search.



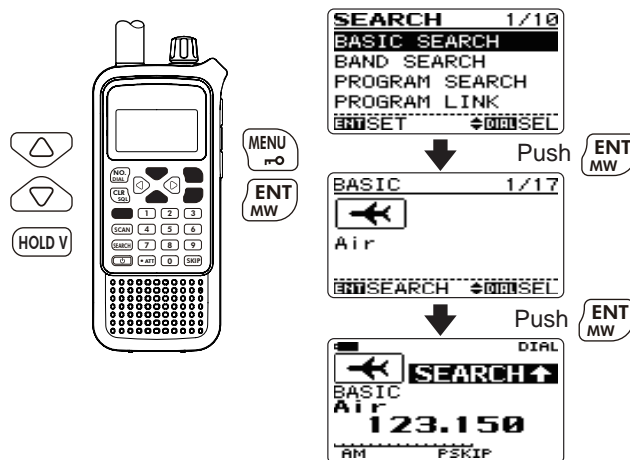
About the searching steps: The selected tuning step in each frequency band (in VFO mode) is used during search.

■ Basic search

- ① Enter "BASIC SEARCH" in SEARCH menu.

MENU ⇨ SEARCH ⇨ **BASIC SEARCH**
(Push **[MENU]**), (Push **[△]/[▽]**, then push **[ENT MW]**.)

 - Search menu can also be entered by pushing and holding **[SEARCH]** for 1 sec.
 - 1st category appears.
- ② Push **[△]/[▽]** (or rotate **[DIAL]**) to select the desired category, then push **[ENT MW]** to start the search.
 - Search pauses when a signal is received.
 - Rotate **[DIAL]** to change the searching direction.
- ③ Push **[HOLD V]** to stop the search temporarily, if desired.
 - Push **[HOLD V]** again to restart the search.

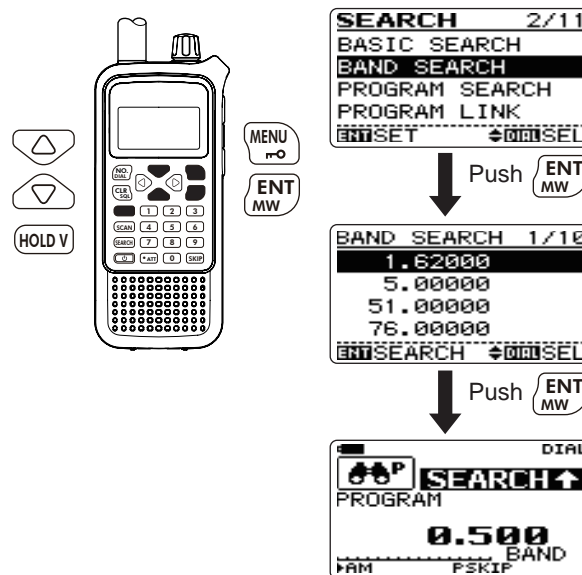


■ Band search

- ① Enter “BAND SEARCH” in SEARCH menu.

MENU ⇨ SEARCH ⇨ **BAND SEARCH**
 (Push [MENU ) , (Push [△]/[▽], then push [ENT MW].)

- Search menu can also be entered by pushing and holding [SEARCH] for 1 sec.
 - Band selection screen appears.
- ② Push [△] or [▽] several times to select the desired frequency band, then push [ENT MW] to start the search.
- Search pauses when a signal is received.
 - Rotate [DIAL] to change the searching direction.
 - After started the search, searching frequency band can be changed by pushing [◀] or [▶].
- ③ Push [HOLD V] to stop the search temporarily, if desired.
- Push [HOLD V] again to restart the search.



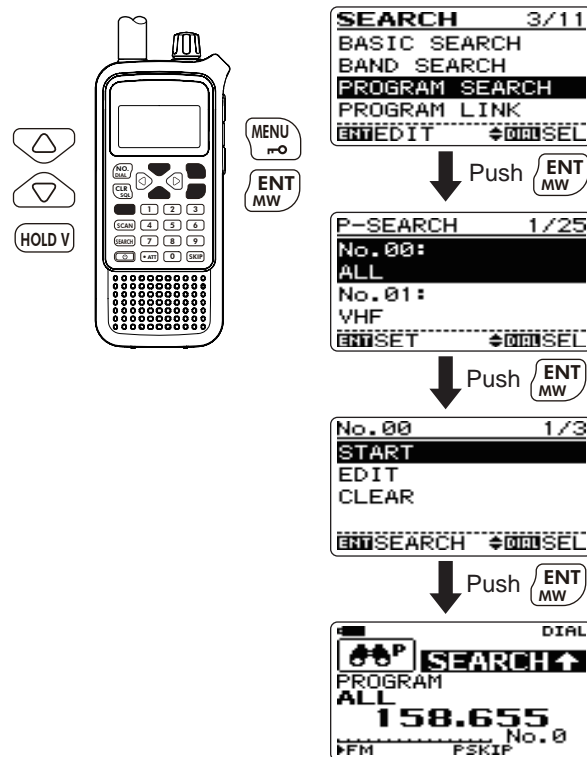
6 SEARCH AND SCAN OPERATIONS

■ Program search

- ① Enter "PROGRAM SEARCH" in SEARCH menu.

MENU ⇨ SEARCH ⇨ **PROGRAM SEARCH**
(Push [MENU] ) (Push [△]/[▽], then push [ENT MW].)

- Search menu can also be entered by pushing and holding [SEARCH] for 1 sec.
 - Program number selection screen appears.
- ② Push [△] or [▽] several times to select the desired program number, then push [ENT MW] to enter the program.
- A total 25 program link numbers (No. 00 to No. 24) are available.
- ③ Push [ENT MW] again to start the search.
- Search pauses when a signal is received.
 - Rotate [DIAL] to change the searching direction.
 - After started the search, program number can be changed by pushing [◀] or [▶].
- ④ Push [HOLD V] to stop the search temporarily, if desired.
- Push [HOLD V] again to restart the search.



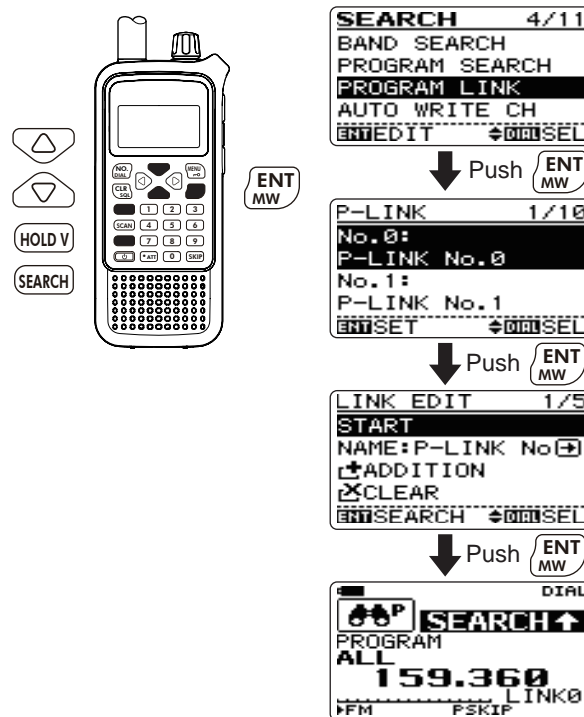
■ Program link search

- ① Enter "PROGRAM LINK SEARCH" in SEARCH menu.

MENU ⇨ SEARCH ⇨ **PROGRAM LINK SEARCH**
(Push [MENU] (F10)), (Push [△]/[▽], then push [ENT MW].)

- Search menu can also be entered by pushing and holding [SEARCH] for 1 sec.
 - Program link number selection screen appears.
- ② Push [△] or [▽] several times to select the desired program link number, then push [ENT MW] to enter the link edit state.
- A total 10 program link numbers (No. 0 to No. 9) are available.
- ③ Push [ENT MW] again to start the search.
- Search pauses when a signal is received.
 - Rotate [DIAL] to change the searching direction.
 - After started the search, program link number can be changed by pushing [◀] or [▶].
- ④ Push [HOLD V] to stop the search temporarily, if desired.
- Push [HOLD V] again to restart the search.

NOTE: All program searches are linked in default settings. Program links can be customized, see page 32 for programming details.



6 SEARCH AND SCAN OPERATIONS

■ Search edges programming

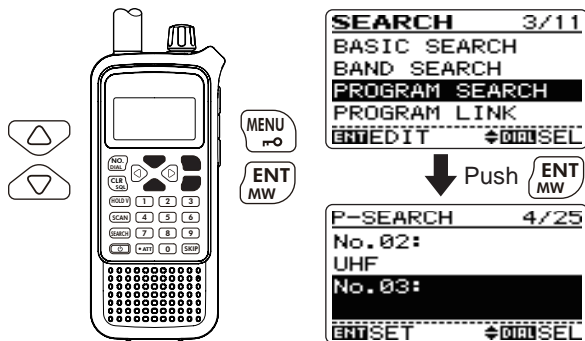
Search edges programming can be stored frequency edges, receiving mode, tuning steps, attenuator ON/OFF and search name. But other items of the frequencies are not necessary to program. In this case, settings of each frequency band are used to the search.

- ① Enter "PROGRAM SEARCH" in SEARCH menu.

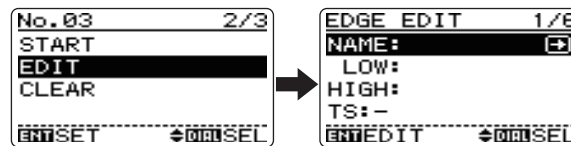
MENU → SEARCH → **PROGRAM SEARCH**
(Push [MENU] (F1)), (Push [Δ]/[∇], then push [ENT MW].)

- Search menu can also be entered by pushing and holding [SEARCH] for 1 sec.
- Program number selection screen appears.

- ② Push [Δ] or [∇] several times to select the desired program number, then push [ENT MW] to enter the program.



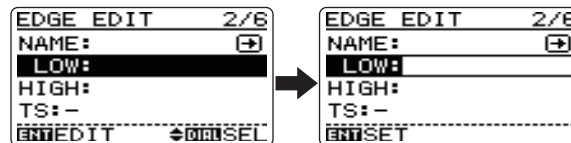
- ③ Push [∇] once to select "EDIT," then push [ENT MW] (or [▷]).



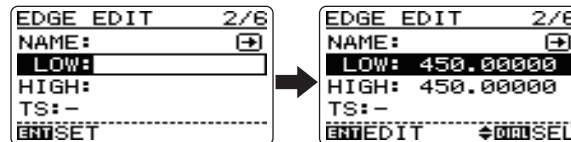
- ④ Set the desired edge frequencies either "LOW" or "HIGH."
• Other items cannot be programmed until these frequencies are input.

LOW:/HIGH:

- ① Push [ENT MW] (or [▷]) to enter the frequency input.



- ② Edit the desired frequency with keypad (pgs. 20, 21).

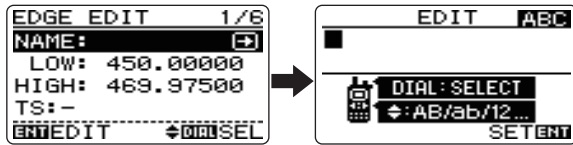


- ③ Push [Δ] or [∇] to select another edge, then edit different frequency.

⑤ Set the other items, if desired.

NAME:

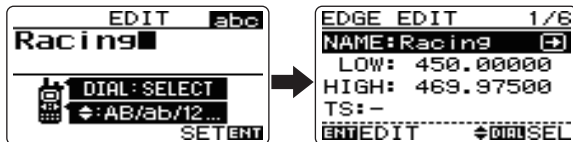
① Push **[ENT MW]** (or **[▷]**) to edit the name programming.



② Rotate **[DIAL]** to select the desired character.

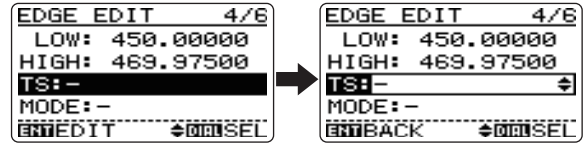
- The selected character blinks.
- Push **[△]** or **[▽]** to select the character group from “ABC” (alphabetical characters; capital letters), “abc” (alphabetical characters; lower case letters), “123” (numbers) or “!@#” (symbols). See next page for available characters details.
- Push **[◀]** or **[▶]** to move the cursor left or right, respectively.
- Push **[CLR SQL]** to clear the selected character.

③ Push **[ENT MW]** to set the name and return to program search edit state.



TS:/MODE:/ATT:

① Push **[ENT MW]** (or **[▷]**) to edit the tuning step setting.



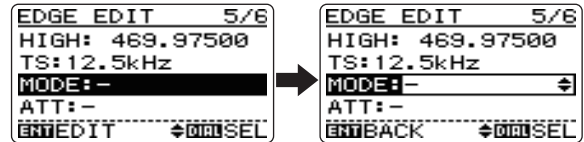
② Push and hold **[△]/[▽]** (or rotate **[DIAL]**) to select the desired setting.

- Push **[◀]** or **[▶]** to move the cursor left or right, respectively.
- Push **[CLR SQL]** to clear the selected character.

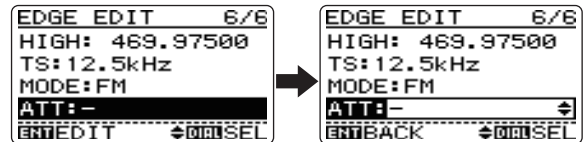
③ Push **[ENT MW]** (or **[▷]**) to set the setting.

④ Set the mode or attenuator settings as same as steps ① to ③.

MODE



ATT



6 SEARCH AND SCAN OPERATIONS

■ Program link programming

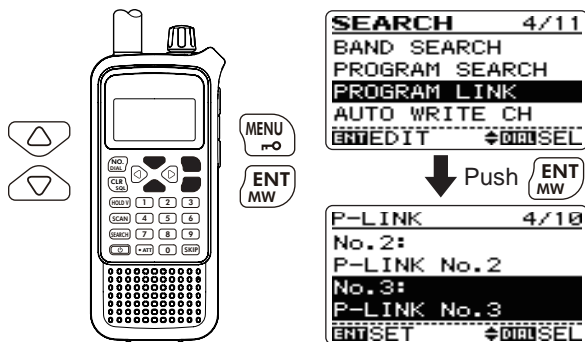
Each program link can be programmed by linking program searches (No. 00 to No. 24), and can be programmed with an alphanumeric link name for easy recognition. Program links are available a total 10 kind of links.

- ① Enter "PROGRAM LINK" in SEARCH menu.

MENU ⇨ SEARCH ⇨ **PROGRAM LINK**
(Push [MENU] (F-0)), (Push [△]/[▽], then push [ENT MW].)

- Search menu can also be entered by pushing and holding [SEARCH] for 1 sec.
- Program link number selection screen appears.

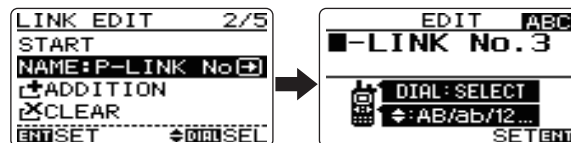
- ② Push [△] or [▽] several times to select the desired program link number, then push [ENT MW] to enter the link edit state.



- ③ Push [▽] several time to select the following operations.

NAME

- ① Push [ENT MW] (or [▷]) to edit the link name programming.
- Push [△] or [▽] to select the character group from "ABC" (alphabetical characters; capital letters), "abc" (alphabetical characters; lower case letters), "123" (numbers) or "!\"#\$" (symbols).
 - Push [◀] or [▷] to move the cursor left or right, respectively.
 - Push [CLR SQL] to clear the selected character.



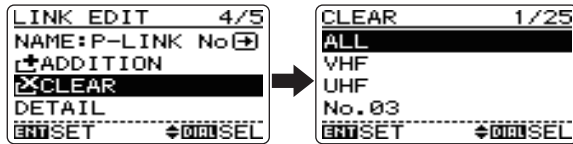
- ② Push [ENT MW] to set the name and return to link edit state.

• Available characters

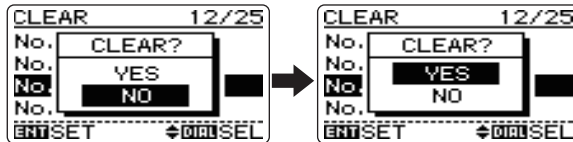
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
0123456789
!\"#\$%&'()*+,-./:;<=>?@[\\]^_`{ }~ (Space)

CLEAR

- 1 Push **[ENT MW]** (or **[▷]**) to edit the link clearing.
 - If all program searches are already cleared in the selected program link number, this item cannot be edited.



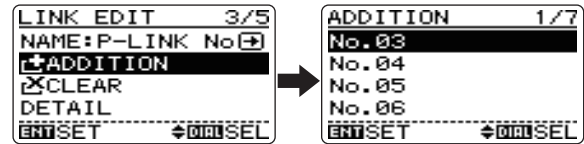
- 2 Push **[△]** or **[▽]** to select the program search to be unlinked.
- 3 Push **[ENT MW]** (or **[▷]**) to unlink the program search.
 - "CLEAR?" window appears.
- 4 Push **[△]** to select "YES," then push **[ENT MW]** (or **[▷]**).
 - Select "NO," then push **[ENT MW]** to cancel clearing.



- 5 Push **[◀]** to finish the link clearing and return to link edit state.

ADDITION

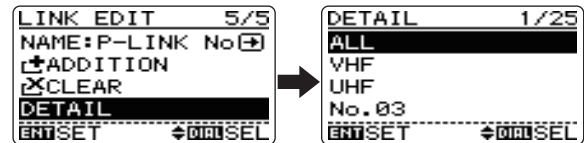
- 1 Push **[ENT MW]** (or **[▷]**) to edit the adding link.
 - If all program searches are already linked in the selected program link number, this item cannot be edited.



- 2 Push **[△]** or **[▽]** to select the desired program search.
- 3 Push **[ENT MW]** to set the link.
- 4 Push **[◀]** to finish the adding link and return to link edit state.

DETAIL

- 1 Push **[ENT MW]** (or **[▷]**) to enter the program link details.
 - If no program searches are linked in the selected program link number, this item cannot be entered.



- 2 Push **[△]** or **[▽]** to select the program search.
- 3 Push **[ENT MW]** (or **[▷]**) to enter the program search.
- 4 Push **[◀]** to return to link edit state.

6 SEARCH AND SCAN OPERATIONS

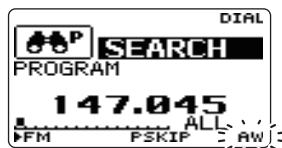
■ Auto write search

This search is useful for searching a specified frequency range and automatically storing busy frequencies into memory channels. The auto write search is performed with any search types.

- ① Push **[SEARCH]** to start the full search.
 - Any other searches are also available (see pages 26 to 29).
 - Search pauses when a signal is received.
 - Rotate **[DIAL]** to change the searching direction.
- ② Push and hold **[ENT MW]** for 1 sec. to turn the auto write function ON and OFF.
 - "AW" indicator blinks.



• During auto write search



"AW" indicator blinks during auto write search.

- ③ Push **[HOLD V]** to stop the auto write search.

◇ During auto write searching:

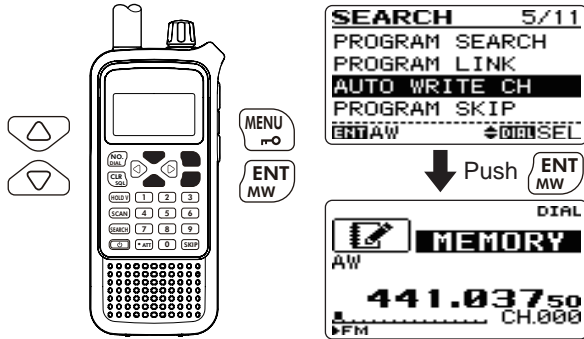
- When a signal is received, search pauses and the frequency is stored into auto write channel group (CH000 – CH199).
 - 2 short beeps sound when stored.
- Search resumes after frequency storing.
- When all channels are stored, the search is cancelled automatically and 1 long beep sounds.

◇ Recalling the stored frequencies:

- ① Enter "AUTO WRITE CH" in SEARCH menu.

MENU ⇨ SEARCH ⇨ **AUTO WRITE CH**
 (Push [MENU] (F1)), (Push [△]/[▽], then push [ENT MW].)

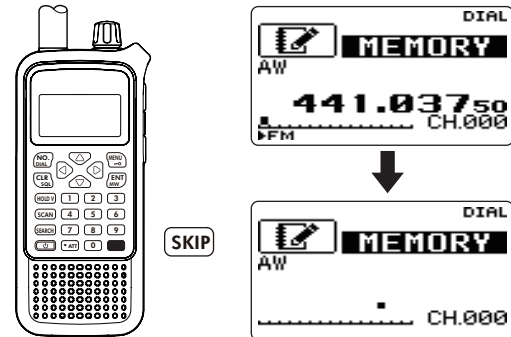
- Search menu can also be entered by pushing and holding [SEARCH] for 1 sec.
- Auto write channel group appears.



- ② Rotate [DIAL] to select the desired channel.

◇ Clearing the stored frequencies:

- ① Select the auto write channel group.
 ② Push and hold [SKIP] for 1 sec. to clear the all channels contents.
 • 1 short and 1 long beeps sound.



/// **NOTE:** The auto write channel contents CANNOT be cleared by an independent channel. Thus it is a good idea to copy the contents into regular memory channel.

6 SEARCH AND SCAN OPERATIONS

■ Skip search

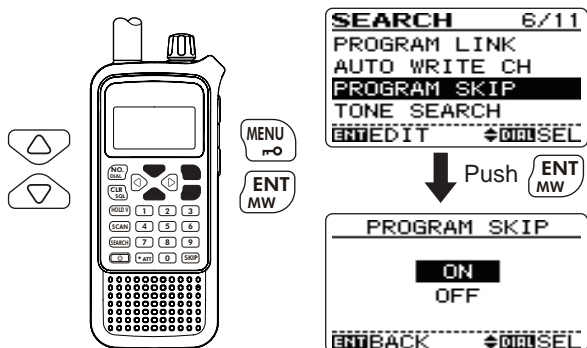
During search operation, you can store the paused frequency into memory channel as a skip channel which is skipped during search. This setting is useful to speed up the search speed.

◇ Setting

- ① Enter "PROGRAM SKIP" in SEARCH menu.

MENU → SEARCH → **PROGRAM SKIP**
(Push [MENU] ) , (Push [Δ]/[▽], then push [ENT MW].)

- Search menu can also be entered by pushing and holding [SEARCH] for 1 sec.
- ② Push [Δ]/[▽] (or rotate [DIAL]) to select the program skip setting ON or OFF.
 - ③ Push [ENT MW] (or [←]) to return to SEARCH menu, and push [CLR SQL] to return to frequency indication.

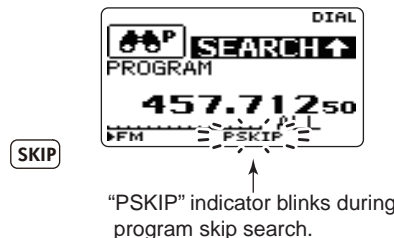


◇ Operation

- ① Push [SEARCH] to start the full search.
 - Any other searches are also available (see pages 26 to 29).
 - "PSKIP" indicator blinks.
 - Search pauses when a signal is received.
 - Rotate [DIAL] to change the searching direction.
- ② When search pauses and you want to set the paused frequency as a skip frequency.
Push and hold [SKIP] for 1 sec. to store the frequency into skip channel group in program search category.
 - Program search (category)/PSKIP1 (group) are made automatically when first skip channel is stored.
 - 1 long beep and 2 short beeps sound when stored.



• During Program skip search



- ③ After that, stored frequencies are skipped during search.
 - This setting can be turned OFF by entering "PROGRAM SKIP" in SEARCH menu (see left content for details).

■ Priority watch during search

Priority watch checks for signals on the priority channels every 5 sec. while operating on a search. All programmed memory channels can be set as priority channels at same time.

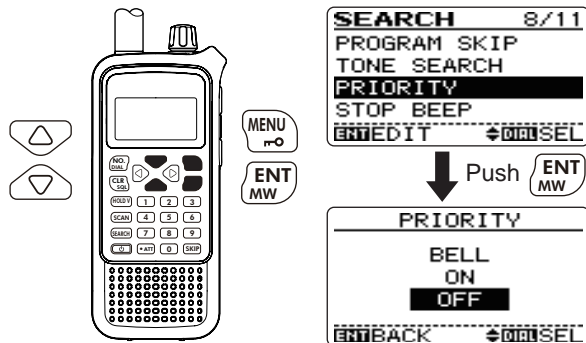
The watch resumes according to the selected search resume condition. See page 89 for details.

- ① Push **[SEARCH]** to start the full search.
 - Any other searches are also available (see pages 26 to 29).
 - Search pauses when a signal is received.
 - Rotate **[DIAL]** to change the searching direction.

- ② Enter "PRIORITY" in SEARCH menu.

MENU ⇨ SEARCH ⇨ **PRIORITY**
(Push **[MENU]**), (Push **[Δ]/[▽]**), then push **[ENT MW]**.)

- ③ Push **[Δ]/[▽]** (or rotate **[DIAL]**) to select "ON."
 - Select "BELL" if the priority beep function is desired.



- ④ Push **[ENT MW]** (or **[<|]**) to return to SEARCH menu, and push **[CLR SQL]** to return to frequency indication and start the watch.

- "PRIO" indicator appears.
- The receiver checks the priority channel(s) every 5 sec (see p. 53 for priority channel programming details).
- The watch resumes according to the selected scan resume condition (p. 46), or push **[CLR SQL]** to resume manually.
- During priority watch



Searches VFO frequencies for 5 sec.



Pauses on a priority channel when a signal is received.

- During priority watch with priority beep



Emits beep and blinks "(•)" indicator when a signal is received on a priority channel.



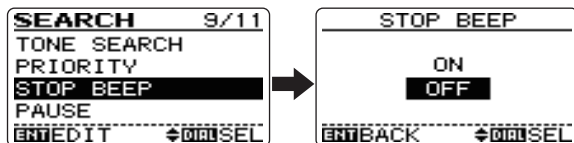
- ⑤ Push **[CLR SQL]** to cancel the priority watch.

Other SEARCH menu items

◇ Stop beep (STOP BEEP)

Selects the stop beep setting for search.

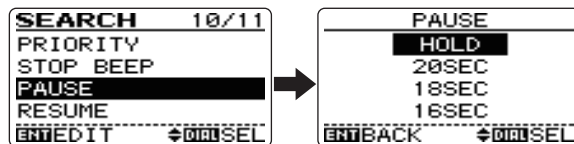
- OFF : The stop beep is turned OFF. (default)
- ON : The receiver emits a long beep when a search pauses with signal is received.



◇ Search pause timer (PAUSE)

Selects the search pause time. When receiving signals, the search pauses according to the search pause time.

- 2–20 SEC : Search pauses for 2–20 sec. on a received signal in 2 sec. steps. (default: 10 sec.)
- HOLD : Search pauses on a received signal until it disappears. Rotate [DIAL] to resume manually.



◇ Search resume timer (RESUME)

Selects the search resume time from a pause after the received signal disappears.

- 0 SEC : Search resumes when a received signal disappears.
- 1–5 SEC : Search pauses 1–5 sec. after a received signal disappears. (default: 2 sec.)
- HOLD : Search remains paused on the received signal even if it disappears. Rotate [DIAL] to resume manually.



Search resume timer must be set shorter than search pause timer (previous item), otherwise this timer does not activate.

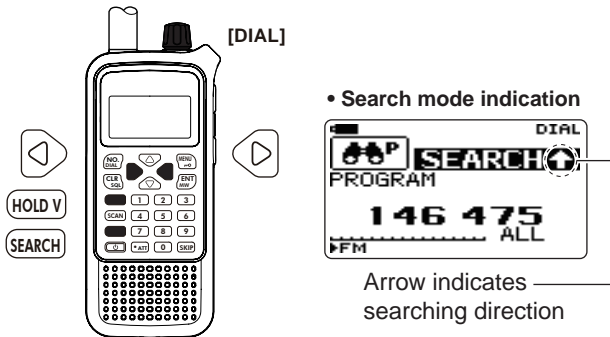
◇ Tone search (TONE SEARCH)

This item appears only when FM mode is selected. See page ?? for tone search details.

■ Link scan

IMPORTANT! To perform scan functions, 2 or more memory channels MUST be programmed, otherwise the scans will not start.

- ① Push **[SCAN]** to start a link scan.
 - Scan pauses when a signal is received.
 - Rotate **[DIAL]** to change the scanning direction.
- ② Push **[HOLD V]** to stop the scan temporarily, if desired.
 - Push and hold **[<]** or **[>]** for 1 sec. several times to select the desired category; or push **[<]** or **[>]** several times to select the desired group.
 - Push **[HOLD V]** again to restart the scan.



The category/group link setting can be changed in memory programming. See page 109 for details.

Scan skips any memory channels in the selected category/group that are set to “SKIP” or “PSKIP.”

Link scan stops at the first channel when all channels in a category/group are set to “SKIP” or “PSKIP.”

6 SEARCH AND SCAN OPERATIONS

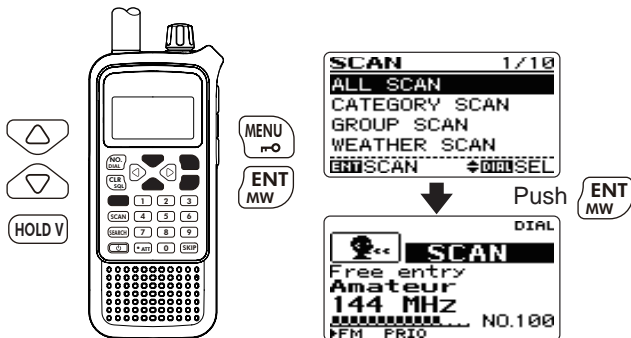
■ All scan

All scan repeatedly scans all memory channels programmed with any frequencies in the memory channel selected for scanning.

- 1 Enter "ALL" in SCAN menu.

MENU ⇨ SCAN ⇨ **ALL**
(Push [MENU >]), (Push [Δ]/[▽], then push [ENT MW].)

- SCAN menu can also be entered by pushing and holding [SCAN] for 1 sec.
 - Scan pauses when a signal is received.
 - Rotate [DIAL] to change the scanning direction.
- 2 Push [HOLD V] to stop the scan temporarily, if desired.
 - Push and hold [◀] or [▶] for 1 sec. several times to select the desired category; or push [◀] or [▶] several times to select the desired group.
 - Push [HOLD V] again to restart the scan.



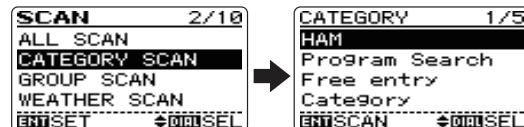
■ Category scan

Category scan repeatedly scans all memory channels in the same category as the selected memory channel has been programmed.

- 1 Enter "CATEGORY" in SCAN menu.

MENU ⇨ SCAN ⇨ **CATEGORY**
(Push [MENU >]), (Push [Δ]/[▽], then push [ENT MW].)

- SCAN menu can also be entered by pushing and holding [SCAN] for 1 sec.



- 2 Push [Δ]/[▽] (or rotate [DIAL]) to select the desired category, then push [ENT MW].
 - Scan pauses when a signal is received.
 - Rotate [DIAL] to change the scanning direction.



- 3 Push [HOLD V] to stop the scan temporarily, if desired.
 - Push and hold [◀] or [▶] for 1 sec. several times to select the desired memory category; or push [◀] or [▶] several times to select the desired group.
 - Push [HOLD V] again to restart the scan.

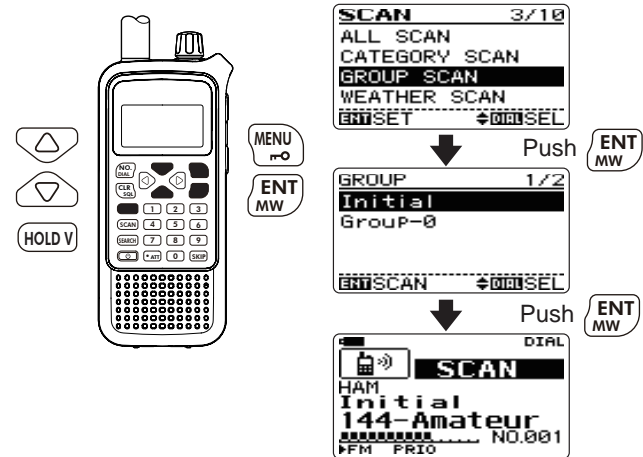
■ Group scan

Group scan repeatedly scans all memory channels in the same group as the selected memory channel has been programmed.

- ① Select the category that includes the desired group to be scanned.
 - ➔ Push **[SCAN]** to start a scan, then push **[HOLD V]** to hold the scan.
 - ➔ Push and hold **[<]** or **[>]** for 1 sec. to select the category.
- ② Enter "GROUP" in SCAN menu.

MENU → SCAN → **GROUP**
 (Push **[MENU]**), (Push **[Δ]/[▽]**), then push **[ENT MW]**.)

 - SCAN menu can also be entered by pushing and holding **[SCAN]** for 1 sec.
- ③ Push **[Δ]/[▽]** (or rotate **[DIAL]**) to select the desired group, then push **[ENT MW]**.
 - Scan pauses when a signal is received.
 - Rotate **[DIAL]** to change the scanning direction.
- ④ Push **[HOLD V]** to stop the scan temporarily, if desired.
 - Push and hold **[<]** or **[>]** for 1 sec. several times to select the desired memory category; or push **[<]** or **[>]** several times to select the desired group.
 - Push **[HOLD V]** again to restart the scan.



6 SEARCH AND SCAN OPERATIONS

Weather channel operation

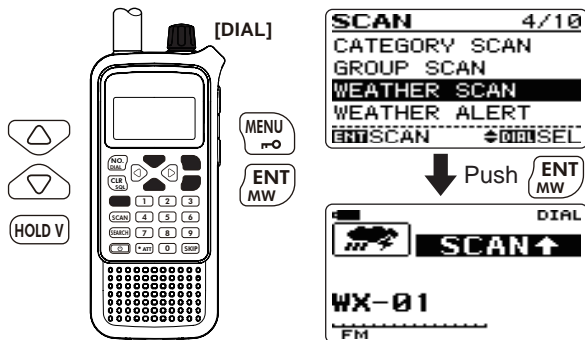
There are 10 weather channels for monitoring weather channels from the NOAA (National Oceanographic and Atmospheric Administration) broadcasts.

Weather channel selection

- 1 Enter "WEATHER SCAN" in SCAN menu.

MENU → SCAN → **WEATHER SCAN**
(Push [MENU] ) , (Push [Δ]/[▽] , then push [ENT MW].)

- SCAN menu can also be entered by pushing and holding [SCAN] for 1 sec.
 - "WX" and the weather channel number appear.
- 2 Push [HOLD V] to stop scanning.
 - 3 Rotate [DIAL] to select the desired weather channel.
 - 4 Push and hold [HOLD V] for 1 sec. to return to VFO mode.



U.S.A. and CANADA versions only

Weather alert function

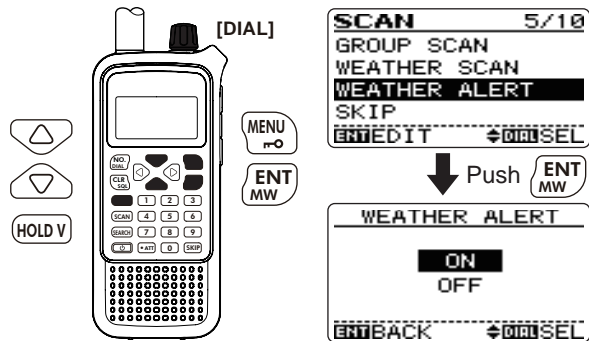
NOAA broadcast stations transmit weather alert tones before important weather announcements. When the weather alert function is turned ON, the selected weather channel is monitored every 5 sec. for the announcement. When the alert signal is detected, the "ALT" and the WX channel are displayed alternately and sounds a beep tone until the receiver is operated. The previously selected (used) weather channel is checked periodically during standby or while scanning.

- 1 Select the desired weather channel.
- 2 Enter "WEATHER ALERT" in SCAN menu.

MENU → SCAN → **WEATHER ALERT**
(Push [MENU] ) , (Push [Δ]/[▽] , then push [ENT MW].)

- Scan menu can also be entered by pushing and holding [SCAN] for 1 sec.
- 3 Push [Δ]/[▽] (or rotate [DIAL]) to select "ON" or "OFF".
 - 4 Push [ENT MW] (or [◀]) to return to SCAN menu, and push [CLR SQL] to return to the weather channel indication.
 - 5 Set the desired stand-by condition.
 - Select VFO or memory channel.
 - Search, scan or priority watch operation can also be selected.
 - 6 When the alert is detected, a beep sounds and the following indication will be displayed.
 - 7 Turn the weather alert function OFF in SCAN menu.

NOTE: While receiving a signal (on a frequency other than the weather alert ON frequency), the receiving signal or audio will be interrupted momentarily every 5 sec. (approx.) in the case that the alert function is turned ON. This symptom is caused by the WX alert function. To cancel these symptoms, set the weather alert item OFF in SCAN menu.



6 SEARCH AND SCAN OPERATIONS

■ Skip setting for scanning

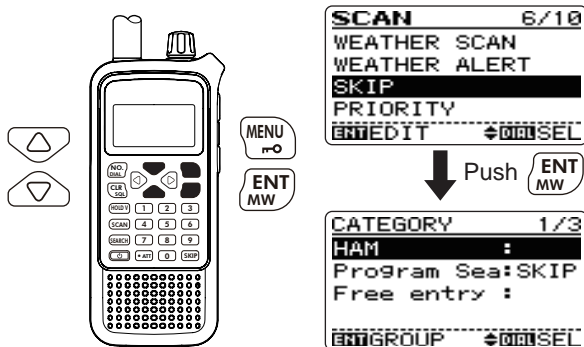
Memory category/group/name can be set to be skipped during scan. In addition, memory channels can be set to be skipped during search. This is useful to speed up the scan/search rate.

- 1 Enter "SKIP" in SCAN menu.

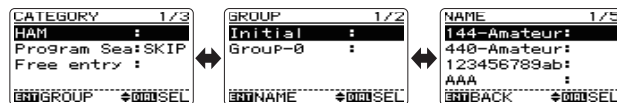
MENU → SCAN → **SKIP**

(Push [MENU] [F0]), (Push [Δ]/[▽], then push [ENT MW].)

- Scan menu can also be entered by pushing and holding [SCAN] for 1 sec.



- 2 Push [<|/|>] once or twice to select "CATEGORY," "GROUP" or "NAME."



- 3 Push [Δ]/[▽] (or rotate [DIAL]) to select the category (group/name) to be skipped.
- 4 Push [SKIP] to set the skip state.
 - Push [SKIP] again to cancel the skip state.



- 5 Push [ENT MW] (or [<|/|>]) several times to return to SCAN menu, and push [CLR SQL] to return to frequency indication.

✓ CONVENIENT!

The group skip setting can be set with the following operation during a scan or scan holding state.

- 1 Select the desired memory group to be skipped.
- 2 Push and hold [SKIP] for 1 sec., and rotate [DIAL] to select the skip setting from "ON (skip)" and "OFF," then push [ENT MW].

■ Priority watch during scan

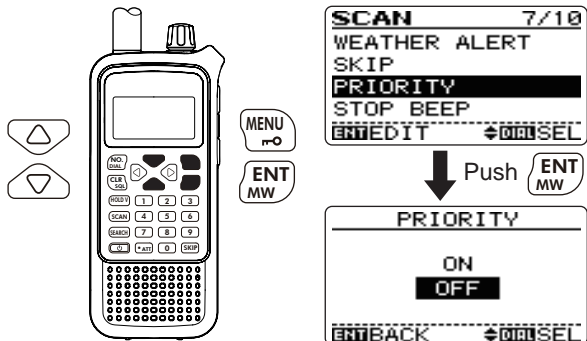
Priority watch checks for signals on the priority channels every 5 sec. during a scan.

- ① Push **[SCAN]** to start the link scan.
 - Any other scans are also available (see pages 39 to 41).
 - Scan pauses when a signal is received.
 - Rotate **[DIAL]** to change the scanning direction.

- ② Enter "PRIORITY" in SCAN menu.

MENU ⇨ SCAN ⇨ **PRIORITY**
 (Push **[MENU]**), (Push **[Δ]/[▽]**, then push **[ENT MW]**.)

- ③ Push **[Δ]/[▽]** (or rotate **[DIAL]**) to select "ON."

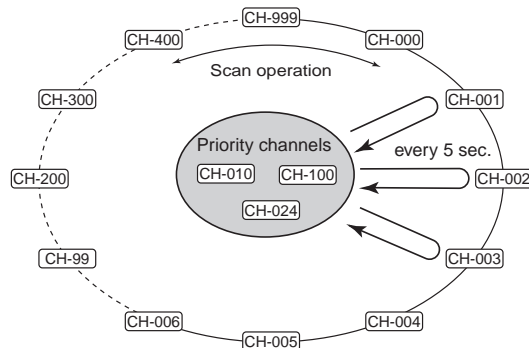


- ④ Push **[ENT MW]** (or **[<]**) to return to SCAN menu, and push **[CLR SQL]** to exit the menu screen and start the watch.

- "PRIO" indicator appears.
- The receiver checks the priority channel(s) every 5 sec (see p. 53 for priority channel programming details).
- The watch resumes according to the selected scan resume condition (p. 89), or push **[CLR SQL]** to resume manually.



Pauses on a priority channel when a signal is received.



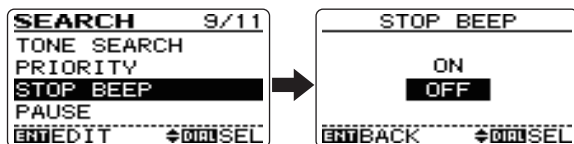
- ⑤ Turn the priority watch function OFF in SCAN menu.

Other SCAN menu items

◇ Stop beep (STOP BEEP)

Selects the stop beep setting for scan.

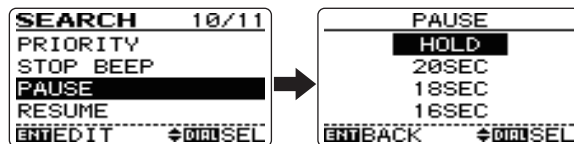
- OFF : The stop beep is turned OFF. (default)
- ON : The receiver emits a long beep when a scan pauses with signal is received.



◇ Scan pause timer (PAUSE)

Selects the scan pause time. When receiving signals, the scan pauses according to the scan pause time.

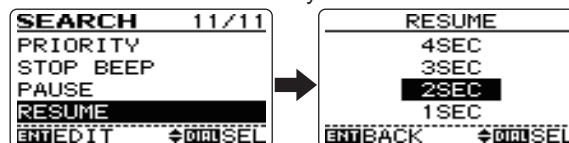
- 2–20 SEC : Scan pauses for 2–20 sec. on a received signal in 2 sec. steps. (default: 10 sec.)
- HOLD : Scan pauses on a received signal until it disappears. Rotate [DIAL] to resume manually.



◇ Scan resume timer (RESUME)

Selects the scan resume time from a pause after the received signal disappears.

- 0 SEC : Scan resumes when a received signal disappears.
- 1–5 SEC : Scan pauses 1–5 sec. after a received signal disappears. (default: 2 sec.)
- HOLD : Scan remains paused on the received signal even if it disappears. Rotate [DIAL] to resume manually.



/// Scan resume timer must be set shorter than scan pause timer (previous item), otherwise this timer does not activate.

■ General description

The IC-RX7 can be programmed a total 1600 memory channels. And a total of 26 category are available for storing groups of frequencies, etc.

The memory organization is as follow.

- ① Category : Max. 26
- ② Group : Max. 100 (in each category)
- ③ Name : Max. 100 (in each group)
- ④ CH : Max. 6 (in each name)

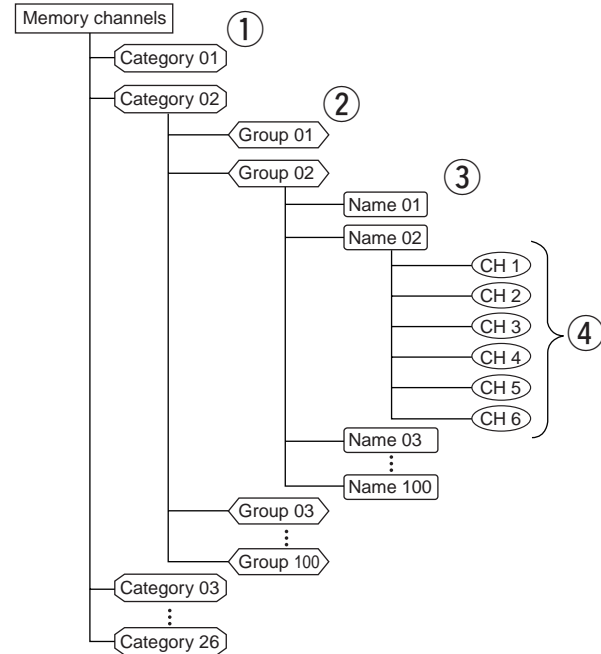
◇ Memory channel contents

The following information can be programmed into memory channels:

- Operating frequency (pgs. 20, 21)
- Duplex direction (+DUP or -DUP) with an offset frequency (p. 74)
- Tuning step (p. 61)
- Receiving mode (p. 61)
- Attenuator ON/OFF (p. 73)
- Skip setting (p. ??)
- Priority setting (p. ??)
- Stop beep (p. 46)
- Tone squelch or DTCS squelch ON/OFF (p. 62)
- Tone squelch frequency or DTCS code with polarity (pgs. 62, 63)
- VSC setting (p. 63)

CAUTION!

Memory data can be erased by static electricity, electric transients, etc. In addition, they can be erased by malfunction and during repairs. Therefore, we recommend that memory data be written down or be saved to a PC using the optional CS-RX7 CLONING SOFTWARE.



Memory channel programming

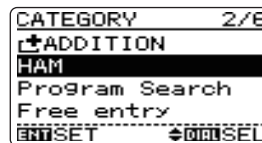
- ① Push and hold **[HOLD V]** for 1 sec. to select VFO mode.
- ② Set the desired frequency, if desired:
 - Frequency or any other data can be set while in CH programming state.
 - ➔ Select the desired band with **[<|]** or **[>|]**.
 - ➔ Set the desired frequency with **[DIAL]**.
 - ➔ Or set the desired frequency with keypad directly.
In this case, the band and frequency settings with **[<|]/[>|]** and **[DIAL]** as above are not required.
 - ➔ Set other data (e.g. offset frequency, duplex direction, tone squelch, etc.) in the Menu screen.
- ③ Push and hold **[ENT MW]** for 1 sec. to enter memory programming mode.
 - 1 short and 1 long beep sound.
 - Category selection screen appears.

✓ STORING SEARCHED FREQUENCY:

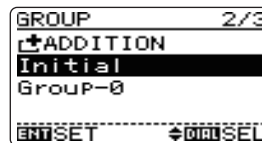
While in a search holding state, the displayed frequency, receiving mode and other data can also be stored into memory channel as following operation instead above ① to ③.

- ① Start a search.
 - Search pauses when a signal is received.
 - Rotate **[DIAL]** to restart the search.
- ② Push **[HOLD V]** to hold the search, if you want to store the paused frequency into memory channel.
- ③ Push and hold **[ENT MW]** for 1 sec. to enter the memory programming mode.

- ④ Push **[△]** or **[▽]** (or rotate **[DIAL]**) to select the desired category or “ADDITION,” then push **[ENT MW]**.
 - When “ADDITION” is selected, new category can be programmed (see p. 50 for new category programming details).



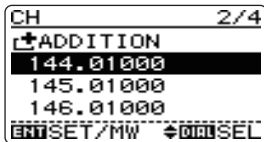
- ⑤ Push **[△]** or **[▽]** (or rotate **[DIAL]**) to select the desired group or “ADDITION,” then push **[ENT MW]**.
 - When “ADDITION” is selected, new group can be programmed in the category (see p. 51 for new group programming details).



- ⑥ Push [△] or [▽] (or rotate [DIAL]) to select the desired name or “ADDITION,” then push [ENT MW].
- When “ADDITION” is selected, new name can be programmed in the group (see p. 52 for new name programming details).



- ⑦ Push [△] (or rotate [DIAL]) to select “ADDITION,” then push [ENT MW].
- After “ADDITION” is selected, new channel can be programmed in the name (see p. 53 for new channel programming details).



- ⑧ After all data are programmed, push and hold [ENT MW] for 1 sec. to store the channel and return to frequency display.

What is DIRECT KEY

The IC-RX7 has a total of 100 direct keys in the same category (00 to 99). Direct key is used to turn the link setting ON/OFF for the assigned category or group during link scan.

- ① Push [SCAN] to start the link scan.
 - Scan pauses when a signal is received.
 - Rotate [DIAL] to restart the scan.
- ② Push [HOLD V] to hold the scan.
 - Push a numeral key (0 to 9) to the link setting ON or OFF for the category or group which assigned a direct key (00 to 09).
 - Or push [• ATT] and 2 digit number (00 to 99) to the link setting ON or OFF for the category or group which assigned a direct key (00 to 99).
 - Or push [• ATT] and a numeral key (0 to 9), then push [ENT MW] to the link setting ON or OFF for the category or group which assigned a direct key (00 to 09).

7 MEMORY PROGRAMMING

◆ New CATEGORY programming

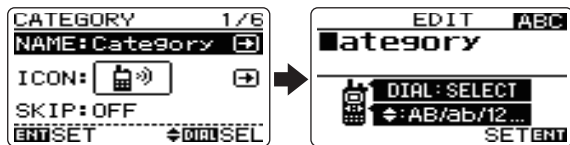
- ① Push [△] or [▽] (or rotate [DIAL]) to select the desired information, then push [ENT MW].

Selectable information:

- NAME
- ICON
- SKIP
- LINK
- DIRECT KEY
- NEXT (Edit GROUP programming)

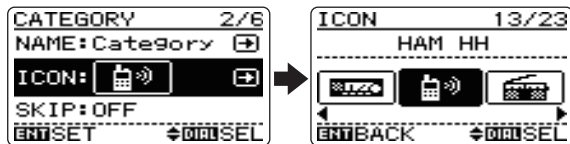
NAME (Category name)

- ① Push [ENT MW] (or [▷]) to edit the name programming.
- Push [△] or [▽] to select the character group from “ABC” (alphabetical characters; capital letters), “abc” (alphabetical characters; lower case letters), “123” (numbers) or “!@#” (symbols). See next page for available characters details.
 - Push [◀] or [▶] to move the cursor left or right, respectively.
 - Push [CLR SQL] to clear the selected character.



ICON

- ① Push [ENT MW] (or [▷]) to edit the setting state.
- ② Push [△] or [▽] (or [◀]/[▶]) to select the desired icon, then push [ENT MW].



SKIP, LINK

- ① Push [ENT MW] (or [▷]) to edit the setting state.
- ② Push [△] or [▽] to select the desired setting, then push [ENT MW].



DIRECT KEY

- ① Push [ENT MW] (or [▷]) to enter the number input.
- ② Edit the desired 2 digit number with keypad.
- Duplicated number can not be assigned in the same category (including direct key for group).



- ② Push [▽] (or rotate [DIAL]) to select “NEXT,” then push [ENT MW] to enter the GROUP programming state.