



## INSTRUCTION MANUAL

COMMUNICATIONS RECEIVER  
**IC-R1500**

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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.

**Icom Inc.**

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## FOREWORD

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Thank you for purchasing this Icom product. The IC-R1500 COMMUNICATIONS RECEIVER is designed and built with Icom's state of the art technology and craftsmanship. With proper care, this product should provide you with years of trouble-free operation.

We want to take a couple of moments of your time to thank you for making your IC-R1500 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-R1500.

### ◊ FEATURES

- *Wide frequency coverage with all mode receive*
- *Real-time bandscope function*
- *IF shift function function*
- *ANF and NR functions available (Only when the DSP unit is installed.)*

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## IMPORTANT

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

**SAVE THIS INSTRUCTION MANUAL**— This instruction manual contains important operating instructions for the IC-R1500.

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## EXPLICIT DEFINITIONS

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

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# PRECAUTION

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**⚠ WARNING RF EXPOSURE!** This device emits Radio Frequency (RF) energy. Extreme caution should be observed when operating this device. If you have any questions regarding RF exposure and safety standards please refer to the Federal Communications Commission Office of Engineering and Technology's report on Evaluating Compliance with FCC Guidelines for Human Radio frequency Electromagnetic Fields (OET Bulletin 65).

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

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

**NEVER** connect the receiver to a power source of more than 16 V DC. This will damage the receiver.

**NEVER** connect the receiver to a power source using reverse polarity. This will damage the receiver.

**NEVER** cut the DC power cable between the DC plug and fuse holder. If an incorrect connection is made after cutting, the receiver may be damaged.

**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.

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

**NEVER** let objects impede the operation of the cooling fan on the rear panel.

**AVOID** using or placing the receiver in direct sunlight or in areas with temperatures below  $-10^{\circ}\text{C}$  ( $+14^{\circ}\text{F}$ ) or above  $+60^{\circ}\text{C}$  ( $+140^{\circ}\text{F}$ ).

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

**AVOID** setting the receiver in a place without adequate ventilation. Heat dissipation may be affected, and the receiver may be damaged.

**AVOID** the use of chemical agents such as benzine or alcohol when cleaning, as they can damage the receiver's surfaces.

**USE** Icom microphones only (supplied or optional). Other manufacturer's microphones have different pin assignments and may damage the receiver if attached.

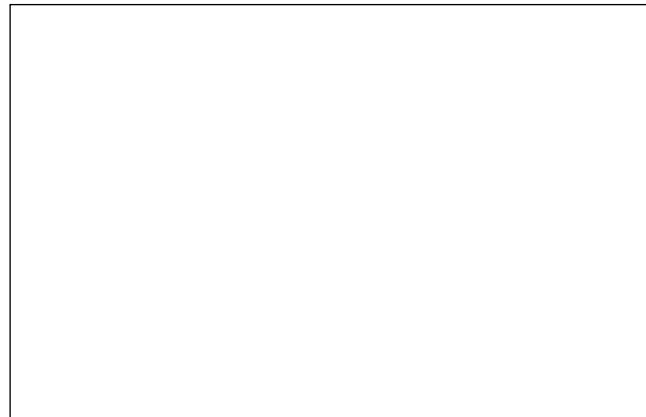
***For U.S.A. only***

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

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## SUPPLIED ACCESSORIES

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① Antenna .....	1
② AC adapter .....	1
③ USB cable .....	1
④ CD .....	1
⑤ Leg pad .....	1

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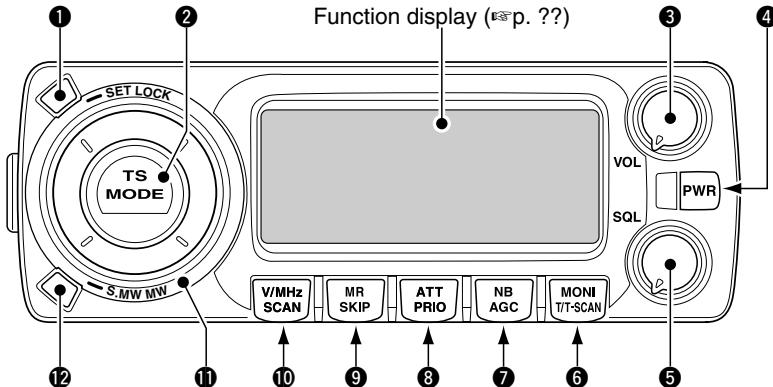
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## ■ Front panel— controller



### ① SET-LOCK SWITCH [SET-LOCK]

- Enters set mode when pushed. (p. ??)
- Switches the lock function ON and OFF when pushed for 1 sec. (p. ??)

### ② TUNING STEP/MODE [TS-MODE]

- Push to select the tuning step. (p. ??)
- Each push for 1 sec. selects the operating mode. (p. ??)

### ③ VOLUME CONTROL [VOL] (p. ??)

Adjusts the audio level.

### ④ POWER SWITCH FOR CONTROLLER [PWR]

Turns the controller power ON and OFF when pushed for 1 sec.

### ⑤ SQUELCH CONTROL [SQL]

Varies the squelch level. (p. ??)

### ⑥ MONITOR-TONE-TONE SCAN SWITCH [MONI-T/T-SCAN]

- Push to switch the monitor function ON and OFF. (p. ??)
- Push for 1 sec. to enter the tone function selection mode. (pgs. ??, ??)
  - Subaudible tone encoder, pocket beep (CTCSS), tone squelch, pocket beep (DTCS), DTCS squelch or tone function OFF can be selected.
- Push for 1 sec. during tone function selection mode to start the tone scan. (p. ??)

**⑦ NOISE BLANKER/AUTOMATIC GAIN CONTROL SWITCH [NB•AGC]**

- Push to switch the NB (Noise Blanker) function ON and OFF. (p. ??)
  - The noise blanker function cannot be used in WFM mode.
- Push for 1 sec. to switch the AGC (Automatic Gain Control) function ON and OFF. (p. ??)

**⑧ ATTENUATOR/PRIORITY SWITCH [ATT•PRIO]**

- Push to switch the ATT (Attenuator) function ON and OFF. (p. ??)
- Starts priority watch when pushed for 1 sec. (p. ??)

**⑨ MEMORY/SKIP SWITCH [MR•SKIP]**

- Push to select and toggle memory and weather channel\* modes. (pgs. ??, ??, ??)
  - Weather channels are available for USA version only.
- Push for 1 sec. to turn the channel skip setting ON and OFF for memory skip scan operation. (p. ??)

**⑩ VFO/MHz TUNING•SCAN SWITCH [V/MHz•SCAN]**

- Selects and toggles VFO mode and 1 MHz (or 10 MHz for some versions) tuning when pushed. (p. ??)
- Starts scan when pushed for 1 sec. (p. ??)
  - Cancels a scan when pushed during scan.

**⑪ TUNING DIAL [DIAL]**

Selects the operating frequency (p. ??), memory channel (p. ??), the setting of the set mode item and the scanning direction (p. ??).

**⑫ MEMORY WRITE SWITCH [S.MW•MW] (pgs. ??, ??, ??)**

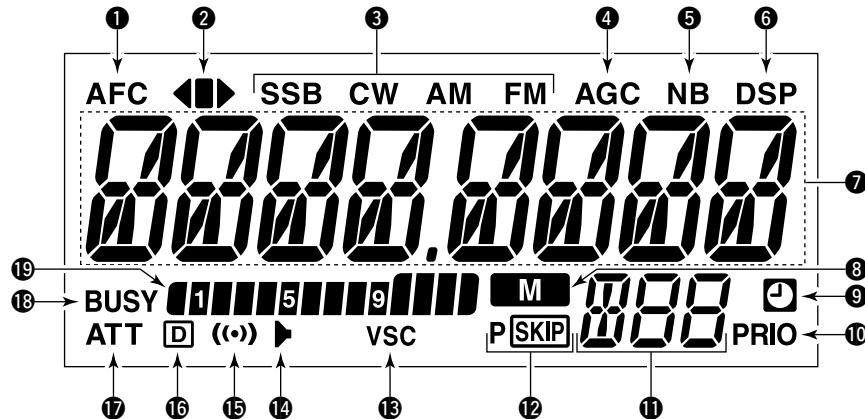
- Selects a memory channel for programming when pushed.
- Programs the selected memory channel when pushed for 1 sec.

**⑬ POWER SWITCH FOR RECEIVER [POWER]**

Turns the receiver power ON and OFF

# 1 PANEL DESCRIPTION

## ■ Function display



### ① AFC INDICATOR

Appears when the AFC function is in use. (p. ??)

### ② FM CENTER INDICATORS (p. ??)

- “◀” or “▶” appears when the received signal is not tuned to its center frequency; or the squelch is closed.
- “■” appears when the received signal is tuned to its center frequency.

### ③ RECEIVE MODE INDICATORS

Shows the selected receive mode.

- LSB, USB, CW, AM, FM and WFM are available.

### ④ AGC INDICATOR (p. ??)

Appears when the AGC function is in use. (p. ??)

### ⑤ NB INDICATOR (p. ??)

Appears when the NB function is in use. (p. ??)

### ⑥ DSP INDICATOR (p. ??)

Appears when the DSP digital filter function is in use.

**⑦ FREQUENCY READOUT**

Shows the operating frequency, channel names, set mode contents, etc.

- Frequency decimal point blinks while scanning. (p. ??)
- "d" appears in place of the 1st digit while the DTMF memory function is in use. (p. ??)

**⑧ MEMORY INDICATOR (pgs. ??, ??)**

Appears when memory mode is selected.

**⑨ AUTO POWER-OFF INDICATOR (p. ??)**

Appears while the auto power OFF function is in use.

**⑩ PRIORITY INDICATOR (p. ??)**

Appears while the priority watch is activated; blinks while the watch is paused.

**⑪ MEMORY CHANNEL NUMBER INDICATORS**

- ➔ Shows the selected memory channel number. (p. ??)
- ➔ Shows the selected bank initial. (p. ??)
- ➔ "L" appears when the lock function is activated. (p. ??)

**⑫ SKIP INDICATORS (p. ??)**

- ➔ "SKIP" appears when the displayed memory channel is specified as a skip channel.
- ➔ "P SKIP" appears when the displayed frequency is specified as a program skip frequency.

**⑬ VSC INDICATOR (p. ??)**

Appears when the VSC function is in use. (p. ??)

**⑭ TONE SQUELCH INDICATOR (p. ??)**

Appears when the tone squelch function is in use. (p. ??)

**⑮ POKET BEEP INDICATOR (p. ??)**

- ➔ Appears when the poket beep function is in use. (p. ??)
- ➔ Appears with "▶" or "▣" while the pocket beep function (with CTCSS or DTCS) is in use. (p. ??)

**⑯ DTCS SQUELCH INDICATOR (p. ??)**

Appears while the DTCS squelch function is in use. (p. ??)

**⑰ ATT INDICATOR (p. ??)**

Appears when the ATT function is in use. (p. ??)

**⑱ BUSY INDICATOR**

- ➔ Appears when a signal is being received or the squelch is open. (p. ??)
- ➔ Blinks while the monitor function is in use. (p. ??)

**⑲ S-METER INDICATORS**

Shows the relative signal strength while receiving signals. (p. ??)

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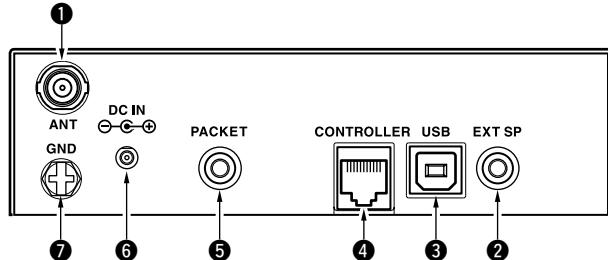
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# 1 PANEL DESCRIPTION

## ■ Rear Panel



### ① ANTENNA CONNECTOR [ANT]

Connects a  $50\ \Omega$  antenna with a BNC connector and a  $50\ \Omega$  coaxial cable.

### ② EXTERNAL SPEAKER JACK [EXT SP]

Connects an  $8\ \Omega$  external speaker.  
• Audio output power is more than 0.5 W.

### ③ USB RECEPTACLE [USB]

Connects to a PC via an extension cable.

### ④ CONTROLLER [CONTROLLER]

Connects to a controller via an extension cable.

### ⑤ DATA SOCKET [PACKET]

Connects a TNC (Terminal Node Controller), etc. for data communications. The receiver can receive 9600 bps packet communication (AFSK.)

- See p. ? for connection information.

### ⑥ POWER RECEPTACLE [DC IN]

Accepts 12 V DC  $\pm 15\%$  with the supplied DC power cable.

**NOTE: DO NOT** use a cigarette lighter socket as a power source when operating in a vehicle. The plug may cause voltage drops and ignition noise may be superimposed onto receive audio.

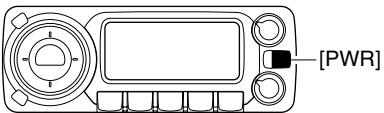
### ⑦ GROUND TERMINAL [GND]

Connect this terminal to a ground.

# SETTING A FREQUENCY

## ■ Turning power ON/OFF

→ Push [PWR] for 1 sec. to turn power ON and OFF.

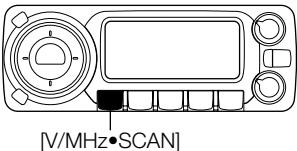


## ■ Mode selection

### ◊ VFO modes

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

→ Push [V/MHz•SCAN] 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.

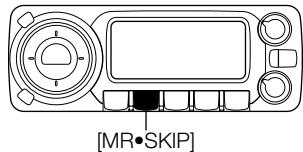
### ◊ Memory mode/Weather channels\*

Memory mode is used for operation of memory channels which have programmed frequencies. Weather channels\* are monitored each 5 sec. when the weather alert function is turned ON.

\*Available for the USA version only.

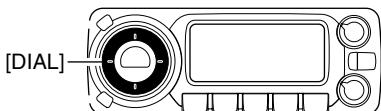
① Push [MR•SKIP] several times to select the channel type.

- Memory mode/Weather channels can be selected in sequence.
- “M” indicator appears when memory mode is selected.



② Rotate [DIAL] to select the desired channel.

- Only programmed memory channels can be selected.
- See p. ?? for memory programming details.



## 2 SETTING A FREQUENCY

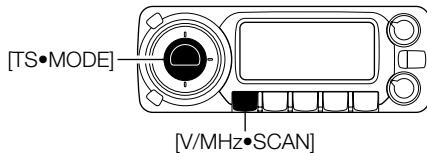
### ■ Tuning step selection

When using the tuning dial to change the frequency, or when a scan function is activated, the frequency changes in increments determined by the set tuning step. This can be changed if desired.

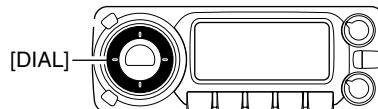
The following tuning step are available.

• 1 Hz	• 10Hz	• 20 Hz	• 50 Hz	• 100 Hz
• 500Hz	• 1 kHz	• 2.5 kHz	• 5 kHz	• 6.25 kHz
• 8.33 kHz	• 9 kHz	• 10 kHz	• 12.5 kHz	• 15 kHz
• 20 kHz	• 25 kHz	• 30 kHz	• 50 kHz	• 100 kHz
• 125 kHz	• 150 kHz	• 200 kHz	• 500 kHz	• 1 MHz
• 10 MHz				

- ① Push **[V/MHz•SCAN]** to select VFO mode, if necessary.
- ② Push **[TS•MODE]** to enter the tuning step select mode.



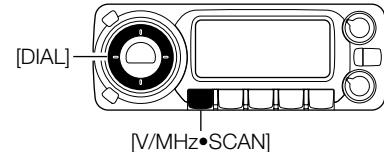
- ④ Rotate **[DIAL]** to select the desired tuning step.



- ⑤ Push **[TS•MODE]** to exit the tuning step select mode.

### ■ Setting a frequency

- ① Rotate **[DIAL]** to set the frequency.
  - If VFO mode is not selected, push **[V/MHz•SCAN]** to select VFO mode.
  - The frequency changes in the selected tuning steps. (p. ??)



- ② To change the frequency in 1 MHz (10 MHz for some versions) steps, push **[V/MHz•SCAN]**, then rotate **[DIAL]**.
  - Pushing **[V/MHz•SCAN]** for 1 sec. starts scan function. If scan starts, push **[V/MHz•SCAN]** again to cancel it.



While 1 MHz tuning step is selected, the digit below 100 kHz disappear.



While 10 MHz tuning step is selected, the digit below 1 MHz disappear.

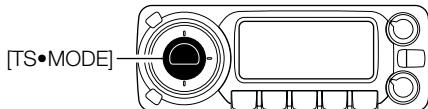
## ■ Receive mode selection

Receive modes are determined by the physical properties of the radio signals. The receiver has 6 receive modes: SSB LSB, CW, AM, WFM and FM modes. The mode selection is stored independently in each memory channels.

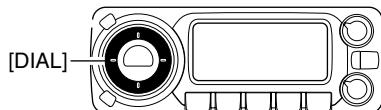
Typically, AM mode is used for the AM broadcast stations (0.495–1.620 MHz) and air band (118–135.995 MHz), and WFM is used for FM broadcast stations (76–107.9 MHz).

When Automatic mode is selected, IF filter passband width, tuning step, etc., are selected automatically after inputting a frequency. (p. ???)

→ Push [TS•MODE] for 1 sec. to enter the receive mode select mode.



④ Rotate [DIAL] to select the desired mode.



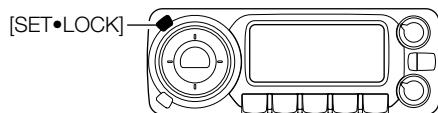
⑤ Push [TS•MODE] to exit the receive mode select mode.

## ■ Lock function

To prevent accidental frequency changes and unnecessary function access, use the lock function.

→ Push [SET•LOCK] for 1 sec. to turn the lock function ON and OFF.

• [SET•LOCK] (lock function only), [MONI•T/T•SCAN] (monitor function only), [PWR], [VOL] and [SQL] can be used while the channel lock function is in use.



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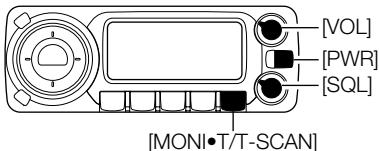
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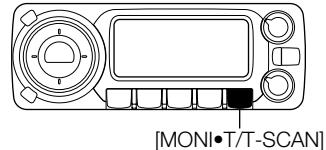
## ■ Receiving

- ① Push **[PWR]** for 1 sec. to turn power ON.
- ② Set the audio level.
  - ▶ Push **[MONI•T/T-SCAN]** to open the squelch.
  - ▶ Rotate **[VOL]** to adjust the audio level.
  - ▶ Push **[MONI•T/T-SCAN]** to close the squelch.
- ③ Set the squelch level.
  - ▶ Rotate **[SQL]** fully counterclockwise in advance, then rotate **[SQL]** clockwise until the noise just disappears.
    - When interference is received, rotate **[SQL]** clockwise again for attenuator operation. (p. ??)
- ④ Set the receive frequency. (pgs. ??, ??)
- ⑤ When receiving a signal on the set frequency, squelch opens and the receiver emits audio.
  - “BUSY” appears and the S-meter indicator shows the relative signal strength for the received signal.



## ■ 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.

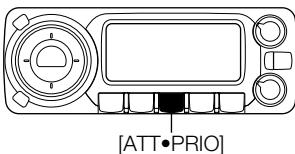


- ▶ Push **[MONI•T/T-SCAN]** to open the squelch.
  - “BUSY” blinks.
  - Push **[MONI•T/T-SCAN]** again to cancel the function.

## ■ Squelch attenuator

The attenuator prevents a desired signal from distorting when very strong signals are near the desired frequency or when very strong electric fields, such as from a broadcasting station, are near your location. The attenuator gain is about 20 dB.

- ▶ Push **[ATT•PRIO]** to toggle the attenuator function ON and OFF.
  - “ATT” appears when the attenuator function is in use.

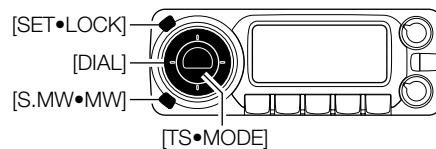


## ■ AFC function

USING SET MODE

The AFC (Automatic Frequency Control) function tunes the displayed frequency automatically when an off-center frequency is received. It activates in FM/WFM modes only.

- ① Select FM mode.
- ② Push **[SET•LOCK]** to enter set mode.
- ③ Push **[SET•LOCK]** or **[S.MW•MW]** several times until “AFC” appears.
- ④ Rotate **[DIAL]** to toggle the AFC function ON and OFF.
- ⑤ Push **[TS•MODE]** to exit set mode.
  - “AFC” appears when the AFC function is in use.

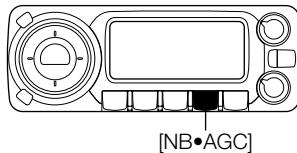


## 3 BASIC OPERATION

### ■ NB function

The NB (noise blanker) function removes pulse-type noise when USB, LSB or CW mode is selected.

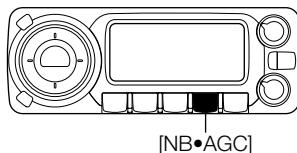
- ▶ Push **[NB•AGC]** to toggle the NB function ON and OFF.
  - “NB” appears when the NB function is in use.



### ■ AGC function

The AGC (Automatic Gain Control) function controls receiver gain to produce a constant audio output level even when the received signal strength is varied by fading, etc.

- ▶ Push **[NB•AGC]** for 1 sec. to toggle the AGC function ON and OFF.
  - “AGC” appears when the AGC function is in use.

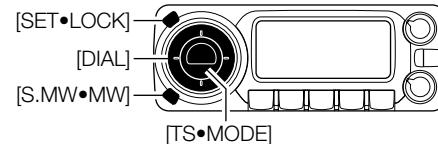


### ■ VSC function

USING SET MODE

The VSC (Voice Squelch Control) function opens the squelch only when receiving a modulated signal. This function is very useful while scanning, the VSC pauses only when modulated signals are received. Scanning continues when unmodulated or beat signals are received.

- ① Push **[SET•LOCK]** to enter set mode.
- ② Push **[SET•LOCK]** or **[S.MW•MW]** several times until “VSC” appears.



- ③ Rotate **[DIAL]** to toggle the VSC function ON and OFF.
- ④ Push **[TS•MODE]** to exit set mode.
  - “VSC” appears when the VSC function is in use.

## ■ General description

The receiver has 1050 memory channels including 50 scan edge memory channels (25 pairs) for storage of often-used frequencies. And a total of 26 memory banks, A to Z are available for usage by group, etc. Up to 100 channels can be assigned into a bank.

### ◊ Memory channel contents

The following information can be programmed into memory channels:

- Operating frequency (p. ??)
- Receive mode (p. ??)
- Tone squelch or DTCS squelch ON/OFF (p. ??)
- Tone squelch frequency or DTCS code with polarity (p. ??)
- Scan skip information (p. ??)

## ■ Memory channel selection

- ① Push **[MR•SKIP]** several times to select memory mode.
  - “**M**” indicator appears.
- ② Rotate **[DIAL]** to select the desired memory channel.
  - Programmed memory channels only can be selected.

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### ■ Programming a memory channel

VFO settings, including the set mode contents such as sub-audible tone frequency or scan skip information, can be programmed into a memory channel.

- ① Push **[V/MHz•SCAN]** to select VFO mode.
- ② Set the desired frequency using **[DIAL]**.
  - ▶ Set other data (e.g. subaudible tone frequency, scan skip information, etc.) if required.
- ③ Push **[S.MW•MW]** to select the select memory write condition.
  - “**M**” indicator and the memory channel number blink.

- ④ Rotate **[DIAL]** to select the desired memory channel to be programmed.
  - Memory channels not yet programmed are blank.
- ⑤ Push **[S.MW•MW]** for 1 sec. to program.
  - 3 beeps sound
  - Memory channel number automatically increases when continuing to push **[S.MW•MW]** after programming.

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#### ✓CONVENIENT

Memory programming can be performed in versatile ways e.g. memory channel to the same (or different) memory channel, etc.

---

## ■ Programming channel names

Each memory channel can be programmed with an alphanumeric channel name for easy recognition and can be indicated independently by channel. Names can be a maximum of 8 characters— see the table below for available characters.

(space)	+	-	=	*	/	((	)()	((	((0)
/ (1)	J (2)	J (3)	J (4)	J (5)	J (6)	J (7)	J (8)	J (9)	J (A)
J (B)	J (C)	J (D)	J (E)	J (F)	J (G)	J (H)	J (I)	J (J)	J (K)
J (L)	M (M)	N (N)	O (O)	P (P)	Q (Q)	R (R)	S (S)	T (T)	U (U)
V (V)	W (W)	X (X)	Y (Y)	Z (Z)					

- ① Select the desired memory channel.  
→ Push [**MR•SKIP**] several times to select memory mode, then rotate [**DIAL**] to select the desired memory channel.  
• “**M**” and memory channel number blink.
- ③ Push [**S.MW•MW**] to select the memory name programming condition.
  - Frequency readouts disappear and a cursor blinks.
- ④ Rotate [**DIAL**] to select the desired character.
  - The selected character blinks.
- ⑤ Push [**SET•LOCK**] to move the cursor to the right.
- ⑥ Repeat steps ④ and ⑤ until the desired channel names are displayed.
- ⑦ Push [**S.MW•MW**] for 1 sec. to program the name and exit the channel name programming condition.

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## 4 MEMORY OPERATION

### ◊ To indicate the channel name

USING SET MODE

The channel name indication can be set for independent memory channels.

- ① Select the desired memory channel.  
→ Push [MR•SKIP] several times to select memory mode, then rotate [DIAL] to select the desired memory channel.  
• “**M**” and memory channel number blink.
- ③ Push [SET•LOCK] to enter set mode.
- ④ Push [SET•LOCK] or [S.MW•MW] several times to select “ANM” item.
- ⑤ Rotate [DIAL] to turn the memory name indication ON.
- ⑥ Push [TS•MODE] to exit set mode.

**NOTE:** When no memory name is programmed, the stored frequency is displayed.

## ■ Copying memory contents

This function transfers a memory channel's contents to VFO (or another memory channel). This is useful when searching for signals around a memory channel frequency and for recalling the subaudible tone frequency etc.

### ◊ Memory↔VFO

- ① Select the desired memory channel to be copied.
  - Push [**MR•SKIP**] several times to select memory mode, then rotate [**DIAL**] to select the desired memory channel.
    - “**M**” and memory channel number blink.
- ② Push [**S.MW•MW**] for 1 sec. to transfer the selected memory channel contents to the VFO.
  - VFO mode is selected automatically.

### ◊ Memory↔memory

- ① Select the desired memory channel to be transferred.
  - Push [**MR•SKIP**] several times to select memory mode, then rotate [**DIAL**] to select the desired memory channel.
    - “**M**” and memory channel number blink.
- ② Push [**S.MW•MW**] momentarily.
  - “**M**” indicator and “---” indication blink, and shows VFO conditions.
- ③ Rotate [**DIAL**] to select the target memory channel.
  - Scan edge channels, 1A/1B to 50A/50B can also be selected.
- ④ Push [**S.MW•MW**] for 1 sec. to transfer the selected memory channel contents to the target memory.
  - The targeted memory and transferred contents are indicated.

### ■ Memory clearing

Contents of programmed memories can be cleared (blanked), if desired.

- ① Push **[V/MHz•SCAN]** to select VFO mode.
- ② Push **[S.MW•MW]** to select the select memory write condition.
  - “**M**” and the memory channel number blink.
- ③ Rotate **[DIAL]** to select the memory channel to be cleared.
  - Memory channels not yet programmed are blank.

- ④ Push **[S.MW•MW]** momentarily, then push **[S.MW•MW]** again for 1 sec.

**☞ This operation must be performed within 1.5 sec.**

- 3 beeps sound.
- The cleared channel changes to blank channel
- “**M**” and the memory channel number blink continuously.

- ⑤ Push **[V/MHz•SCAN]** to return to VFO mode.

**☞ NOTE:** Be careful!— the contents of cleared memories CANNOT be recalled.

## ■ Memory bank selection

The IC-R1500 has a total of 26 banks (A to Z). Regular memory channels, 1 to 1000, are assigned into the desired bank for easy memory management.

- ① Push **[MR•SKIP]** several times to select memory mode, if desired.
- ② Push **[TS•MODE]** to select memory bank condition.
  - Bank's initial blinks
- ③ Rotate **[DIAL]** to select the desired bank, A to P.
  - Banks that have no programmed contents are skipped.
- ④ Push **[TS•MODE]** to set the bank.
  - Bank's initial stops blinking.
- ⑤ Rotate **[DIAL]** to select the contents in the bank.
  - No channel numbers are displayed for memory bank operation.
- ⑥ To return to regular memory condition, push **[MR•SKIP]** twice.

## ■ Memory bank setting

USING SET MODE

- ① Select the desired memory channel.
  - Push **[MR•SKIP]** several times to select memory mode, then rotate **[DIAL]** to select the desired memory channel.
    - “**M**” and memory channel number blink.
- ② Push **[SET•LOCK]** to enter set mode.
- ③ Push **[SET•LOCK]** or **[S.MW•MW]** several times until “bAk” appears.

- ④ Rotate **[DIAL]** to select the desired bank, A to Z.
  - Banks that have no programmed contents are skipped.
- ⑤ Push **[TS•MODE]** to exit set mode.

### ■ Transferring bank contents

USING *SET MODE*

The bank contents of programmed memory channels can be cleared or transferred to another bank.

 **INFORMATION:** Even if the memory bank contents are cleared, the memory channel contents still remain programmed.

① Select the desired bank contents to be transferred or erased from the bank.

- Push **[MR•SKIP]** several times to select memory mode
- Push **[TS•MODE]** then rotate **[DIAL]** to select the desired memory bank.
  - Bank's initial blinks.
- Push **[TS•MODE]** to select the bank then rotate **[DIAL]** to select the desired contents.
  - Bank's initial stops blinking.

② Push **[SET•LOCK]** to enter set mode.

③ Push **[SET•LOCK]** or **[S.MW•MW]** several times until “bAk” appears.

- The bank's initial for the selected memory channel is displayed.

④ Rotate **[DIAL]** to select the desired bank initial to transfer or erase.

- Select “-- --” indication when erasing the contents from the bank.

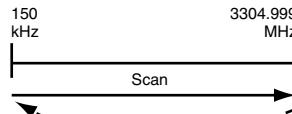
⑤ Push **[TS•MODE]** to set the bank and exit set mode.

⑥ Repeat steps ① to ④ for transferring or erasing an another banks contents.

## ■ Scan types

Scanning searches for signals automatically and makes it easier to locate new stations for contact or listening purposes.

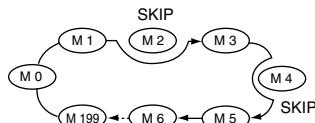
### FULL SCAN (p. ??)



Repeatedly scans all frequencies over the entire band.

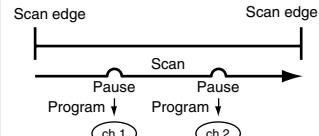
Some frequency ranges are not scanned according to the frequency coverage of the receiver's version.

### MEMORY (SKIP) SCAN (p. ??)



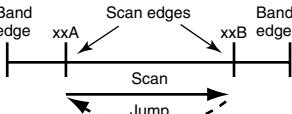
Repeatedly scans memory channels except those set as skip channel. Skip channels can be turned ON and OFF by pushing and holding [MR•SKIP] in memory mode.

### AUTO MEMORY WRITE SCAN (p. ??)



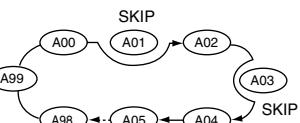
The frequencies that the programmed scan stops are automatically programmed into a selected memory bank.

### PROGRAMMED SCAN (p. ??)



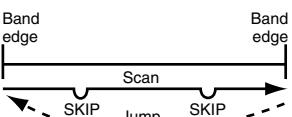
Repeatedly scans between two user-programmed frequencies. Used for checking for frequencies within a specified range such as repeater output frequencies, etc.

### ALL/SELECTED BANK SCAN (p. ??)



Repeatedly scans all bank channels or selected bank channels. The skip scan is also available.

### FREQUENCY/MEMORY SKIP FUNCTION (p. ??)



Skips unwanted frequencies or channels that inconveniently stop scanning. This function can be turned ON and OFF by pushing and holding [MR•SKIP] in either VFO or memory mode.

### ■ Scan start/stop

#### ◊ Preparation

Scan resume condition (p. ??); program the scan edges (p. ??); program 2 or more memory channels (p. ??); set skip settings (p. ??), if desired.

#### ◊ Operation

- ① Push **[V/MHz•SCAN]** to select VFO mode for full/programmed scan; or push **[MR•SKIP]** to select memory mode for memory/bank scan.
  - Select the desired bank with **[TS•MODE]** for bank scan.
- ② Set the squelch level to the point where noise is just muted.
- ③ Push **[V/MHz•SCAN]** for 1 sec. to start the scan.
  - To change the scanning direction, rotate **[DIAL]**.
  - The memory channel readout blinks the scan type as follows:
- ④ Push **[TS•MODE]** to switch full and programmed scan (P00 to P24), if VFO is selected in step ①.
- ⑤ To stop the scan, push **[V/MHz•SCAN]**.

■ **About the scanning steps:** The selected tuning step in each frequency band (in VFO mode) is used during scan

■ **IMPORTANT!:** To perform memory or bank scan, 2 or more memory/bank channels MUST be programmed, otherwise the scan will not start.

■ The bank-link setting can be changed in expanded set mode. See page ?? for details.

## ■ Scan edges programming

Scan edges can be programmed in the same manner as memory channels. Scan edges are programmed into scan edges, 00A/00B to 24A/24B, in memory channels.

- ① Push **[V/MHz•SCAN]** to select VFO mode.
- ② Set the edge frequency of the desired frequency range:
  - Set the frequency using **[DIAL]**.
  - Set other data (e.g. tone squelch, etc.), if desired.
- ③ Push **[S.MW•MW]**.
  - “**M**” indicator and channel number blink.
- ④ Rotate **[DIAL]** to select one of scan edge channel, 00A to 24A.

- ⑤ Push **[S.MW•MW]** for 1 sec. to program.
  - 3 beeps sound and VFO is automatically selected.
  - Scan edge 00B to 24B is automatically selected when continuing to push **[S.MW•MW]** after programming.
- ⑥ To program a frequency for the other pair of scan edges, 00B to 24B, repeat steps ① to ④.
  - If the same frequency is programmed into a pair of scan edges, programmed scan will not function.

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### ■ Skip channel/frequency setting

You can set the selected memory channel as a skip channel which is skipped during memory skip scan. In addition, it can be set as a skip channel for both memory skip scan and frequency skip scan. These are useful to speed up the scan interval.

① Select a memory channel.

- Push **[MR•SKIP]** several times to select memory mode, then rotate **[DIAL]** to select the desired memory channel to be a skip channel.
- “**M**” and memory channel number blink.

② Push **[SET•LOCK]** to enter set mode.

③ Push **[SET•LOCK]** or **[S.MW•MW]** several times until “CHS” appears.

④ Rotate **[DIAL]** to select the skip condition for the selected channel.

- CHS-ON : When “**SKIP**” appears, the channel is skipped during scan.  
When “P **SKIP**” appears, the channel is skipped during scan and the programmed frequency is skipped during VFO scan, such as programmed scan.
- CHS-OFF : The channel is scanned during scan. (“**SKIP**” disappears)

⑤ Push **[TS•MODE]** to exit set mode.

USING SET MODE

MR  
SKIP

① Select a memory channel.

- Push **[MR•SKIP]** several times to select memory mode, then rotate **[DIAL]** to select the desired memory channel to be a skip channel.
- “**M**” and memory channel number blink.

② Push **[MR•SKIP]** for 1 sec. to set the selected channel as a skip channel.

- When “**SKIP**” appears : The channel is skipped during scan.
- When “P **SKIP**” appears : The channel is skipped during scan and the programmed frequency is skipped during VFO scan, such as programmed scan.
- When “**SKIP**” disappears: The channel is scanned during scan.

## ■ Scan resume condition

### USING SET MODE

The scan resume condition can be selected as timer or pause scan. The selected resume condition is also used for priority watch. (p. ??)



- ① Push [SET•LOCK] to enter set mode.
- ② Push [SET•LOCK] or [S.MW•MW] several times until “SCT” or “SCP” appears as shown above.
  - When “d” is displayed in place of the 100 MHz digit, cancel the DTMF memory encoder in advance. (p. ??)
- ③ Rotate [DIAL] to set the desired timer:
  - “SCP-2” : Scan pauses until the signal disappears and then resumes 2 sec. later.
  - “SCT-15” : Scan pauses 15 sec. while receiving a signal.
  - “SCT-10” : Scan pauses 10 sec. while receiving a signal.
  - “SCT-5” : Scan pauses 5 sec. while receiving a signal.
- ④ Push [TS•MODE] to exit set mode.

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## ■ Priority watch types

Priority watch checks for signals on the frequency every 5 sec. while operating on a VFO frequency or scanning. The receiver has 3 priority watch types to suit your needs.

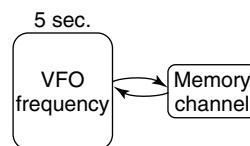
The watch resumes according to the selected scan resume condition. See p. ?? for details.

**NOTE:** If the pocket beep function is activated, the receiver automatically selects the tone squelch function when priority watch starts.

### MEMORY CHANNEL WATCH

While operating on a VFO frequency, priority watch checks for a signal on the selected memory channel every 5 sec.

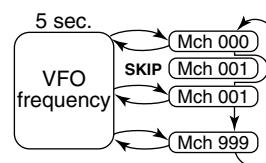
- A memory channel with skip information can be watched.



### MEMORY SCAN WATCH

While operating on a VFO frequency, priority watch checks for signals on each memory channel in sequence.

- The memory skip function and/or memory bank scan is useful to speed up the scan.



## ■ Priority watch operation

- ① Select VFO mode; then, set an operating frequency.
- ② Set the watching channel(s).

### *For memory channel watch:*

Select the desired memory channel.

### *For memory scan watch:*

Select memory mode, or the desired bank group; then, push [V/MHz•SCAN] for 1 sec. to start memory scan.

- ③ Push [ATT•PRIO] for 1 sec. to start the watch.
  - "PRIO" indicator appears.
  - The receiver checks the memory/bank channel(s) every 5 sec.
  - The watch resumes according to the selected scan resume condition. (p. ??)
  - While the watch is pausing, pushing [ATT•PRIO] resumes the watch manually.
- ④ Push [ATT•PRIO] for 1 sec. to stop the watch.

## ■ Pocket beep operation

This function uses subaudible tones for calling and can be used as a “common pager” to inform you that someone has called while you were away from the receiver.

### ◊ Waiting for a call from a specific station

- ① Set the operating frequency in FM mode.
- ② Push **[SET•LOCK]** to enter set mode.
- ③ Push **[SET•LOCK]** or **[S.MW•MW]** several times until “Ct” (when selecting the tone squelch frequency) or “Dt” (when selecting the DTCS code squelch) appears.

- ④ Rotate **[DIAL]** to select the desired tone frequency or DTCS code.
- ⑤ When operating the pocket beep function with DTCS code squelch, push **[SET•LOCK]** once then rotate **[DIAL]** to select the DTCS polarity.

- ⑥ Push **[TS•MODE]** to exit set mode.
- ⑦ Push **[MONI•T/T-SCAN]** for 1 sec and rotate **[DIAL]** until “((•))” or “((•))” appears to turn the pocket beep function ON with tone/DTCS squelch, respectively.

- ⑧ When a signal with the matched tone is received, the receiver emits beep tones and blinks “((•)).”
  - Beep tones sound for 30 sec. and “((•))” blinks. To stop the beeps and blinking manually, push any key. When the beep tones are not stopped manually, “((•))” continues blinking until **[TONE•T-SCAN]** is pushed (see step ⑨).
- ⑨ Push **[TONE•T-SCAN]** several times until “T SQL” or “DTCS” disappears to cancel the tone squelch or DTCS squelch function.

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## 7 POCKET BEEP AND TONE SQUELCH

### ◊ Available tone frequency list

67.0	79.7	97.4	118.8	146.2	167.9	186.2	206.5	241.8
69.3	82.5	100.0	123.0	151.4	171.3	189.9	210.7	250.3
71.0	85.4	103.5	127.3	156.7	173.8	192.8	218.1	254.1
71.9	88.5	107.2	131.8	159.8	177.3	196.6	225.7	
74.4	91.5	110.9	136.5	162.2	179.9	199.5	229.1	
77.0	94.8	114.8	141.3	165.5	183.5	203.5	233.6	

**NOTE:** The receiver has 51 tone frequencies and consequently their spacing is narrow compared to units having 38 tones. Therefore, some tone frequencies may receive interference from adjacent tone frequencies.

### ◊ Available DTCS code list

023	054	125	165	245	274	356	445	506	627	732
025	065	131	172	246	306	364	446	516	631	734
026	071	132	174	251	311	365	452	523	632	743
031	072	134	205	252	315	371	454	526	654	
032	073	143	212	255	325	411	455	532	662	
036	074	145	223	261	331	412	462	546	664	
043	114	152	225	263	332	413	464	565	703	
047	115	155	226	265	343	423	465	606	712	
051	116	156	243	266	346	431	466	612	723	
053	122	162	244	271	351	432	503	624	731	

### ◊ Calling a waiting station using pocket beep

A subaudible tone matched with the station's CTCSS tone frequency or 3-digit DTCS code with polarity is necessary. Use the tone squelch on the next page or a subaudible tone encoder (pgs. ??, ??).

## ■ Tone/DTCS squelch operation

The tone or DTCS squelch opens only when receiving a signal with the same pre-programmed subaudible tone or DTCS code, respectively. You can silently wait for the specified signal using the same tone.

- ① Set the operating frequency in FM mode.
- ② Program the CTCSS tone frequency or DTCS code in set mode.
  - See steps ② to ⑥ on p. ?? for programming details.
- ③ Push **[MONI•T/T-SCAN]** for 1 sec and rotate **[DIAL]** until “▶” or “□” appears in the function display.
- ④ When a signal with the matched tone is received, the squelch opens and the receiver emits audio.
  - When the received signal includes an unmatched tone, the squelch does not open. However, the S-meter indicator shows the received signal strength.
  - To open the squelch manually, push **[MONI•T/T-SCAN]**.
- ⑤ To cancel the tone squelch, push **[MONI•T/T-SCAN]** for 1 sec and rotate **[DIAL]** until “▶” or “□” disappears.

## ■ Tone scan

By monitoring a signal that is being operated with pocket beep, tone or DTCS squelch function, you can determine the tone frequency or DTCS code necessary to open a squelch.

- ① Set the desired operating frequency or memory channel to be checked for a tone frequency or code.
- ② Push **[MONI•T/T-SCAN]** for 1 sec and rotate **[DIAL]** select the tone type, tone squelch or DTCS, to be scanned.
  - Either “▶” or “◀” appears
- ③ Push **[MONI•T/T-SCAN]** for 1 sec. to start the tone scan.
  - To change the scanning direction, rotate **[DIAL]**.

④ When the CTCSS tone frequency or 3-digit DTCS code is matched, the squelch opens and the tone frequency is temporarily programmed into the selected condition such as memory channel.

- The tone scan pauses when a CTCSS tone frequency or 3-digit DTCS code is detected.
- The decoded CTCSS tone frequency or 3-digit DTCS code is used for the tone encoder or tone encoder/decoder depending on the selected tone condition or type in step ②.
- “▶” : CTCSS tone encoder/decoder
- “◀” : DTCS tone encoder/decoder

⑤ Push **[MONI•T/T-SCAN]** to stop the scan.

 **NOTE:** The decoded tone frequency is programmed temporarily when a memory or call channel is selected. However, this will be cleared when the memory/call channel is re-selected.

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## ■ General

### ◊ Set mode operation

- ① Push [SET•LOCK] to enter the set mode.
- ② Push [SET•LOCK] or [S.MW•MW] to select the desired item.
- ③ Rotate [DIAL] to select the desired condition of the item.
- ④ Push [TS•MODE] to exit set mode.

## ■ Set mode items

## ◆ Display dimmer

Adjust the display lighting condition.

The levels 1 (dark) to 8 (bright: default) are available.

## ◆ Display color

The display color can be set to amber (default), yellow or green.

## ◆ Display contrast

The LCD contrast can be adjusted through 9 levels.

## ◆ Tone frequency

Sets subaudible tone frequency for tone squelch operation.

Total of 50 tone frequencies (67.0–254.1 Hz) are available.

(default: 88.5 Hz)

### • Available tone frequency list

67.0	79.7	97.4	118.8	146.2	167.9	186.2	206.5	241.8
69.3	82.5	100.0	123.0	151.4	171.3	189.9	210.7	250.3
71.0	85.4	103.5	127.3	156.7	173.8	192.8	218.1	254.1
71.9	88.5	107.2	131.8	159.8	177.3	196.6	225.7	
74.4	91.5	110.9	136.5	162.2	179.9	199.5	229.1	
77.0	94.8	114.8	141.3	165.5	183.5	203.5	233.6	

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## 8 SET MODE

### ◊ DTCS code

Sets DTCS code for DTCS squelch operation. Total of 104 codes (023–754) are available.  
(default: 023)

#### • Available DTCS code list

023	054	125	165	245	274	356	445	506	627	732
025	065	131	172	246	306	364	446	516	631	734
026	071	132	174	251	311	365	452	523	632	743
031	072	134	205	252	315	371	454	526	654	754
032	073	143	212	255	325	411	455	532	662	
036	074	145	223	261	331	412	462	546	664	
043	114	152	225	263	332	413	464	565	703	
047	115	155	226	265	343	423	465	606	712	
051	116	156	243	266	346	431	466	612	723	
053	122	162	244	271	351	432	503	624	731	

### ◊ DTCS polarity

Sets DTCS polarities from n (normal) and r (reverse).  
(default: n)

### ◊ Scan resume timer

Selects scan resume timer from SCT-15 (default), SCT-10, SCT-5 and SCP-2. Scan resumes after the specified period when the received signal disappears.

- SCT-15/10/5 : Scan pauses for 15/10/5 sec. when the received signal disappears.
- SCP-2 : Scan pauses on a signal until signal disappears, then resumes 2 sec. after the signal disappears.

### ◊ Memory name setting

Sets memory name setting from ON (appear) and OFF (not appear; default) for memory name appearance. This item appears when set mode is accessed from memory mode only.

## ◊ Memory bank setting

Sets the desired memory bank (A to P) to assign the regular memory channels.

This item appears when set mode is accessed from memory mode only.

## ◊ Memory bank link function

Sets the memory bank link function ON and OFF (default). The link function provides continuous banks scan, that scans all contents in the selected banks during bank scan.

This item appears when set mode is accessed from memory mode only.

### • Bank link setting

① Rotate [DIAL] to select the memory bank link function ON.  
② Push [SET•LOCK] or [S.MW•MW] to select the desired bank to be linked.

• bLA: Bank A   • bLb: Bank B   • bLC: Bank C   • bLd: Bank D  
• bLE: Bank E   • bLF: Bank F   • bLG: Bank G   • bLH: Bank H  
• bLI: Bank I   • bLJ: Bank J   • bLk: Bank K   • bLL: Bank L  
• bLm: Bank M   • bLn: Bank N   • bLO: Bank O   • bLP: Bank P  
• bLQ: Bank Q   • bLR: Bank R   • bLS: Bank S   • bLt: Bank T  
• bLU: Bank U   • bLV: Bank V   • bLW: Bank W   • bLX: Bank X  
• bLy: Bank Y   • bLZ: Bank Z

③ Rotate [DIAL] to select “ON” to linking the bank.  
④ Repeat steps ② and ③ to set the link condition.

## ◊ Channel skip setting

Sets channel skip setting from ON and OFF for memory skip scan operation.

This item appears when set mode is accessed from memory mode only.

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## 8 SET MODE

### ◊ Program scan skip setting

Sets the program scan skip setting from ON and OFF for VFO scan operation, such as programmed scan.

This item appears when set mode is accessed from VFO mode only.

### ◊ AFC setting

Turns AFC (Automatic Frequency Control) function ON and OFF.

### ◊ VSC setting

Turns VSC (Voice Squelch Control) function ON and OFF.

### ◊ Filter setting

Select the IF filter passband width from 3, 6, 15, 50 and 230 (depending on the selected mode.)

### ◊ Weather alert function

*U.S.A. version only*

Turns weather alert function ON and OFF.

### ◊ IF shift frequency setting

Select the IF shift frequency up to  $\pm 25$  kHz (in 50 Hz steps).

### ◊ Squelch delay

Selects squelch delay from short and long to prevent repeated opening and closing of the squelch during reception of the same signal.

- S : Short squelch delay.
- L : Long squelch delay.

### ◊ ANF setting

Turns ANF (Automatic Notch Filter) function ON and OFF. The ANF function automatically attenuates up to 3 beat tones, tuning signals, etc. even if they are moving. The ANF function can be used in USB, LSB, AM, FM and WFM modes. This item appears when optional UT-106 is installed.

### ◊ NR setting

Selects NR (Noise Reduction) level from 1 to 15 and OFF. The NR function enhances desired signals in the presence of noise by using the DSP circuit. The amount of enhancement is adjustable.

The NR level can result in audio signal masking. Set the noise reduction level for maximum readability. This item appears when optional UT-106 is installed.

### ◊ Key-touch beep

The key-touch beep can be turned OFF for silent operation. (default: ON)

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## 8 SET MODE

### ◊ Beep output level

Adjust the key-touch beep level from 1 to 9 and OFF (for silent operation).

### ◊ Auto power OFF

The receiver can be set to automatically turn OFF after a specified period with a beep when no key operations are performed.

30 min., 1 hour, 2 hours and OFF can be specified. The specified period is retained even when the receiver is turned OFF by the auto power OFF function. To cancel the function, select "OF" in this set mode.

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## ■ Specifications

### ◆ GENERAL

- Frequency coverage : 0.010–3299.9999 MHz  
\*Guaranteed: 0.495–3000.000 MHz range only
- Type of emission : FM, AM, WFM, USB, LSB, CW
- Number of memory channels : 1050 (incl. 50 scan edges)
- Frequency resolution : 1 Hz, 10 Hz, 20 Hz, 50 Hz, 100 Hz, 500 Hz, 1 kHz, 2.5 kHz, 5 kHz, 6.25 kHz, 8.33 kHz, 9 kHz, 10 kHz, 12.5 kHz, 15 kHz, 20 kHz, 25 kHz, 30 kHz, 50 kHz, 100 kHz, 125 kHz, 150 kHz, 200 kHz, 500 kHz, 1 MHz, 10 MHz
- Operating temperature range : –10°C to +60°C; +14°F to +140°F
- Frequency stability : ±3 ppm (–10°C to +60°C)
- Power supply requirement : 12.0 V DC ±15%
- Current drain (at 12.0 V DC: approx.) : standby 0.65 A (typical)  
max. audio 1.2 A
- Antenna connector : BNC (50 Ω)
- Dimensions (proj. not included)
  - Receiver : 146(W) × 41(H) × 206(D) mm  
5 1/4(W) × 1 1/16(H) × 8 1/8(D) in
  - Controller : 111(W) × 40(H) × 26.5(D) mm  
4 1/8(W) × 1 1/16(H) × 1 1/32(D) in
- Weight (approx.)
  - Receiver : 1.2 kg; 2 lb 10 oz
  - Controller : 0.2 kg; 7 17/32 oz

### ◆ RECEIVER

- Receive system : Triple-conversion superheterodyne and down converter
- Intermediate frequencies : 1st: 266.700 MHz, 2nd: 10.700 MHz  
3rd: 450 kHz (except for WFM mode)
- Sensitivity:
  - FM (1 kHz/3.5 kHz Dev.; 12 dB SINAD)
 

28.000–29.999 MHz	: Less than 0.63 μV
30.000–49.999 MHz	: Less than 0.63 μV
50.000–239.999 MHz	: Less than 0.5 μV
240.000–279.999 MHz	: Less than 0.5 μV
280.000–299.999 MHz	: Less than 0.5 μV
300.000–699.999 MHz	: Less than 0.5 μV
700.000–1299.999 MHz	: Less than 0.63 μV
1300.000–2299.999 MHz	: Less than 5.6 μV
2300.000–3000.000 MHz	: Less than 18 μV
  - WFM (1 kHz/52.5 kHz Dev.; 12 dB SINAD)
 

50.000–699.999 MHz	: Less than 1.4 μV
700.000–1299.999 MHz	: Less than 1.8 μV
1300.000–2299.999 MHz	: Less than 18 μV
2300.000–3000.000 MHz	: Less than 56 μV
  - AM (1 kHz/30% MOD.; 10 dB S/N)
 

0.495–1.799 MHz	: Less than 25 μV
1.800–14.999 MHz	: Less than 2.5 μV
15.000–49.999 MHz	: Less than 2.5 μV
50.000–299.999 MHz	: Less than 2 μV
300.000–699.999 MHz	: Less than 2 μV
700.000–1299.999 MHz	: Less than 2.5 μV

SSB/CW (10 dB S/N)	
0.495–1.799 MHz	: Less than 5 $\mu$ V
1.800–14.999 MHz	: Less than 0.5 $\mu$ V
15.000–49.999 MHz	: Less than 0.5 $\mu$ V
50.000–699.999 MHz	: Less than 0.4 $\mu$ V
700.000–1299.999 MHz	: Less than 0.5 $\mu$ V

• Sensitivity (threshold) :

FM (1 kHz/3.5 kHz Dev.; 12 dB SINAD)	
28.000–29.999 MHz	: Less than 0.63 $\mu$ V
30.000–49.999 MHz	: Less than 0.63 $\mu$ V
50.000–239.999 MHz	: Less than 0.5 $\mu$ V
240.000–279.999 MHz	: Less than 0.5 $\mu$ V
280.000–299.999 MHz	: Less than 0.5 $\mu$ V
300.000–699.999 MHz	: Less than 0.5 $\mu$ V
700.000–1299.999 MHz	: Less than 0.63 $\mu$ V
1300.000–2299.999 MHz	: Less than 5.6 $\mu$ V
2300.000–3000.000 MHz	: Less than 18 $\mu$ V

WFM (1 kHz/52.5 kHz Dev.; 12 dB SINAD)	
50.000–699.999 MHz	: Less than 5.6 $\mu$ V
700.000–1299.999 MHz	: Less than 7.1 $\mu$ V
1300.000–2299.999 MHz	: Less than 71 $\mu$ V
2300.000–3000.000 MHz	: Less than 220 $\mu$ V

AM (1 kHz/30% MOD.; 10 dB S/N)	
0.495–1.799 MHz	: Less than 18 $\mu$ V
1.800–14.999 MHz	: Less than 0.89 $\mu$ V
15.000–49.999 MHz	: Less than 0.89 $\mu$ V
50.000–299.999 MHz	: Less than 0.71 $\mu$ V
300.000–699.999 MHz	: Less than 0.71 $\mu$ V
700.000–1299.999 MHz	: Less than 0.89 $\mu$ V

## SSB/CW (10 dB S/N)

0.495–1.799 MHz	: Less than 71 $\mu$ V
1.800–14.999 MHz	: Less than 7.1 $\mu$ V
15.000–49.999 MHz	: Less than 7.1 $\mu$ V
50.000–699.999 MHz	: Less than 5.6 $\mu$ V
700.000–1299.999 MHz	: Less than 7.1 $\mu$ V

## • Selectivity :

SSB/CW/AM	: More than 2.8 kHz/-6 dB (typical)
SSB/CW/AM/FM	: More than 6.0 kHz/-6 dB (typical)
AM/FM	: More than 15 kHz/-6 dB (typical)
AM/FM/WFM	: More than 50 kHz/-6 dB (typical)
WFM	: More than 230 kHz/-6 dB (typical)

## • AF output power (at 12.0 V DC) :

: More than 0.5 W at 10% distortion with an 8  $\Omega$  load

## • Ext. speaker connectors

: 2-conductor 3.5 (d) mm ( $1/8$ "/8  $\Omega$

## • Data connectors

: 2-conductor 3.5 (d) mm ( $1/8$ "/100 K  $\Omega$

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## 11 SPECIFICATIONS AND OPTIONS

### ■ Options

#### **UT-106** DSP UNIT

W

#### **SP-10** EXTERNAL SPEAKER

For all-round mobile operation. Cable length: 1.5 m; 4.9 ft

#### **OPC-???** SEPARATION CABLE

For extended separate installation. 3.5 m (11.5 ft)

#### **CP-12L/LR** CIGARETTE LIGHTER CABLES

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#### **OPC-254L** DC POWER CABLES

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#### **BC-???** AC ADAPTER

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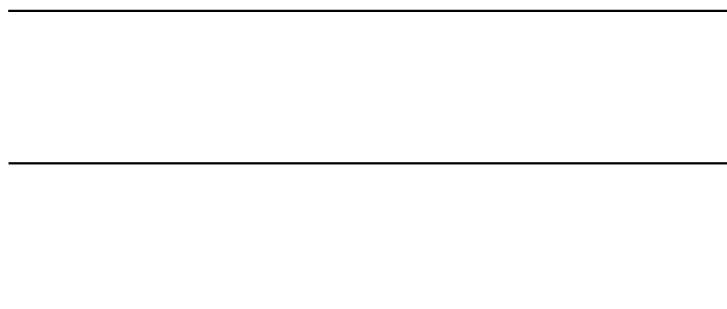
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**Count on us!**



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